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HOW TO PREVENT OUTBREAKS OF INFECTIOUS DISEASES AMONGST SCHOOL CHILDREN AND THE BEST METHODS TO ADOPT TENDING TO LIMIT AND SUPPRESS THESE DISEASES.

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BACTERIOLOGICAL investigations into the cause of diphtheria have contributed considerable to elucidate the methods by which infection may be brought about, and the nature of that infection *per se.* This disease, as most of you know, has been demonstrated by Professors Klebs and Loeffler to be due to a special micro-organism commonly called the Klebs-Loeffler bacillus. It is a low form of vegetable life capable of reproducing itself with great rapidity under favorable conditions, demanding, however, certain special forms of food for its sustenance and growing upon a soil or medium very similar in conditions to those favorable to low forms of vegetable life; and whilst the contagion in other infectious diseases has not been so exhaustively studied there are fairly good reasons for assuming that in the majority of instances they are governed by the same physiological laws.

As an introduction to the subject it would be important to consider some of the reasons which render children more susceptible to contagious diseases, such as scarlet fever and diphtheria, than adults. The conditions of child life and the habits of children largely account for this. It is certainly true that outbreaks of these contagious diseases are much more prevalent during school terms than during vacation, and seasonal influence, so

* Read at Conference on School Hygiene and Education, February 2nd, 1904.

much dwelt upon by statisticians of various countries, should not be considered apart from the school-room, which is operative during such seasons when these diseases are most prevalent. Children in schools are brought into more intimate contact than adults are in any walk of life, and they remain in contact for a much longer period of time, often being crowded into a room the ventilation of which probably is not of the best. They sit in close contact; they communicate in a much more intimate manner than the conventional adult would, and with child-like confidence and simplicity interchange not only their garments, caps, mufflers, coats, and sometimes wraps, but even their toys—girls sometimes their chewing gum. The mouth organ, the kazoo, the rubber judy squeaker, whistles, pea-shooters, string, stick candy, and the like, are often found among the contents of a child's pocket. The methods in which children use lead pencils, wetting one end to mark with, chewing the other in "maiden meditation fancy free;" cleaning their slates sometimes not in accordance with sanitary regulations; interchanging books, and a common drinking cup, will be sufficient to indicate to an ordinary reflective mind that if these diseases are dependent upon organisms which are lower forms of vegetable life, and amenable to influences similar to those affecting higher forms of vegetation, seed, soil, and season, these are certainly splendid opportunities for the seed to be disseminated, if seed exists.

In addition to the above there is another very important and altogether different side to the question, and one which is so frequently operative through the medium of the school. I refer to mild cases of these diseases which possibly have proceeded without having been seen by any medical attendant, which have never been suspected by parent or teacher, and which constitute in the school-room a fruitful and continuous source of infection, operative sometimes for many weeks, and which is, in my opinion, unquestionably the source of epidemics in schools in 99 per cent. of cases, and is frequently overlooked whilst the teacher and even the sanitarians proceed upon a tour of investigation in the drains, the ventilation, and the cellars. I could furnish almost numberless illustrations of this; every medical man who has had anything whatever to do with school infection is aware how often a mild case of scarlet fever, never diagnosed, never treated, never suspected, has returned to school in the stage of desquamation, spreading the disease broadcast. The same can be said of sore throats, sometimes very simple sore throats, so mild that no doctor was required, with, however, sufficient exudation, and secretion issuing therefrom, teeming with the specific microorganism of diphtheria, furnishing seed enough to infect the school and lead to its closure; and, worse than all, the child with

a dirty nose, with nothing whatever the matter with it only a dirty nose, with chronic ozena or a sero-sanious ichrous discharge, which even the medical man is apt to overlook, is the most venomous of all, because, when the child sneezes, as it often does, or coughs or wipes its nose upon its cuff, it scatters this infection upon book, garment, playmate, everywhere.

If these are facts, the lines upon which they must be overtaken are clearly indicated. The mouth toy must be banished from the school; space and air and sunshine provided for the child in the school-room; the teacher must be instructed and educated up to the point of recognizing the indication of contagion in children; and the school children must be inspected by a competent medical inspector whenever contagious disease appears amongst the scholars.

To cover this work in a practical manner is not always simple. It requires a recognized system and money. Municipalities generally incline to the opinion that money for the ordinary sanitary work of inspection is waste, yet as a matter of fact there is no expenditure in connection with municipal economics which yields a larger and more direct return. Moreover, the Health Department and inspectors must work in harmony with the Educational Board and school teachers, for the latter, when rightly informed upon ordinary health matters, constitute the strongest ally a Health Department can have. Every case of contagious disease must be promptly reported to the Health Office, and the case as promptly followed up. The scholars exposed or domiciled in the infected house must be rigidly excluded from school during the incubation period of the disease, and until such time as they can be certified to as no longer liable to convey the disease, and this certificate must be furnished by the officer who alone is personally responsible for controlling the epidemic. How frequently we see medical practitioners imperfectly informed as to the details and conditions of an individual case, sometimes actuated by the desire to meet the convenience of influential or wealthy parents, furnishing certificates which are not always consistent with opinions usually entertained by physicians. In Toronto, I am happy to say that, with the co-operation of the School Board, we have in the past been able to maintain the position that no child of a family wherein there has been contagious disease can be permitted to return to school without a certificate authorized and signed by the Health Officer. The ordinary contagious disease inspector has furthermore instructions to report instantly to the principal of the school where the child has attended, and must ascertain for himself that no members of the infected family are in attendance at school, and if such children are found so to be to remove them, and it is

almost a daily experience that such supervision and constant watching is necessary. A full and complete record of the school bearings in every known case should also be kept. Such record must show the scholar's name, the room the pupil was in, when the child last attended school, where the other members of the family reside, and how the case is being handled, so that at a glance the supervising officer can judge accurately of the situation. The teacher also must be informed, and I am strongly of the opinion that at every teachers' convention, and on all occasions where school teachers assemble for the purposes of mutual improvement and the comparing of notes as to teachers' methods, time should be allotted for practical addresses upon ready means of detecting the various contagious diseases, and instructing teachers as to what they would be justified in regarding as suspicious and important to refer to the Health Officer of the district, or his medical assistants, with the object of determining the existence or non-existence of infection.

In the city of Toronto, I am free to say that school teachers are well abreast of the times in this particular work, but I hope that, with increased opportunity, they will become still more expert in this invaluable and practical field of usefulness. Not only is this important in connection with those diseases enumerated within the Public Health Act, but also in connection with some of the lesser forms of infectious diseases, such as ringworm, impetigo contagiosa, scabies, and the like. The School Board must also be educated up to the point of realizing the necessity of placing within the grasp of the child physical as well as mental force. Despite all that modern sanitarians have done and are doing, how little some of our responsible bodies realize the value of fresh air and sunshine in the development of the physical life of a child. Shorter school hours and longer vacations are commensurate with brighter faces and clearer intellects. That home-work and punishments, which add to mental worry and fatigue, make dull scholars duller, and bad ones worse; that the beauties of Nature, the fields and the flowers, have as much in them to admire as the monument raised to the vanity of a teacher, who has taught his pupil to tell the time of the clock by algebraic equation; to know that basements were never made for school-rooms; that the greater part of a child's life is spent in school; that his associations for all future time will date from that particular period, and its associated memories, his schooldays, should be as happy as it is possible for man to make them. Fresh air in abundance; freedom from odors; the best system of ventilation; light on every hand, with desks and lockers that will, as far as possible, secure and maintain independence

in each pupil and his belongings, are, in my opinion, the rights of the scholar.

I have had in the past the audacity to suggest that some children would be helped by being cleaned and clothed, and have been laughed at for my temerity, but if those whom I am now addressing have seen some scholars as I have seen them, who have been compelled to attend school and sit with others whose odors mark their nationality, as well as their family connections, and stigmatize their home surroundings, they would believe with me that there was more force than fiction in the suggestion. The Provincial Board of Health last year very properly provided for the personal inspection of every pupil and every absentee, where a case of scarlet fever or diphtheria appeared amongst the pupils of a public school. I will not say that in Toronto that has been done with mathematical exactness, because we have over 30,000 school children to supervise, but I am proud to say that the work has been done in the spirit, and with the assurance that it would prove satisfactory to all who care to study our methods. The medical inspector is required to make constant and repeated visits to the school-room for the purpose of detecting, by a skilled medical examination, the existence of latent disease or overlooked infection amongst the pupils; furthermore to examine the absentees with a view to definitely understand and report in form the cause of such absence, so that the reason for the non-attendance of such at school will be on fyle in the Health Office.

We must not forget that parents are compelled to send their children to school, and it is the bounden duty of the Health authorities and the municipality to see that every security is afforded them to avoid contact with infectious diseases.

RELATIVE PREVALENCE OF CONTAGIOUS DISEASES IN CHILDREN OF SCHOOL AGE.*

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Mr. Chairman and Gentlemen,—To everyone, but especially to those interested in the care of the children of our public schools, the subject of this paper becomes of extreme importance.

We naturally are all interested in the question of the prevention of contagious diseases amongst children at all ages, and in the measures by which such prevention may be accomplished; and it is natural to inquire how far schools are an aid or hindrance to such prevention. In one sense our schools are both an aid to the dissemination, and a means of preventing the spread of contagious disease. They do aid in the dissemination of disease in the same way that infection spreads amongst crowds everywhere; but they are a means of prevention through the educational influences which spread often from the children to parents, in these days of general compulsory school attendance and instruction in hygiene. Not until the organization of the Department of Health under the Local Government Board in England was there any systematized study of the causative influences of the spread of infectious diseases; but since the appointment of Dr. John Simon, its first medical officer, investigations have been pushed in every direction. This is illustrated in the following quotation from Dr. Clifford Allbutt's "System of Medicine:

"The influence of school attendance on the diffusion of diphtheria was noted almost as soon as skilled inquiry into the circumstances of the disease was instituted. This was pointed out by Mr. W. H. Power in 1876, and in the following year, I had an opportunity of studying the matter during a maintained prevalence of diphtheria at Coggeshall in Essex. It was found practical to divide the 928 children in the village into age-groups, and then to ascertain within each group the relative amount of diphtheria, in those who attended school and those who did not. Under three years of age school attendance was not found to have materially influenced the number of attacks, but in the age period three to twelve years, the incidence of the disease was not far from 50 per cent. greater on school attendants than on others;

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and in the age period twelve to fifteen years the school attendants suffered nearly three times more than those who were not at school."

A similar result in the instance of scarlet fever is illustrated in the Annual Report of Dr. Murphy, Medical Officer of Health of London, England, for 1893, in connection with 17,704 cases. Of these there were: 5,279 cases under five years of age; 6,727 cases under ten years of age; 3,187 cases under fifteen years of age; or but 29 per cent. of the cases were under five years of age.

Dr. Murphy illustrated the fact in another way by showing how the prevalence of this disease declined with the summer vacation. Thus, under three years the decrease was 1 per cent.; under three to twelve years the decrease was 26 per cent.; over thirteen years the decrease was 13 per cent. Increase in succeeding month: under three years, 4 per cent.; under three to thirteen years, 65 per cent.; over thirteen years, 26 per cent.

Such is the experience of officers of health in England; but we are able to further illustrate the prevalence of infectious diseases from our own statistics.

During the first half of 1897, we had a serious prevalence of scarlet fever in Toronto. There were in all 1,138 cases and 63 deaths.

In the returns for May, and up to the 5th of the following June, there were in all 280 cases. Of these 198 attended school, or 70 per cent. of the whole were school children.

Such are the statistics of several outbreaks in which the details regarding cases have been available. We have, however, in addition to this, always available, the study of the death-returns from year to year for the whole Province, and for particular municipalities.

The following table, from the Registrar-General's Report of 1900, supplies a number of interesting details, by which comparative results may be obtained. It gives the population of the Province by age periods from nought to nineteen years inclusive, by years for the first five-year period, and for the three succeeding quinquennia. It further gives the deaths for each of the several periods separately for scarlatina and for diphtheria.

Age Period	0-1	1-4	0-4	5-9	10-14	14-19	5-19
Population	49,500	190,347	239,847	246,610	243,277	232,073	....
Population Percentage	5%	19.9%	24.9%	25.8%	25.29%	24.13%	....
Total Deaths	7,163	1,989	9,152	803	563	923	2,289
Total Deaths from Scarlatina	18	91	109	39	10	3	52
Total Deaths from Diphtheria	77	330	407	205	66	29	300

From the columns of totals we find that for the first quinquennium, the deaths for both diseases together were 516, and for the period of five to twenty, the legal school period, they were 352, and in the five to nine period separately, 244.

It will be observed that the ratio of deaths in the first five years of life is about three times that in the second five-year period for scarlatina, and twice that for the same period in the case of diphtheria. We see in this an apparent disagreement from the foregoing statistics regarding the cases as reported in the different illustrated statistics given.

There is, however, a natural explanation for this in the fact that the percentage mortality of scarlatina in England in 14,000 cases between 1888 and 1893 under five years was 16.8 per cent., while that for the five to nine year period was 5.6 per cent.

In the same way diphtheria which, between 1895 and 1899, had 25.6 per cent. of deaths in cases of children under five years, had 14.6 per cent. of deaths for the five to nine period. Or there were 1,536, as compared with 695. What is very pleasing to notice, however, in this study of English statistics, is the relatively great decrease in recent years, not only of the total cases and total mortality, but also of the lessening percentage in school children, due doubtless to the closer inspection of school children, and the very general removal of first cases to the isolation hospitals.

To conclude this reference to the relative prevalence in the two periods through illustrative statistics, I shall take the returns of our two largest cities, Toronto and Ottawa, for 1903. Except for the first three months of the year, the following are the number of cases, as well as deaths, for the year 1903. We find that for the ten months from March to December, Toronto had 418 cases of scarlet fever and 62 deaths, and 806 cases of diphtheria, with 100 deaths. The deaths for the whole year by ages are seen in the following table:

Ages	0-1	1	2	3	4	5-9	10-14	15-19	20-24	25-29	40-44	60-69	Not given.	Total.
Scarlet Fever..	4	7	12	14	7	32	10	2	2	1	1			92
Diphtheria.....	7	9	22	18	20	44	7	1	4	1		1	2	136
Diphtheria and Scarlet Fever..			3	1		3	1							8

Comparing cases with deaths as given, we find that the percentage death rate was 14.7 for scarlatina, and that for diphtheria was 11.7. I have not the figures enabling us to determine the death-rate at different periods, but we may assume that the relative rates would be much the same as in other years and places.

We find for scarlet fever that in the nought to five period the deaths were 44, while those for the school period, five to nine-

teen, were exactly the same. Applying the rate in the London Report, this means that there were three times as many cases among children of school age as in those from nought to five years.

For diphtheria it would appear that the record for children of school age is more favorable. Assuming that the London rates prevailed of two to one for the two periods, we find the prevalence in the schools to have a ratio only 50 per cent. greater than that for the nought to five year period.

The following table illustrates the relative prevalence in the city of Ottawa:

Ages	0-1	1	2	3	4	5-9	10-14	15-19	20-24	Total.
Scarlet Fever..			1	1		2		1		5
Diphtheria.....	3	4	6	6	3	5	2		1	30

From the figures here given for scarlet fever, we similarly conclude that the prevalence of cases amongst the school children was three times as great in the five to nine period as in the nought to five year period; but we find that in the matter of diphtheria there is by no means the same relation, there being twenty-two deaths in the nought to five period, and but five in the five to nine period.

These figures are of extreme interest since they represent the results of a year's work, where for nine months all cases of diphtheria were removed to the isolation hospital so soon as diagnosed, and the school children of the rooms, where cases had been, were inspected till the period of incubation was over. The very considerable number of cases which occurred during the year (320 of scarlatina and 351 of diphtheria) removes the element of incorrect deductions which may result from a small number of cases.

The history of these Ottawa figures as a statistical study is most interesting. For years the city had an unenviable reputation in the matter of contagious diseases. In 1902, there were in all 689 cases of scarlet fever and 234 of diphtheria. In February, 1903, a new well-equipped isolation hospital was opened, and after March all cases of the diseases occurring in the city were sent to the hospital. Of the 320 of scarlet fever, 198 were treated in the new hospital during the eleven months; the balance, 102, were treated elsewhere, or after the complete removal to hospital of all cases began, there were for the nine latter months of the year but 159 cases compared with 161 in the first three months.

Of the diphtheria cases (251 cases), 69 occurred in the first three months of the year, and 182 in the latter nine months, during which all cases were treated in the hospital. While not directly bearing on this subject, it is pleasing to remark that the

total deaths for the nine months from scarlet fever were but three, while those from diphtheria were nine, or 1.52 per cent, and 4.9 per cent. of the cases. Such a low record of deaths for so large a number of cases has, so far as I know, never hitherto been obtained. But the other important point is the effect of the removal to hospitals of first cases in lessening the prevalence of the disease. In 1902 there were 689 cases of scarlet fever in Ottawa with thirty-nine deaths, and 487 cases of diphtheria. As a matter of fact, there has resulted from the more effective methods adopted in 1903, a reduction of over 50 per cent. in the cases of scarlatina and 85 per cent. of deaths, and 41 per cent. in the cases of diphtheria and 54 per cent. of deaths.

But little more, I think, need be said on the subject, as the methods for dealing with infectious diseases in schools will be dealt with in another paper. To me, and I think to every one, it must be apparent that practically there is no limit to the economic and life-saving results which public health work, moving along the lines of experimental science, is capable of. What it is apparent is necessary is:

1. A conviction arrived at by such statistics as have been cited that disease is disseminated in such ways as I have indicated.

2. That we be convinced by the results of such methods as have been especially illustrated by the Ottawa statistics, that an enormous saving of cases of disease and deaths is possible.

3. That we possess scientific methods so certain when persistently and systematically carried out, that they will suppress outbreaks of epidemic disease almost with the same certainty as the demonstrated amount of work which a properly constructed machine will perform with the combustion of a definite weighed quantity of fuel. All that is further required is to educate the public that such work is life-saving and patriotic, and that, like all other philanthropic work, the results are not only good to the receiver, but also to the giver. As Sir Launfal, in his search for the Holy Grail, came to realize:

> "The Holy Supper is kept, indeed,
> In whatso we share with another's need;
> Not what we give, but what we share;
> For the gift without the giver is bare;
> Who gives himself with his alms feeds three:
> Himself, his hungering neighbor and me."

THE NECESSITY OF PHYSICAL EDUCATION IN OUR SCHOOLS AND THE UTILITY OF MILITARY INSTRUCTORS.

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BEFORE considering how a system of drill can be provided for, and by its enforcement during school and college life the general health and physique of the people improved, and incidentally the male population trained in military knowledge, it may not be out of place to briefly review the present situation, and consider some of the baneful consequences of neglect of this important class of education.

To discuss at length the importance of this branch of education is entirely uncalled-for before this gathering of educationalists and sanitarians; of its necessity as a part of the educational system most, if not all, are already convinced. We may differ in methods and the details for the carrying out of drill; but of this we are all convinced—the necessities of this twentieth century as regards both the boy and the girl require a sound body as well as a sound mind. For many years the youth have been treated to an intellectual feast where their brains became satiated with saccharine and starchy educational tit-bits, or the cream puffs of some educational faddist, or *ad nauseam,* have had to swallow that which was mentally indigestible. All this, too, in environments both at school and in the home, which would not suit even the most lenient sanitarian. Thus have the youth been trained in the past, the chief aim of education apparently having inclined to the Scriptural injunction. "With all your getting get understanding." The result of past methods has been largely an intellectual victory; but the victory has been gained at considerable cost. We have now, however, reached that stage when we are convinced that the race of life is not to the swift mentally, nor can the physically strong always win its battles. The conclusions drawn from the physiological investigations made in Europe and America into the distortion of the body caused by the demands and pernicious practices of school life are startling in the extreme.

Prof. E. R. Shaw, New York University, writing in 1901, says: "Despite all that has been written of the dependence of mental development, there has not yet been accorded to physical culture the place in our schools which its importance demands.

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How best to secure physical culture is undoubtedly the question of greatest importance in education at the present time?"

And Dr. Scudder, Boston, states: "The tendency in schools generally is to over-emphasize intellectual development and the acquirement of recorded knowledge by filling every available minute of the school programme with requirements designed to accomplish this end," and Sir Frederick Treves, writing upon physical education, says: "If one watches the stream of men, boys and girls which pours out daily at the close of day from a city factory, the question may well be asked, are they superior to the savage in all things, and are there no points in which the barbarian could claim some advantage over his modern descendant? In the face of a marvellous social, moral and intellectual development, we are apt to lose sight of the fact that man is an animal, that he cannot yet do without a body, and that a strong receptacle for the mind is better than a frail one." This fact has recently been emphasized, not only throughout the British Empire, but also in the United States. When large and sudden demands were made for men to engage in active warfare, it was found that many of the young men were not able to comply with the standards of the War Office Department. It was not a case of young men lacking in intellect, but being found unsuitable even to assume the duties of a soldier for home service.

The following extracts from the report of Sir Wm. Taylor, Director-General of the R. A. M. S., as also extracts from the report of the Inspector-General of Recruiting of Great Britain, indicate the physical condition of the young men of that country:

"Only two out of five men enlisting remain in the army as effective soldiers at the end of two years' service, or 60 per cent. of the men offering themselves for enlistment are physically unfit for service. The want of physique thus shown to exist with regard to a large section of the community, is not only serious from its military aspect, it is serious also from its civil standpoint, for if these men are unfit for military service, what are they good for? As Lauder Brunton says: 'Poor in physique as they all are, and poor in mental capacity and power of application, as many of them must be, what becomes of them? Many of them probably marry girls as weak as themselves and have children, some of them go to swell the lists of infant mortality, some join the criminal classes, while others grow up more weak and incompetent than their parents.'"

"The general deterioration of the physique of the working classes from which recruits must always be drawn, is causing much anxiety.

"From 1893 to 1902, 679,703 recruits were medically examined, and of this number 34.6 per cent. (234,912) were re-

jected as medically unfit for service, and 0.9 per cent. (5,849) broke down within three months after enlistment, while 2.1 per cent. (14,259) were discharged as invalids before completing two years of service; and as Sir F. Maurice says, as 60 per cent. are rejected of those who offer themselves to the recruiting officers, the number turned away must be appallingly large. And what can we say of their physical condition? Just think of it—only 25 per cent. of those willing to enter the regular service of the British army are found physically fit for service; the remaining 75 per cent. are rejected for being 'under chest measurements,' and 'under height measurements,' and 'under weight,' as well as for 'decay of teeth.' All are causes which clearly indicate the operation of agencies antagonistic to a healthy, physical development."

So alarmed at the statistics presented have the leading men of the country become that the National League for Physical Education has been formed, under the presidency of Sir Lauder Brunton, and, amongst other proposals made by him, is the reduction of each hour of study to forty or forty-five minutes, the remaining fifteen or twenty minutes of each hour to be devoted to play and physical drill.

We have, perhaps, not reached the same serious condition of affairs in Ontario as apparently exists in England; but we are certainly confronted with the fact that gradually our rural population is becoming urban, with the inevitable result that physical degeneration must sooner or later ensue.

Turning again to the child we may briefly discuss the effects upon him of physical exercise. If a child of ordinary mental capacity were permitted to live in the association of educated people without systematic teaching of any kind, we would naturally expect when he reached manhood some intellectual development. The knowledge would have been gained by observation, experience and example. To be brief, he would be imperfectly developed mentally. What is true of the mental child is precisely true of the physical. We can leave neither the one nor the other to "nature," for he is not born into, nor does he ever live in a natural condition. There are ever present the evils of environment. Therefore, "to leave a child to his own devices when not engaged in school work is not to provide him with a sound or efficient education of the body."

What, then, are the effects of such an education upon the child? First, those upon the body:

1. Increase of size and muscle.
2. Strengthening of his tendons and aponeuroses.
3. Increases size and strength of bones.
4. Invigorates respiration.

5. Augments size of thorax.
6. Increases size of heart.
7. Accelerates circulation.

In short, exercise means "growth and functional vigor and the maintenance of a high standard of organic life," and the truth of these statements has been demonstrated by many. An interesting case is that given by Lord Brabazon, in a paper on "Open Spaces and Physical Education," read before the Sanitary Institution at York, 1886, which gives a report of the effects of six months' drill and gymnastic training given to twelve boys in the Much Wenlock National School from August 21st, 1871, to February 26th, 1872, when it was found that the average chest increase for drill was only eleven-twenty-fourths of an inch, while the combined training of drill and gymnastics gave an increase of 1 5-6 inches.

In addition to the organic improvements, it is found that "he who has been well trained physically possesses not only a complete, but an intelligent use of his muscles. His movements are powerful and under absolute control, are precise, and capable of the freest and most elaborate adjustment."

The Effect upon the Mind.—When the exercise is carefully systematized, and is both regular and moderate, it stimulates the circulation both of the body and of the brain, and cerebral movements are materially aided; besides this, the general health is improved and strength increased, and the capabilities for mental work enhanced.

Having briefly considered the effects of physical education upon the child, I would next refer to the chief elements of this form of education:

(*a*) The exercises should be carefully devised, systematically arranged, and suitably graduated.

(*b*) They should be carried out under guidance and with suitable and efficient apparatus.

(*c*) The time for the exercise should be carefully selected.

(*d*) The exercises should, if possible, be taken in the open air, or in a large and well-ventilated room, and the subjects properly clad.

From a consideration of these four elements, it is quite apparent that this branch of education cannot be carried out under the present staff of teachers. A new staff of teachers must be employed. These can most effectively be engaged from the various officers and non-commissioned officers of the permanent corps of the militia of Canada, all those who wish to qualify for commissions or certificates of instruction from the infantry schools, being required after training at these schools to put in a certain period of time instructing the boys of the Public and other schools

before receiving their commission or certificate. Further, this staff of teachers can be considerably augmented by the undergraduates of all our universities, who should be required to give some of their spare time to this branch of education, so that in turn they may be able to give some service to the State by instructing our boys and girls. By some such method the work could be carried on with small cost, and greater efficiency would result to militia officers of all ranks. The officers of the permanent corps might constitute the permanent staff of instructors, and they should have the supervision of detailing instructors, either to different sections or schools as the case might be.

The time for physical drill should certainly be taken from the present school hours; and I fully agree with the suggestion of Sir Lauder Brunton, that at least fifteen minutes off each hour should be given either to sport or drill, and both of these should be carried on as far as possible in the open air. In this country where buildings are necessary during the winter months, the rooms should be well lighted, roomy, well ventilated and warmed.

So far my remarks have been directed to physical drill during the school periods; but there is every year in the schoolboy's life a vacation during the months of July and August, when the opportunity is afforded for the gathering of the boys in camps on somewhat similar lines to those adopted by the "boys' brigade." While in attendance at these camps, the time of the boys should be divided up between military drill, physical exercises, rifle practice, boating, swimming, and sport generally, and all under the careful supervision of qualified instructors. I can imagine no better training ground for the youth of our country than the well-regulated camps of instruction, where physical instruction can be given to its fullest extent, and under the best sanitary conditions.

The cost of this branch of education would be comparatively small if a system such as suggested is followed out. The maintenance of camps of instruction would be less than the present cost of militia camps, and all expenses should, I think, be borne by the Dominion authorities, the provinces being paid a per capita grant according to efficiency. This suggestion may at first seem to be going too far, but under this system the Militia Department would be saved a great portion of the cost it now incurs in trying to train those of maturer years in similar work; and it can never reach the same standard of efficiency so long as it begins its training at the period of life when the youth is least adapted by nature to receive it. For the improvement of ourselves as a nation, physically and mentally, some such system of instruction as outlined must be adopted.

MARMOREK'S SERUM FOR THE PREVENTION AND CURE OF TUBERCULOSIS.

BY ANDREW EADIE, M.D., TORONTO.

Dr. Alexander Marmorek, of the Pasteur Institute, Paris, has for some years been experimenting with the bacillus of tuberculosis, and has been trying to produce an antituberculous serum, for the cure and for the prevention of this most dreaded disease—tuberculosis. In the New York *Independent* he gives a detailed description of his efforts in search of a serum, and tells of the success he has obtained. After much labor with the methods adopted by Robert Koch, he became convinced that the tuberculin produced by this distinguished pathologist is not the true toxin that is made by the bacilli of tuberculosis in an individual affected with this disease. He, therefore, concluded that there must be some other chemical substance secreted by the bacilli which causes the destructive pathological lesions in the lungs and other organs.

One of his reasons for believing that tuberculin is not the true toxin of tuberculosis is the unequal effects which the same dose of tuberculin produces in various persons. It was found that tuberculin, when injected into healthy persons, produced no reaction. It, therefore, is not a true toxin. When injected into those suffering from a mild form of tuberculosis, it often produces a very severe reaction, while in those suffering from the most serious forms of tuberculosis, and with extensive lesions, it does not always produce a great reaction. He then began to search for some other substance which might prove to be the true toxin.

It was soon found that perfectly healthy colonies of the tubercle bacilli do not secrete any toxin in the ordinary media employed in bacteriological research. He concluded that the reason why bacteriologists had failed to produce this toxin outside of animal bodies was, because the conditions under which it had been cultivated were not sufficiently like those which exist in the tissues where it is usually formed. The bacilli in the animal organism are usually found in the interior of white blood cells, and it is while they are in this situation that their specific toxic substance is formed. Dr. Marmorek's first idea, then, was to grow the bacilli in contact with freshly obtained white blood cells. All his efforts to do this, however, were unsuccessful. But he found that the serum of animals, into which he had previously injected white blood cells, was a more favorable medium, and

after much patient labor he succeeded in growing the bacilli in this medium. When the filtrate of cultures grown in this medium is injected into healthy horses an edema is always produced, but tuberculous animals are not more sensitive to it than healthy ones. This filtrate, therefore, does not contain tuberculin, but it contains a toxic substance.

The next task was to devise some means of keeping the bacilli in their primitive state long enough to permit them to produce an abundant secretion of this toxic substance. In order to do this, he decided to try to produce a hardy and vigorous type of bacteria. From observations made on the immunity of the liver from the invasions of the bacillus, Dr. Marmorek was led

DR. ALEXANDER MARMOREK.

to believe that there must be some chemical substance in the liver cells that is capable, for a time at least, of arresting the growth of the tubercle bacillus. He concluded, therefore, that if the bacilli could be forced to live in a medium of which the liver is a part, a hardy race might be produced that was adapted to overcome any unfavorable substances that might retard the development of weaker colonies. The necessities, he thought, for the bacillus to defend itself constantly would increase all its vital qualities, and would add to its power of producing toxins. After the bacilli became accustomed to grow in this unfavorable medium, they became more vigorous, grew rapidly and abundantly, and produced a greater amount of a more virulent toxin.

The next task was to prove that the substance thus produced was the true toxin of tuberculosis. The first method was to immunize animals by means of the toxin against a subsequent effort to infect them with the bacilli of tuberculosis. Dr. Marmorek succeeded in doing this. By using twenty-five to thirty c.c. of this toxin in several injections of four to five c.c. each time, he was able to make guinea pigs immune to subcutaneous injections of an emulsion of one or two drops of a medium opalescent with active tubercle bacilli. This he took to be a complete confirmation of the identity of his toxin with that which the bacillus secretes in the tissues of the body. Another method was by immunizing horses with repeated injections he was able to obtain an antitoxic serum from their blood. He says it was hard to accustom the animals to the injections, and at least seven or eight months were necessary in order to prepare an efficacious serum. He then tried the curative effects of his serum on animals that were suffering with tuberculosis, and was able to prove experimentally that the serum overcomes the tubercle bacilli.

His next step was to try the effects of the serum on mankind, and he claims that he has used it now in a large number of cases for nearly a year, and with excellent results. In patients suffering from advanced forms of tuberculosis, with abundant expectoration containing numerous bacilli, fever, and bad general condition with cavities, he had most encouraging results. The expectoration diminished, the number of bacilli decreased, the dyspnea promptly disappeared and auscultation and percussion showed a retrocession of the disease. It was found that it is not so much the extent of the lesion as the length of time it has existed that makes it refractory to treatment. A large recent lesion can be cured more easily and more quickly than a much smaller one that is older.

He has also obtained good results from the serum in cases of tuberculous disease of bones, joints and glands, and in tuberculosis of the bladder. He has not yet succeeded in curing any patients with tubercular meningitis, although many of them appeared to be greatly relieved by the treatment. The explanation given is that the tuberculous toxin is already united to the cerebral cells when the first marked symptoms of the disease appear, and it is then impossible to disunite it or to influence the meningitis itself. The patients were brought for treatment rather late, in no case before the seventh or eighth day, often not until the twelfth day or later. Earlier serum treatment, it is hoped, may yet prove effective in tubercular meningitis.

Dr. Marmorek concludes his report by stating that only a much larger experience than he has yet been able to secure, and made on a much more extensive plan, will suffice to give a definite

judgment as to the value of his serum. But observations are now being made with it in a number of places, and the results so far obtained by others have been quite as encouraging as his own. These results, together with those obtained in the Pasteur Laboratory with animals, and in the hospitals of Paris with patients suffering from tuberculosis, have been so encouraging that Dr. Marmorek feels justified in thinking that he has produced a valuable remedy for tuberculosis, the ultimate value of which can only be determined by a fair and impartial trial in the hands of the medical profession.

RUPTURED TUBAL PREGNANCY.*

BY LESTER KELLER, M.D., IRONTON, OHIO.

WHEN one has waded through the literature of extra-uterine pregnancy, and read the various theories as to its etiology, he comes to the conclusion that it is not all known. When he reads of a clinic of 60,000 gynecological cases, with only five cases of extra-uterine pregnancy, and of another who found about 1 per cent. suffered, he comes to the conclusion the observers have a different point of view.

I cannot subscribe to the theory that every extravasation of blood in the pelvis is due to an extra-uterine pregnancy, but I do believe it is more common than many suppose. Where and when impregnation takes place is rather a hard subject to handle, as this is one of the things that nature guards with a jealous eye, and we must deduce our theories largely from the accidental cases that come under our notice. The following will probably as nearly explain our cases theoretically as any deduced. First, the spermatozoa has motive force, and travels through the tube against the ciliary motion, which is always toward the uterus. Second, the ovum does not have motive power, and is carried by the ciliary currents. Third, impregnation takes place in the fimbria, or on the surface of the ovary when the spermatozoa loses its motive power. Fourth, any obstruction met in the descent of the impregnated ovum caused by malformation of the tube or inflammatory process may cause the condition. The lining of the tube may be denuded of its epithelium, as the result of acute inflammation due to gonorrhea or otherwise, or there may be a pouch or sacculation due to viscous attachments, resulting from inflammation, or the lumen of the tube may be impinged upon from outside influences. I cannot add much to the theory of its causation.

My experience in the year ending April 1st, 1903, has been so unusual I feel justified in giving it. I operated upon six cases in a hospital of twelve beds, in a town of 14,000, with no other hospital for reception of general patients. In addition, I operated upon one outside of the hospital, saw one in consultation in a neighboring town, on which the attending physician held a post-mortem a day or two after, verifying the diagnosis, and one case in my own practice in which the diagnosis was made, but the patient died before she could be removed to the hospital. No post-

* Read before the 9th District Medical Society at Jackson, O., December 3rd, 1903.

mortem was held, and consequently I could not verify the diagnosis.

CASE 1.—Mrs. T., 32 years, married, mother of one child, missed her period six weeks, when she had an irregular bleeding, continuing for two weeks, which contained shreds appearing to be mucous membrane. Seized with sudden cramps, tenderness over left ovary, clammy skin, rapid pulse, palor, and every sign of internal hemorrhage. Her physician diagnosed the case, but he was displaced by one who diagnosed "colic." In ten days he was called on for a similar attack, and insisted on consultation. I confirmed his diagnosis, and had her removed to the hospital for immediate operation. We transfused a litre of saline solution while patient was going under chloroform. Section revealed an interesting state of affairs. Pelvis filled with blood clots, most of which were well clotted and adherent to surrounding parts. I removed a left ruptured tube with the remains of an early fetation, the right tube that was diseased and strongly adherent to the ovary, a dermoid cyst of right ovary about the size of a duck's egg, with the adherent and n uch-inflamed appendix. The mass removed also contained an unruptured tubo-ovarian pregnancy of the right side, of about eight weeks' duration. The patient made a good but tedious recovery, due to some infection.

CASE 2.—Was sent in from Kentucky, with a tumor of uncertain nature. The history of the case was vague. Section revealed a ruptured left tube, a blood clot of probably three weeks' standing, adherent to all the pelvic viscera. Patient apparently made a nice recovery until the end of the second week, when she developed all the symptoms of obstruction of the bowels. With much work she was completely relieved. This attack was repeated in a week, when on failure to get response, proposed to reopen the abdomen, but was refused, as the patient put up the plea that we got relief before. She died, and post-mortem showed occlusion from extensive adhesions where blood clot had been removed.

CASE 3.—Was brought in by the same physician that had Case 1. Patient in collapse, with a doughy mass in pelvis, pushing the uterus forward. She gave a history of delayed menstruation, had been discharging blood almost continuously for three weeks, containing many shreds of membrane, with severe cramps and nausea. I gave chloroform and transfused. Section revealed a freshly ruptured tube still bleeding, a fresh blood clot and free blood. We did not secure a fetus, but the microscope revealed decidual cells. She recovered from the operation and left for home in three and a half weeks.

CASE 4.—I was called in consultation by Dr. A., and found a small woman, mother of two children, who supported herself,

pregnant four weeks. She had commenced discharging blood and shreddy tissues, and continued it irregularly for three weeks. While hanging a curtain she was seized with sudden pain and collapse. Being within two hundred yards of the hospital we had her removed at once, and transfused as she was pulseless at the wrist. Section revealed the right tube freshly ruptured, pelvis filled with blood. Again we could find no fetus, and the specimen was referred to the microscopist, who reported it undoubtedly a tubal pregnancy. Patient made a splendid recovery.

CASE 5.—I was called to Hanging Rock, two miles, to see a case with a history similar to Case 4, but patient had been in bed for two weeks. Examination revealed a pelvic mass, doughy, that pushed the uterus forward. While removing her preparatory to operation she had another collapse, and when abdomen was opened found the left tube ruptured, doubtless of two weeks' standing, with blood clot in the broad ligament. Fresh blood was coming from the right tube that had recently been ruptured, and a small fetus was found within. No fetus was found in the left side, and no microscopical examination was made, but I placed it as a double prenancy.

CASE 6.—Was admitted to the hospital with some vague pelvic trouble, single, and denied any possibility of pregnancy. Examination revealed a mass in left tubal region, almost the size of the first, that was not freely movable. Patient had a suppressed menstruation for three months, but for the past four weeks' had had an almost constant, but somewhat irregular flow containing shreds. Her earnestness in denying any possibility of it, and heretofore good reputation, made me decide that it was not a tubal pregnancy. I agreed to open her for, probably, a hydrosalpynx. When the nurse was giving her an enema preparatory to operation she collapsed, and so characteristic was her condition we hurried her on to the table and opened her for internal hemorrhage. We found the pelvis filled with blood, and blood still coming. We removed the tube, ovary and mass, and found in the tube a hematoma containing a dead fetus, partly decomposed, of almost three and a half months, with a fresh rupture in the tube, from which the fresh blood had come. Patient made a good and quick recovery.

The case operated upon outside the hospital was a desperate one. The diagnosis was questioned by what the family thought rather eminent authority, until the golden opportunity for success was past. In fact, when all preparations were made for the operation it was stopped, but afterwards consented to when patient was *in extremis,* and the aforesaid eminent authority was somewhat chagrined to see a ruptured tube, etc. Our patient died.

A few points and I am done. The patients all gave a history of suppressed and then continued and irregular menstruation containing shreds. The rupture was accompanied with much pain and collapse, with every sign of hemorrhage. None of the cases were seen before rupture had taken place. The pelvic mass had a peculiar doughy feel, and always pushed the uterus forward. I attribute much success to the transfusion of salt solution into the veins at the beginning of the operation. I always filled the cavity with salt solution before closing it up.

School Hygiene.

CONFERENCE ON SCHOOL HYGIENE AND EDUCATION.

A SMALL but very select conference was opened on February 2nd at the Normal School, to discuss conditions of hygiene and sanitation in the public schools of the Province.

Mr. William Scott, Principal of the Normal School, was elected to the chair, and Dr. C. A. Hodgetts was appointed secretary of the conference.

Hon. Richard Harcourt, Minister of Education, opened the proceedings with a brief address. He quoted the ancient Latin proverb, "a sound mind in a sound body." Though there had been great men whose lives had been a war with ill-health, yet as a general rule those who study the basic problems of education realized the importance of sound physical conditions. The saying of Agassiz, "The mind of a sage with the body of an athlete," had always impressed him. Economy in school building was all right, but it was much more important that education should be carried on amid sound physical conditions. In the past two months absolutely new schools had had to be closed because of unhealthy conditions. In one case especially no money had been spared to have a first-class modern school, yet the children had fallen ill and two had died. He informed the conference that in his department he would be guided by their conclusions. Large schools were being built every year, and school boards were now seeking for guidance. He would like to see model plans decided on. His own view was that schools should not be too large. He wanted three sets of plans; one for the country school-house, another for the town, and yet another for the large cities. Problems of heating and lighting, and all sanitary conditions should be taken into consideration.

Dr. Charles Sheard, the Medical Health Officer of Toronto, spoke on "The Problems of How to Prevent Outbreaks of Infectious Diseases among School Children, and Suppress them when Present." (This paper will be found among our "Original Articles" in this issue.) He dealt first with the diphtheria germ, a low form of vegetable growth capable of reproducing itself with great rapidity. It was a fact that diphtheria was more prevalent during the school term. The school system and the manners and customs of children when gathered together afford fruitful op-

portunities for the spread of infection. A mild case of what seemed a sore throat sometimes caused an epidemic of diphtheria in a school. To meet these conditions, the mouth toy must be abolished; there must be space, air, and sunshine for every child; the teacher must be educated sufficiently to detect the signs of contagion; and there must be competent medical inspection. All this required a definite system and money, but no expenditure yielded a better return. There should be prompt reports of contagious disease, and a careful record. No infected child should be allowed to return to school without a certificate from the Health Officer. He also suggested practical addresses to teachers on how to detect contagion. The School Boards required education also.

Dr. Sheard further advocated shorter school hours and longer vacations. Home work should be abolished, because it made dull scholars duller and bad ones worse. Life should be made as happy as possible.

Dr. P. H. Bryce read a paper, which dealt to some extent with the same subject, giving abundant statistics from England and Canada to show that contagious diseases like diphtheria and scarlet fever flourished most during the school term. (This paper will be found among our "Original Articles" in this issue.) In England since inspection and isolation had been adopted, there had been a great improvement. In Canada the effect of the removal of first cases to hospitals had had the most beneficial results in reducing the percentage of cases and deaths. It must be apparent to everybody that there was no limit to the life-saving results that public health work could produce. Its object was prevention rather than the suppression of disease.

Mr. Scott spoke of the folly of doctors who recklessly granted certificates to infected pupils, which the teacher was compelled to act upon.

Mr. Samuel McAllister wrote suggesting that the common drinking cup be abolished, and that the question whether ventilators should be placed near the ceiling or near the floor be discussed.

Inspector James L. Hughes strongly advocated the necessity of infected pupils bringing certificates from the Medical Health Officer before being admitted. He also gave some account of the methods adopted in Toronto.

Dr. Oldright, of The Ontario Provincial Board of Health was in favor of instructing teachers how to be on the alert for signs of disease. Medical men objected sometimes to have their professional status questioned by having their certificates challenged, but it would be dangerous to take the responsibility of saying that everyone was competent to give such a certificate. He thought all such certificates should pass through the hands of the

Medical Health Officer. He suggested a conference with the teachers at the educational convention this spring.

Dr. John Hunter strongly opposed giving teachers the right to refuse a doctor's certificate. Physicians as a rule were quite competent and conscientious enough to make tests.

Dr. Charles A. Hodgetts, secretary of The Ontario Provincial Board of Health, praised the methods adopted by Dr. Sheard in Toronto. He said that it was the Medical Health Officer who put the child in quarantine, and no one else should be empowered to release it. He was satisfied by his travels up and down the Province that many a life would have been saved had this course been adopted. He advocated house inspection by women, who could talk more intimately with the mothers of children.

Inspector Chapman, of Toronto, was strongly in favor of a meeting with the teachers at Easter.

Mr. C. H. Bishop said it was necessary to devise some solution of the drinking cup problem.

Mr. Scott said that, at the Model School, they boiled the cups once a week.

Mr. Chapman said that at Toronto Junction cups had been abolished, and a constantly running fountain was substituted.

Dr. Bryce spoke of the admirable effect of the Order-in-Council making six weeks the minimum quarantine in cases of scarlet fever.

Dr. Sheard said that the regulations were an assistance to the medical man in dealing with his patient. They enabled him to unload responsibility. He paid the highest tribute to the co-operative health work done by the teachers of Toronto. They had, he was sure, saved many a life in the poorer districts. He advocated glass drinking cups, which could be boiled every night.

In the afternoon Inspector Hughes read a paper on "Can School Hours be Shortened?" The best remedy for the evils resulting from long school hours and unnatural intellectual work, especially in cities, says Mr. Hughes, is not to set the children free on the streets, but to provide materials for constructive work with their hands, to afford facilities for their practical study of nature and her great growth processes, and to make it possible for them to enjoy vigorous free play under the direction and protection of their teachers. The time is not far distant when the work of the teacher in guiding the plays of children, under nine years of age, will be recognized as of quite as much value as her work in teaching reading or arithmetic or grammar. The primary school, based on the kindergarten, should provide the fullest opportunities for continuing, under the definite conditions that experience proves to be most productive, but without unduly interfering with the child's spontaneity, the best elements of the

child's play and work, before he goes to school. Such school work will not arrest intellectual growth, nor impair physical vitality, but will promote the harmonious development of both.

Papers were also read by Mr. C. H. Bishop and Mr. Wm. Scott, on the teacher's duty as an instructor of hygiene; and Drs. Hodgetts and Fotheringham on compulsory drill. (The latter appears in this number of the JOURNAL.)

Teaching of Epileptics.—A conference of representatives of the School Boards of Bristol, Cardiff, Newport, Birmingham, Worcester, Gloucester, Plymouth, Coventry, Swindon and other places was held at Bristol to consider the question of the establishment and maintenance of a boarding school for epileptics which would serve the Midlands, South Wales and the West of England. The subject was introduced by Miss Townsend, member of the Bristol Board, who pointed out the desirability of the boards combining to provide an institution for the education of epileptic children, who must have separate institutes with proper medical and other care. Such a thing could be done under the Act dealing with the education of mentally deficient children, but it would be a difficult and expensive work. After discussion, Alderman Lowe, of Bristol, moved a resolution recognizing the right of epileptic children to education, and insisting on the advantage to themselves and the community of their being educated in schools specially provided. The resolution was carried unanimously.

School Ailments.—The army of eight thousand teachers and four hundred and fifty thousand pupils who are to-day in the public schools of this city constitutes quite an important part of our *clientele,* and many of their ailments are the direct result of their educational work and surroundings, a thorough knowledge of which will often assist their medical attendant in diagnosticating their diseases. There is a crying need for radical improvement in their environments, a simplification and abridgment of our school curriculum, and increased advantages for physical development. The medical profession should be more thoroughly alive to their duty in this matter, and should make their influence felt in every way possible, and every school board should contain a goodly percentage of physicians. School buildings should be constructed under the supervision of sanitarians and educators rather than politicians, and the overzealous pedagogues should be compelled by a properly-educated public opinion to give suitable time and attention to physical development, and to keep their ever-increasing course of study within reasonable limits. Our schools will then produce fewer intellectual prodigies, and also fewer physical and nervous wrecks.—G. D. Hamlin, M.D., in *The New York Medical Journal.*

Selected Articles.

TREATMENT OF CROUPOUS PNEUMONIA.*

BY ED. E. MAXEY, M. D., BOISE, IDAHO.

PNEUMONIA being one of the self-limited diseases, it is questionable just how much its course may be benefited or influenced by treatment. The clinical experience of various observers is not uniform. Then, too, the mortality rate is influenced by so many conditions as well as by the personal history of each individual case, to such an extent that it has been almost impossible to determine with any degree of accuracy whether or not any particular line of treatment has really lowered the frightfully high mortality of pneumonia.

It will hardly be expected of me, therefore, to point out the best or only treatment of this disease, but as our most practical knowledge of applied therapeutics should naturally come from the general practitioner, I shall endeavor to outline, as briefly as possible, the modern or present methods of treating pneumonia, as summarized from recent literature, with the expectation that those present will criticise, add to, or take from, as suggested by their personal experiences. The man who cures his cases of pneumonia should have something to say about his methods, that others may benefit thereby, and those who have troubles should tell us about them.

I have found it more convenient to study my subject under the following five subdivisions: Prophylactic, hygienic, local, symptomatic and specific.

Prophylactic Treatment.—N. S. Davis, jun., says: "Physicians have never known so much of the nature of pneumonia or used remedial agents more intelligently than now. It is not their fault that the mortality of the disease is increasing. But is the medical profession altogether free from blame for its prevalence? Prophylactic measures have not been enforced as they should have been. It is well-known that the cause of pneumonia is a micro-organism in the sputa of those suffering from the disease, and that the malady is engendered by inhaling it. Therefore, the same care should be taken to collect and destroy the sputa that is taken in pulmonary tuberculosis. It is not, however, a sufficient pre-

* Read before the South Idaho District Medical Society, Boise, Idaho, April 9th.

caution to exercise this care during a patient's brief sickness, because the diplococcus of pneumonia is known sometimes to live and multiply for months and even years, in the mouth, pharynx and nose of those who have had the disease. Therefore, during convalescence, and for at least two or three weeks thereafter, expectoration, if it occurs, should be into a sputum cup containing an antiseptic and water. Moreover, the patient's mouth should be rinsed several times daily with an antiseptic mouth wash. During the illness the greatest pains should be taken to prevent soiling bed clothing, carpets or furniture with the sputa. After the illness the patient's room should be carefully cleaned and ventilated. The enforcement of such measures will help to lessen the spread of this disease, and will greatly lessen the frequency of occurrence in those who have had it.

"The fact that house epidemics are not infrequent and that the disease prevails as other contagious and highly infectious ones do in the winter season, when people are most crowded together and live most of the time in badly-ventilated apartments, suggests another prophylactic measure, which the public should be taught to apply, namely, through ventilation of houses, offices, factories theatres, churches, cars and other public places, in order that the air which must be breathed may be kept clean and free from infectious matter.

"Laymen should be taught not to be afraid of a patient who has pneumonia, influenza or tuberculosis, but to be afraid of lack of cleanliness about him during his illness, of failure to enforce prophylactic measures, and of close, badly ventilated apartments during the season when these diseases prevail."

S. S. Burt suggests, in view of the prevalence and fatality of pneumonia and the absence of a specific remedy, that the efforts of the medical profession and the public should be devoted to its prevention by sanitary measures such as temperate living, care as to food and drink, better ventilation of houses and especially places of public assembly, better street cleaning, the careful disinfection or destruction of pneumonic sputum, and the avoidance of spitting upon the sidewalks.

It is evident, therefore, that the question of prevention is an extremely important one, and precautions that would seem to be exaggerated will have to be considered to prevent the spread of this disease. Twenty-five years ago the suggestion that tuberculous sputum carried infection would have been laughed at. The laity must likewise be educated concerning the dangers from pneumonic sputum.

The question of dust and its dangers, especially in dry climates like our own, and in cities and places of public gathering will have to be studied seriously by city and local boards of health

and means provided for the suppression of this menace to health. All these prophylactic measures must emanate from and, in a great measure, be carried out by the medical profession. It is our duty to do this, and, often, without fee or other reward other than one's personal gratification in the knowledge of a duty done.

Hygienic Treatment.—Rest, fresh air and appropriate nourishment are, in my opinion, of the very first importance in the treatment of a case of pneumonia. Put your patient into a large, airy room with free ventilation, avoiding drafts of air, in a comfortable bed, with ample protection for the chest, and give him an abundance of liquid nourishment, and you will not only contribute much to his bodily and mental comfort, but you will reduce to the minimum, dangers of complications and, incidentally, enhance that patient's chances of recovery. A point on which particular stress is laid by Ingals is the avoidance of too frequent examination of the patient. Nothing is gained by daily examinations. The disease is going to go right on to the crisis just the same, and the disturbing of his rest and the worry and annoyance incident to the daily thumping and auscultation of his chest is to be deprecated.

In regard to food, milk is generally recommended, but beef juice, beef tea, mutton broth, clam broth, chicken broth or oyster soup all possess more or less nourishment, and any of them may be substituted for milk a part of the time, to prevent the patient from becoming tired of the milk. As a rule, where it can be borne, half a pint of milk, or its equivalent, should be given to an adult every three hours. If given oftener the stomach is kept in a constant ferment, with no time for rest, so that soon the appetite is lost or nausea and vomiting occur, or the food passes into the bowels undigested and there undergoes decomposition, causing tympanites and possibly diarrhea. When milk is not digested by the stomach, it should be tried in a partly digested form, and should the stomach reject all forms of nourishment, then high rectal enemas of four to six ounces of a partly digested and easily assimilated nutriment should be given, not oftener than three times a day. For, if given oftener, the rectum soon refuses to retain them (Ingals).

Local Treatment.—There is yet considerable difference of opinion regarding the local treatment of pneumonia. In the very early stages of the disease, leeches, cupping, and counter-irritants, in some cases, will relieve the pain and, in a few cases, may possibly abort the disease. They may likewise be of service in the last stages by hastening resolution. However, most, if not all of these methods are deprecated by a large class of physicians, and venesection is very rarely used at this time. Poultices, or any other local application requiring frequent changing, should be discarded

as not only useless but really harmful, on account of disturbing the patient's rest. Ingals says that, in lieu of poultices, many physicians have, within the last few years, employed soft, putty-like preparations, which are spread on the chest to a depth of one-eighth to one-fourth of an inch and covered with a cloth. They are said to have effects similar to poultices in relieving pain, and it is claimed that they also have some influence in checking the progress of the disease. He claims, however, that in the great majority of cases he has found the oiled silk and cotton jacket much more serviceable than the poultice or any of its substitutes. This jacket keeps the chest moist and warm, and, if properly made, it can be easily removed for sponging or for examination. This jacket should be made in two parts, lapping several inches at the shoulders and sides, where it is held together by safety-pins. It should have a layer of cheesecloth next to the skin, just outside of this a layer of oiled silk, then comes a layer of absorbent cotton about two inches thick, and this is covered with another layer of cheesecloth and the whole quilted together to prevent shifting of the parts. Ingals claims that in his hospital experience the death rate was some 5 per cent. less when such protection was used as compared with similar cases where no such protection was employed.

Symptomatic Treatment—Pain.—If counter-irritants are used early and fail to relieve the pain, heat should be tried by means of hot-water bag, and if this does not give relief, cold, by means of ice-bag or Leiter coil, may be tried. Phenacetin in five or ten-grain doses may be given at infrequent intervals, provided there is no indication of heart failure. In probably 50 per cent. of the cases, however, it will be found necessary to resort to the use of an opiate, however, codein or heroin. Oertel recommends the inhalation of chloroform for the pain and shortness of breath.

Cough.—Ingals advises the administration of ammonium bromide in ten-grain doses every two to four hours, combined with hyoscyamus in moderate doses. A combination of atropin and hyoscyamus is often found beneficial, but quite often it will be found necessary to give some form of opium to control the cough. I very frequently prescribe a combination of heroin or codein and ammoniated glycyrrhizin with gratifying results. I have also found whiskey to be a cough sedative.

Fever.—A temperature below 103 degrees F. needs no treatment. Higher temperatures should be treated by sponging every two to four hours. In hospital practice the tub bath and cold packs are not infrequently resorted to. Cold applications to the abdomen by the ice-bag or Leiter coil are also frequently beneficial in reducing fever. Only as a last resort, when the temperature persists in remaining high and the heart shows no indica-

tion of weakness, should Phenacetin (5 grains) or acetanilid (3 grains) be resorted to. The alkaline diuretics and diaphoretics may often be of service.

Insomnia and Restlessness.—If the remedies already mentioned for treatment of pain, fever and cough do not control the insomnia and nervousness, whiskey, choralamid, sulphonal, trional or some additional opiate may be tried, in order named.

Heart Stimulants.—In the pneumonia of drunkards, and where there is the slightest tendency to cardiac weakness, whiskey or brandy is indicated, at first in half ounce doses every three or four hours, the dose to be increased and continued as the urgency of the case indicates. Should the alcoholic stimulants fail, then strychnia must be used in addition in doses and frequency to meet the needs of the case. For sudden heart failure the hypodermic injection of ether is recommended, or digitalis may be combined with strychnia or given alone. In severe cases of pneumonia or where there is extreme weakness of heart and depression of respiratory forces. Anders recommends the exhibition of the tincture of digitalis in doses of five to fifteen minutes, every three hours hypodermically. The hypodermic use of the normal saline solution is also often found of marked benefit. However, except in extreme cases, I prefer to use the salt solution by means of high rectal enemas.

Specific Treatment.—There is yet great diversity of opinions on the question of specific remedies in the treatment of insomnia. Andrew H. Smith says: "We may reasonably expect benefit in a considerable proportion of cases from the use of means addressed directly to the germ present in the lungs. The practical question to be solved is, what agent will act most powerfully on the specific organization with least inconvenience of danger to the patient." The salicylates, creosote, chloroform, digitalis, quinine and anti-pneumonic serum, each have their champions claiming specific action.

Salicylates.—Siegel reports seventy-two consecutive cases, many of them most unpromising, treated with sodium salicylates with no deaths. Ingals says that "this is a very remarkable record and certainly recommends the treatment most strongly for further trial," and adds that, "apart from the experience of Siegel, it does not appear unlikely that a drug which is capable of producing such decided results in acute rheumatism should be effective against an organism so sensitive as the pneumococcus." Siegel gave two drams daily with no unpleasant symptoms except buzzing in the ears. He claims that the disease was not more than half the usual duration, and that crisis did not occur in any case, the temperature gradually declining from the end of the first day until the third or fourth day, when convalescence was

established. Microscopical examination of the sputa showed a constantly diminishing number of diplococci until they were found to have entirely disappeared with the beginning of convalescence. Other observers report results almost as favorable.

Creosote.—Van Zandt claims that a large percentage of pneumonias are cut short or aborted; that almost all of the rest are mitigated, and the remainder, or a very small percentage, are not affected by creosote. He gives seven and one-half grains of the carbonate of creosote every three hours, in urgent cases, giving the dose more frequently for a few times, and thinks that this remedy, in pulmonary affections, is one of the greatest life-saving discoveries of the nineteenth century.

Kerr, Robinson, and others advocate the specific action of creosote in the treatment of pneumonia.

On the other hand, neither Anders nor Nothnagel even comments on the use of creosote in the treatment of pneumonia.

Chloroform.—Quoting from Ingals' paper: "Oertel, in 1882, reported decided benefits from the inhalation of chloroform, which he employed mainly in the advanced stages of the disease, about the fifth or sixth day, where there was extensive hepatization with pleuritis which rendered the breathing irregular, frequent, and superficial, and when the expectoration was scanty and viscid, and there were coarse rales over a large area of the lungs, with rapidly increasing cyanosis. The inhalations were repeated as often as five or six times and pushed to commencing narcosis, with most satisfactory results. The respirations became deeper, the pain was relieved, the rales were diminished, expectoration increased, cyanosis became less marked and general betterment ensued. Oertel sums up his experience in the following words: I consider the inhalation of chloroform, when the above indications are present, as a means of treatment in pneumonia that would be difficult to replace by any other."

Digitalis.—Petresco highly extols enormous doses of digitalis. He gives from three to fifty drams of an infusion of the leaves daily, and reports that out of several hundred cases among soldiers he has had a death-rate of only 1.2 to 2.6 per cent. with the crisis commonly occurring on the third day. Nothnagel states, however, in commenting on Petresco's cases, that it must be remembered that these cases were treated in a central military hospital; and further, that to attain such results it is by no means necessary to employ digitalis as a treatment, for in his own mortality statistics he had, in 379 cases of pneumonia in ages ranging from five to twenty, eleven deaths, or a 2.64 per cent. death-rate. These cases were all taken from the civil population, and many were moribund when sent to the hospital. Even more conspicuous are the figures given by Risell. He reports 127 pneumonias

in persons in the second and third decennium of life with only two deaths, or a mortality of 1.8 per cent.

Quinine.—Nothnagel says that quinine, when properly used —that is, in accordance with all the symptomatic indications, which in pneumonia are quite numerous—is the most suitable remedy, and that the value of quinine in the treatment of this disease is due less to its antipyretic action than to its specific action on the causes of the disease or their products. According to this author, pallor, marked decubitus, conspicuous weakness, slight apathy, with slight fever, are indications for the use of stimulants; and if in such cases mild delirium is added, the pulse becomes weak, small and frequent, and the disease is at its height, that is to say, on the fifth or sixth day, in some severe cases even earlier, then the hypodermic use of quinine hydrochlorate is strongly advised. He injects seven and one half grains in a half ounce of water once daily for two days. In two years' experience he was but twice required to resort to three injections, and both these cases recovered. For fifteen years prior to beginning the use of quinine he treated 1,461 cases, with an average mortality of 17.4 per cent. From 1895 to 1897 he treated 121 cases with quinine hypodermically with a mortality of only 7.4 per cent.

Serum Treatment.—Goldsborough reviews the cases of pneumonia treated by anti-pneumonic and anti-diphtheritic sera reported in the literature. Four hundred and forty-seven cases were treated with a percentage of deaths of 15.7, which, when compared with the average hospital death rates of 25 to 35 per cent., as determined by Osler, would appear to justify or even, as Goldsborough expresses it, to almost make it obligatory upon the hospital physician to employ it in conjunction with hygienic and symptomatic treatment. Sixty-one cases were treated with anti-diphtheritic serum with nine deaths, or slightly less than 15 per cent. The most noticeable effect of the serum is the marked cessation of cough and expectoration.

Nammack says that, in his practice at Bellevue Hospital, he has never been able to convince himself that the serum treatment had any value, and many other clinicians who have employed the serum are sceptical as to its therapeutic efficiency. However, there seems to be little doubt but that the Klemperer brothers have demonstrated that anti-streptococcus serum has a certain protective power in rendering animals, and, to a more limited degree, humans immune to pneumonia.

General Conclusions.—This is not, as you will perceive, a paper pregnant with original ideas. I have endeavored rather to present a view of some of the recent literature on this subject. In several instances I have thought it advisable to quote more or less extensively from various authors, believing their words to be better than mine.

My studies on the treatment of pneumonia lead me to make the following conclusions:

1. Pneumonia is a self-limited disease and is practically uninfluenced by treatment.

2. There is a wide range of deviation or variation in the mortality rate in different years, seasons and locations, and in different classes of people of the same age and environments.

3. The laity must be educated as to the dangers and methods of contracting pneumonia, and how to avoid it.

4. Rest, fresh air, appropriate nourishment, with ample protection for the chest, are of first importance in the treatment of a case of pneumonia.

5. No method of treatment has yet been recommended that can be accepted as a specific remedy.

6. Serum therapy would seem to hold out the most promise of giving us a specific treatment for pneumonia.—*North-West Medicine,* July, 1903.

QUEBEC COLLEGE OF PHYSICIANS AND SURGEONS

THE College of Physicians and Surgeons of the Province of Quebec has issued the following formalities, to be complied with in order to be admitted to the study and practice of medicine, surgery and obstetrics in that Province:

I.—ADMISSION TO STUDY.

1. The Bachelors in Arts, Sciences or in Letters of a Candian or English University will be admitted on presentation of their diploma, the taking of the oath before one of the Secretaries of the College and the payment of the fee ($20) at least eight days before the meeting of the Provincial Board of Medicine; or else, at their option, they may take the oath before a justice of the peace or a commissioner of the Superior Court in their own locality, according to a form of affidavit, that can be obtained by them from one of the Secretaries. They must then address the said affidavit, with their diploma, their certificate of good morals and their fee to one of the Secretaries, at least ten days before the date of the meeting of the Board.

2. Those who are not bachelors must pass, before the examiners of the Board, a satisfactory examination upon all matters forming a classical course of studies.

3. The Board may admit any candidate having passed an examination, equivalent to the examination required in this Province, before an authorized College or a licensing Board in any other Province or British possession, provided however, that the same privilege be granted there to students from this Province.

II.—Admission to Practice.

Shall be admitted to the practice of medicine, surgery and obstetrics in this Province:

1. Those who having been regularly admitted to study shall have followed during four years regular medical lectures in one of the universities of this Province and passed satisfactory examination in presence of the assessors of the College or before the Board of examiners.

2. Those who having followed a regular and complete course of Medical studies in any University of England or France shall have obtained the diploma of Doctor in medicine from said University.

3. Those whose names are entered upon the medical register of England under the Imperial Act of 1886 (49-50 Vict., chap. 48) or under any act amending the same.

4. The physicians of the other provinces of Canada, the British Colonies and foreign countries may be admitted, provided they pass the preliminary examination, study medicine during one year in one of the Universities of this Province and pass a satisfactory medical examination before the Board.

III.—Midwives.

Any woman wishing to practise obstetrics in this Province must furnish:

1. A certificate of regular presence at not less than fifty lessons given by a French or English-speaking physician connected with a lying-in hospital.

2. A certificate of regular service, during at least six months, in a lying-in hospital.

3. A certificate showing that she has attended at not less than twelve births.

4. A certificate showing that she enjoys a good reputation and is able to read and write.

General Information.

The Provincial Board of Medicine meets twice a year; the first Wednesday of July, in Montreal, and the last Wednesday of September, in Quebec.

The committee on credentials and the committee interested with the professional examination meet the day before or on the day fixed by public notice, at nine o'clock in the forenoon.

All the candidates for the license must present themselves before the committee on credentials, on the appointed day, with their certificate of matriculation, their diploma from the University and their certificate of good morals.

Those who have no diploma must pass before the committee

of professional examinations a satisfactory examination on the matters inscribed on the programme of medical studies of the College of Physicians.

Licenses are granted only at the regular meetings of the Board. In all cases the candidates for the license to practise must establish that they have completed their twenty-first year.

The Bachelors who wish to be admitted to the study of medicine must swear to their diplomas before one of the secretaries of the Board, or else before a Justice of the Peace or a Commissioner of the Superior Court complying with the rules herein laid down.

Those who are not Bachelors must pass before the Board's examiners, a satisfactory examination on the matters which form a course of classical studies, and furnish a certificate of good morals.

The programme of this examination is revised from time to time by the examiners, and it can be obtained on application to one of the secretaries.

The examination takes place alternately in Montreal and Quebec, on the Thursday and Friday preceding one or the other of the Board's meetings. The first day is devoted to sciences and the second to letters. The sitting begins each day at nine o'clock in the morning. Each group can be passed separately.

The candidates must sign a solemn declaration certifying their identity and that they have faithfully observed the rules of the Board during examination.

Fees.

The fees required by the College are the following:

For the admission to the study of medicine, on presentation of a diploma of Bachelor, or after preliminary examination, $20.

For the admission to the practice of medicine on presentation of a university diploma or after passing a professional examination before the Board's examiners, $40.

The candidates coming from abroad and not having passed a preliminary examination must pay $60.

For a license of midwife, $10.

In all cases these fees must be paid into the hands of one of the secretaries of the Board *at least ten days beforehand.*

To the candidates unsuccessful *for the first time* either at preliminary or professional examinations one-half of the fee will be reimbursed.

Programme of Preliminary Examination for 1904.

Latin.—The Commentaries of Cæsar, books IV, V, VI. The Aeneid of Virgil, books V, VI. Cicero, Pro Milone. A sound

knowledge of the primitive meaning of words, of construction, and of grammar generally will be required.

French.—Candidates whose mother-tongue is French will be required to have a critical knowledge of Racine's "Athalie" and of the first three books of Lafontaine's fables. They will also be required to answer questions of grammar, of etymology and of analysis. English-speaking candidates must translate into English passages from "Telemachus" and answer questions of French grammar. Also, they will be required to translate into French short sentences of English.

English.—Candidates whose mother-tongue is English will be required to have a critical knowledge of one of Shakespeare's plays—"The Merchant of Venice," with notes by Deighton (published by Macmillan & Co.), including also grammar, etymology and analysis. French-speaking candidates must translate into French passages from the first eight books of Washington Irving's "Life of Columbus," and answer questions of English grammar, as in West's "English Grammar for Beginners." They will also be required to translate into English short passages from "Telemachus."

Belles-Lettres.—Principles of the subject and of rhetoric; also History of the Literature of the Age of Pericles in Greece, of Augustus in Rome, and of English and French Literature of the seventeenth, eighteenth and nineteenth centuries.

History.—A general knowledge of the history of Greece and of Rome, and a more particular knowledge of British, French and Canadian history.

Geography.—A general knowledge of the subject, and more especially of England, France and North America.

Arithmetic.—Must include vulgar and decimal fractions, simple and compound proportion, interest, percentage and square root.

Algebra.—Must include fractions and simultaneous equations of the first degree.

Geometry.—The first four books of Euclid and the sixth. Also the measurement of the lines, surfaces and volumes of the geometrical figures, without proofs.

Chemistry.—Elementary principles as in P. Wurtz, Troost, or Roscoe.

Botany.—Elements of the subject as in Moyen, Provencher, Laflamme or Spotton.

Physics.—Elements as in Peck's translation of "Ganot's Physics."

Philosophy.—Logic, as in Jevon's "Logic," and Intellectual and Moral Philosophy, as in Professor Murray's "Handbook of Psychology."

N.B.—Candidates must produce certificates of good moral character. Any candidate detected in copying or in aiding another to copy, or in using books or notes, will be immediately dismissed from the room. At the conclusion of the examination, each candidate will be required to make, before a magistrate then present, a solemn declaration that he had not recourse to any fraudulent means to aid himself in the examination. He must also furnish proof of his identity.

FIRST DAY.—GROUP A.

Geometry	9	to 10	100	marks	25	per cent.	to pass.
Arithmetic	10	to 11	100	"	50	"	"
Algebra	11	to 12	100	"	25	"	"
Chemistry	12	to 12¾	100	"	25	"	"
Physics	2½	to 4	150	"	33	"	"
Philosophy	4	to 5	100	"	25	"	"
Botany	5	to 6	100	"	33	"	"

SECOND DAY.—GROUP B.

Latin	9	to 10½	200	marks	50	per cent.	to pass.
Belles-Lettres	10½	to 11½	100	"	25	"	"
History	11½	to 12¾	100	"	25	"	"
Geography	12¾	to 1	100	"	25	"	"
Mother-tongue	2½	to 4	150	"	75	"	"
French or English	4	to 5	100	"	50	"	"

The subjects of the examination are divided into two groups: (*a*) Science subjects; and (*b*) Literary subjects. Candidates must obtain at least half the total marks assigned for each group in order to pass in that group. If they do not, they will have to take the whole of that group again. A candidate who fails to obtain the *minimum* number of marks assigned for any subject in either group will have to take the whole of that group again. It is to be understood that failure in one group does not nullify success in the other.

Examiners.

J. C. K. LAFLAMME, A.M.
A. WALTER, A.M.
A. FRENCH, B.A., OXON.
J. O. CASSEGRAIN, PROF.

Proceedings of Societies.

CLINICAL SOCIETY OF THE NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

At the stated meeting of the above society, held January 4th, 1904, the Vice-President, Dr. D. S. Dougherty, occupied the chair.

Primary Endothelioma of the Lung and Pleura.—Dr. Maurice Packard presented this patient, of whom he gave the following history: Male, aged 24 years; cigarmaker by trade; father died of endocarditis, sister of apoplexy, brother of diabetes; no history of tuberculosis in the family. The patient gave no history of syphilis or of alcoholism, and claims he was never ill until the present time. About five years ago he began to cough, with very little expectoration, but otherwise was perfectly healthy until fifteen months ago, when the cough became more distressing, and was accompanied by profuse expectoration. He became very short of breath, especially on exertion, and suffered from pains localized anteriorly on the right side. These pains were increased on deep inspiration. There were no night-sweats, nor, at that time, any hemoptysis nor loss of weight. Although the examination of the sputum was negative, he was sent South with a diagnosis of tuberculosis. As there appeared to be no improvement, he remained but a short time. The symptoms continued about the same, but he noticed that the veins of his chest and abdomen were growing larger, and that when he coughed he brought up considerable blood, sometimes as much as a cupful. His sputum examination was still negative.

Dr. Packard saw him for the first time about two months ago, and his examination developed the following: The man was fairly well nourished, but had peculiar varicosities on the chest and abdomen. His right lung did not expand as well as the left, and there seemed to be a change in the dimension of the thoracic arch. Pectoral fremitus was diminished on the right side, from the second to the fifth intercostal space, and from the sternum to the axillary line. Over this area the percussion note was flat, but over the other portions of the same lung, and over the left lung, it was almost normal. Vocal fremitus was diminished, and distant bronchial, almost tubular, breathing could be heard over this affected region. Over the other portions of the lung, the sounds

were normal. The heart, spleen, liver and abdominal organs were normal. Sputum examination and thoracentesis were negative; the urine was normal. One month ago signs similar to the above were found posteriorly in the lower lobe of the right lung.

Erythromelalgia.—Dr. J. C. Lynch presented this case of Wier Mitchell's disease or erythromelalgia, occurring in a man 51 years of age, who was also the victim of tabes. The patient was single, and an officer in the navy. He had had the ordinary diseases of childhood. During adolescence he had pneumonia twice and typhoid fever. While on a cruise to the Far East he had Chinese malaria (?) (From his description one would be warranted in presuming it was lues.) Since he was twenty years old and up to the present time he had been free from sickness, except for three attacks of tripper. After the Spanish-American war he noticed that he had difficulty in holding his water (hurried sphincteric action), which was shortly followed by difficulty in walking (ataxic gait) accompanied by sharp, shooting, stabbing pains in the feet and legs (lightning pains). On consulting the ship's surgeon about his difficulty in walking he was told he was suffering from beginning gangrene of the left foot. He was put to bed, and his condition improved. Six months later the other foot became involved. The first two toes were then amputated. After recovery from this operation he retired from the service.

Acute Thyroidism following Curettage.—This case was reported by Dr. Brooks H. Wells He said that since the time when the Roman matron measured with silken ribbon the throat of the bride before, and the day after, marriage, to determine by its rounded increase, that she had been a pure virgin, the sympathetic relation of the thyroid gland to the pelvic organs has been vaguely known; but hardly more than a decade has passed since we began to appreciate the various facts that will in time lead to an accurate knowledge of the functions and physiology of this and the other ductless glands.

Under certain conditions there occurs in those individuals who have been the subjects of a thyroid tachycardia a virulent acute toxemia characterized by a well-marked group of symptoms. This toxemia may follow operations upon the thyroid itself, operations upon the pelvic organs, or, more rarely, operations upon the breast or other parts of the body, or any marked nervous strain.

The exact mechanism by which the function of the gland is disturbed or excited is not definitely known. The disturbances after operations on the thyroid itself have been attributed to an outpouring of toxic material into the blood, either as the result of the manipulation to which the gland is subjected, or from a leakage and absorption from its cut surfaces. These causative fac-

tors can be ruled out when the thyroidism follows operations on other parts of the body. In cases similar to the one recorded below it seems certain that the condition is the result of a reflex disturbance of the central nervous centres, and the sympathetic centres that control the activity of the thyroid gland or, as has recently been suggested, of the parathyroids.

The condition is often rapidly fatal, death occurring within the first three or four days from cardiac exhaustion. When recovery ensues the symptoms rapidly or gradually disappear until the individual reaches the status present before the attack.

The following case of acute thyroid poisoning following curettage seemed to possess features of interest which made it worthy of record:

Mrs. X., aged 53, had passed the menopause at the usual time, but during the last six months had had repeated small bleeding from the uterus, which was not enlarged, and was freely movable. She was nervous, thin, and poorly nourished. For many years she had had a slight enlargement of the right lobe of the thyroid, an excitable, rapid pulse and slight tremor, but no protrusion of the eyeballs. Auscultation of the chest revealed a few bronchial rales. No other pathological condition was discovered. To exclude the possibility of beginning cancer of the fundus uteri as a cause for the post-climacteric bleeding a curettage of the uterus was performed under strict asepsis on November 5th, at 10 a.m. The scrapings from the endometrium were examined by Dr. Jeffries, Pathologist at the Polyclinic, who reported that they showed only a moderate grade of endometritis. There were no further symptoms, local or general, that could be referred directly to the curettage.

The anesthetic was given by Dr. Bennett, and was gas followed by ether. After a few breaths of ether her heart became so rapid that Dr. Bennett considered it wise to change to chloroform, under which the heart beats became slower. From the beginning of the anesthesia to the return to consciousness a little less than half an hour elapsed.

Six hours later the patient was flushed, tremulous, nervous, voluble, but not worried, and with mind clear. Her pulse had risen to 130, and became more rapid on any little excitement. Temperature, 100.5 degrees F. Twenty-four hours after the operation the flush, tremor, nervousness and volubility were increased; the pulse had risen to 178, and at times was uncountable; her temperature was 99.5 degrees F. There was profuse sweating, a watery diarrhea, marked irritability of the bladder with polyuria, many soft rales all over the chest, and vomiting. The thyroid was perceptibly enlarged, especially on the right side, and presented a quite apparent thrill. There was marked

throbbing of the heart and large arteries. Examination of the urine showed a sour odor, reaction neutral, sp. gr. 1012, no albumin, no casts, innumerable colon bacilli, and a few pus cells. These symptoms of an extreme toxemia continued to the end of the first week, then her temperature reached 101.6 degrees F., and the auscultatory symptoms of bronchitis became more marked, though there was little cough and little expectoration. Blood examination at this time showed no leucocytosis and no typhoid reaction.

From the fifteenth to the twenty-fourth day the patient's condition was such that death was expected to occur at any time. The toxic symptoms continued, the tongue became dry and brown, there was extreme weakness and the usual relation between temperature and pulse was reversed, so that the most rapid and weak heart action was when the temperature was lowest. The diarrhea ceased to be troublesome on the twenty-first day, and on the twenty-fourth the patient was able to take small amounts of solid food by mouth. From this time on improvement was steady, but slow, until she reached a condition approximating that before the operation.

Treatment.—At the beginning it was thought that some of the symptoms might be dependent upon an intestinal toxemia, and the patient was given calomel, followed by a saline, and repeated high colonic flushings. The bladder for several days was washed out with a boric acid solution at eight-hour intervals, the washing being followed by the injection and retention of two ounces of a 10 per cent. argyrol solution. The diarrhea was finally controlled by tannigen by mouth, ten grains every three to six hours as needed, and starch and deodorized tincture of opium, ten minims, by rectum, every six to eight hours. The insomnia was relieved by the opium and by trional at night, in doses of from twenty grains at first to five grains at a later period. As it became impossible to make the patient retain food given by mouth, rectal alimentation was employed more or less from the eleventh to the twenty-second day. Solid food in small amounts was given on the twenty-fourth day. The heart action and general condition were not benefited by any drug; colonic flushing, strychnine, digitalis, belladonna, suprarenalin, alcohol, all seemed to do more harm than good.

Dr. Robert C. Myles opened the discussion of this case. He said that one of the peculiar characteristics of exophthalmic goitre is the diminished electrical resistance. If some one would experiment with these cases in order to find out, if possible, what alkaloid is discharged into the system, and its exact relation to the thyroid, the speaker thought these cases could be treated more successfully.

Leprosy.—Dr. F. Dillingham presented a patient, male, 58 years. He was born in America, and has lived here, with the exception of one year spent in Mexico, during his entire lifetime. Eight or nine years ago a corn appeared on his right foot. It began to burn, and in a short time a perforated ulcer developed. He had the joint excised, and two years afterwards the second joint was also treated in this manner. Two years later a second ulcer appeared on the other side of the same toe. There are now two perforating ulcers present. This was about all the history the patient could give.

The speaker said that the diagnosis can easily be made from the typical picture presented, and by exclusion of any other condition, because of the lack of essential conditions. The brownish patches here and there, and the peculiar brownish color and scaling appearance of the limb were characteristic of leprosy. There was more or less atrophy of the foot, and also of the hand, but very little loss of sensation. He said there were three types of leprosy, and gave the differential symptoms minutely. The question of contagion was interesting in these cases. In some countries leprosy undoubtedly is contagious, but, in his opinion, this is not true in our climate. There are several cases in this city all the time, and no case has been reported that has developed as the result of contact with another patient suffering from the same condition. He once saw a patient in whose case he made a diagnosis of leprosy, and she informed him that her husband had suffered from the same condition before it developed in her. In countries where leprosy is prevalent, people who have proper food and hygienic surroundings very rarely contract the disease. Some authorities claim that it is infectious, some that it can be conveyed only by direct contact, and some that it is a concomitant of yellow fever and malaria. Experiments have been made by having lepers breathe into a certain receptacle, and colonies of bacteria have been grown from the atmosphere into which they breathed, showing that the mucous membrane of the mouth may be the source of the infection. Inoculation, as a rule, has been negative. The speaker succeeded, some years ago, in oculating some persons with leprosy, but there was some doubt about its being a leprous family, so that experiment proved nothing. Some guinea-pigs were inoculated with tuberculous nodules, and eight months later bacilli were found in the kidneys, spleen and liver.

The duration of the disease varies, according to the form. Some patients live twenty years after the symptoms appear. The patient before the society had suffered from this condition for about nine years, and, except that it was rather inconvenient for him to get about, he was not incapacitated for work.

Cast of a Bronchial Tree.—Dr. F. M. Jeffries presented a cast of a bronchial tree. He said that the cast was from a patient

suffering from fibrous or plastic bronchitis. It showed the ramifications of the smaller bronchial tubes. The speaker said that it was the first specimen of the kind he had seen in a laboratory experience of twelve years, and for this reason he thought it worthy of note.

New Method of Treatment for Fracture of Neck of Femur.—The paper of the evening was read by Dr. Royal Whitman. He called attention to the fact that it was generally admitted that the results of treatment of fracture of the neck of the femur are very unsatisfactory. These results are to be ascribed, not so much to the age of the patient or to the severity of the injury, as to the faulty conception of treatment and its perfunctory application. At present it is taught that no attempt should be made to correct the deformity of an impacted fracture, a deformity which is essentially a traumatic coxa vara; while the means employed to appose the fragments and to hold them in position, if the fracture is complete, are quite ineffectual, as demonstrated by the fact that shortening is almost always present when the treatment is concluded. He said that fracture of the neck of the femur is not uncommon in childhood and in vigorous adult life, but as it is often incomplete, it is usually classed as contusion. These cases are unrepresented in hospital statistics.

The treatment which he had already described as applicable in childhood (*Annals of Surgery,* November, 1902), he would, on further experience, now urge as one of routine in all favorable cases. In principle, it is a method of replacing the depressed neck if the fracture is incomplete or impacted, and of apposing and retaining the fragments in approximate apposition if it is complete. If the fracture is impacted, the patient having been anesthetized, the extended limb should, under traction, be slowly abducted. As in every instance in which depression of the neck is present, abduction would be checked when the neck comes into contact with the upper border of the acetabulum, further forcible deduction by means of the leverage of the extended limb on the fulcrum of the acetabulum would disengage the impaction and elevate the neck. At the limit of normal abduction a long, plaster spica bandage should be applied. If the fracture is complete the shortening should be reduced by traction and counter traction. The limb should then be abducted, and by downward pressure on the trochanter the outer fragment may, if of sufficient length, be pushed beneath the rim of the acetabulum. Abduction should then be increased until the trochanter is brought into contact with the side of the pelvis, so that upward displacement is impossible. In this attitude it is evident that muscular contraction becomes powerless to induce deformity, while the firm support of the plaster bandage permits necessary movements without danger of displacement. The details of the treatment and the after-treat-

ment were described, and the modifications that might be necessary to meet varying indications. In closing, the reader again called attention to the large number of patients, still youthful or in vigorous old age, who, because of failure of diagnosis and inefficient treatment, were in great degree disabled by this injury. He said that the limitations of weakness and age so often urged as an excuse for the present ineffective and perfunctory treatment should not be extended to this class, but that one should attempt to apply here the principles that are admitted as being essential to the successful treatment of fracture in other situations.

Dr. J. A. Bodine opened the discussion of this paper. He said that it was particularly interesting to him because he had controlled practically the largest fracture service in the country at St. John's Hospital, Long Island City. Some years ago he had been called to see a patient, who, as far as he could make out, had sustained an injury to the patella ligament, and there was relaxation between the patella and its insertion. He had never been told that fracture of the neck of the femur was a condition of young life, and sent the patient to Dr. Whitman, who made the diagnosis. Most of the patients were forty, fifty, and even sixty years of age, who were included in the speaker's service, and were thin and emaciated for the most part, and an anatomical cure was more than could be hoped for. If the patients could get about with the limb supported by a high shoe, the surgeon had to be content, but in future, the speaker would be glad to try Dr. Whitman's method. About two years ago Dr. Maxwell reported several cases in which he put on twenty to thirty pounds pressure to reduce the shortening, and in addition lateral extension of some ten pounds, as he claimed that in case the neck of the bone was pulled down, a better position resulted. He showed four post-mortem specimens secured from patients who died some years after this method was applied, which showed almost perfect union. Dr. Whitman claimed these ends could be brought into apposition. His method possessed a great advantage over others. But in young people why not use direct operative interference? The surgeon can cut down, certainly, on the great trochanter.

In reply to Dr. Bodine, Dr. Whitman said that twenty-six cases of fracture of the neck of the femur in childhood had come under his observation, and that in a single year he had seen five cases in young adults in not one of which had the diagnosis been made. He was not ready to admit that because a person was sixty years of age treatment was useless. Direct operative intervention is, of course, a treatment of last resort, that may be applied only under favorable conditions. It, however, might be the treatment of selection for partial epiphyseal separation in young subjects.

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., *must be* in our hands by the fifteenth of the month previous to publication.

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Editorials.

THE PRELIMINARY EXAMINATION FOR THE COLLEGE OF PHYSICIANS AND SURGEONS OF QUEBEC.

At page 187 we publish the programme of the preliminary examination for 1904 of the College of Physicians and Surgeons of Quebec. It will doubtless be interesting to our readers, few of whom know anything of the educational standards required in order to be admitted to the study of medicine in Quebec. At a meeting of the Quebec Board of Physicians and Surgeons held in the city of Quebec, September, 1903, among other important mat-

ters the question of a compulsory B.A. course, or *cours classique complet,* before admission to the study of medicine was discussed. With regard to the *cours classique complet* it may be well to explain that there are in the Province of Quebec several well-equipped colleges, in which French is the language of instruction. The professors are Catholic priests, and teaching is imparted at a very moderate cost. A boy who begins his course in such a college at ten, finishes it at eighteen, and leaves college a *bachelier es lettres.* This degree is, of course, not the equivalent of a B.A. degree of a Canadian University, but it shows to the public that its possessor has received a literary and classical education, amply sufficient as a preliminary to the study of medicine and law. There is no means of obtaining this diploma under similar circumstances in a Protestant English-speaking college in Quebec. McGill University and Bishop's College are universities intended for men. The instruction imparted at a high school in Quebec fits a boy to matriculate at a university, but is not the equivalent of the *baccalaureat* to which we refer. If it were so a boy who had completed his high school course at sixteen or seventeen would be as far in advance as the French-Canadian collegian, who passes the *baccalaureat* examination at about the same age.

When the question of the preliminary examination in medicine was discussed last September by the College of Physicians and Surgeons of Quebec, it seemed unjust to force a preliminary examination, such as the *cours classique complet,* on French and English alike. The French-Canadians had in their colleges the machinery for providing the requisite education at a low cost, and the English-Canadians did not have it.

Moreover, and this is a most important reason, the authorities of the French-Canadian colleges, who are engaged in training boys for the *baccalaureat,* do not propose to go out of business. Neither do their friends, the French-Canadian members of the College of Physicians and Surgeons of Quebec, intend to force them to do so. Although this motive is founded on self-interest, the French-Canadian Catholic colleges are not blameworthy, least of all should they be censured by any medical publicist, who is jealous of the reputation of his profession for scholarly training.

Looking at the other side there is no chance for English-speaking students to get an education equivalent to the *cours classique complet,* except in the large cities, and even then the fees are very much higher than in the French-Canadian colleges. The outcome would be that to place French-Canadian and English-Canadian boys in Quebec on an equal level in educational facilities, from the standpoint of expense as well as efficiency, it would be necessary for the English-speaking boy to be educated at a French-Canadian college. Two objections occur: difference of religion, and a foreign language. After considering the question in detail, an amendment was passed by the College of Physicians and Surgeons of Quebec to the effect that the Catholic or French-speaking candidate, desiring to begin the study of medicine, would have to present the diploma for the *cours classique complet,* or be prepared to pass an examination equivalent to that which would have been required for admission to the *baccalaureat,* and that the law would remain unchanged for the Protestant and English-speaking candidate. In other words, the French and Catholic student is obliged to be a *bachelier es lettres,* or to pass an examination sufficient to obtain that degree before beginning his medical studies; the Protestant English-speaking student escapes with the examination, the subjects of which we publish at page 189 These changes do not come into force until passed by the Quebec Legislature, but it is probable that they will soon become law without alteration.

Through no fault of their own, the English-speaking Protestant students of Quebec are, by the proposed legislation, forced to a lower level of literary culture than their rivals, and the reasons for such a course are two: unwillingness to patronize French-speaking colleges, or the absence of English-speaking colleges in which a student can be trained for the *baccalaureat* at a moderate cost. By demanding that French-Canadian medical students shall have the hall-mark of literary culture stamped on them, French-Canadian colleges place themselves in a strong position. As the English-speaking Protestants of Quebec do not provide their boys with literary culture at moderate rates, they should employ some of their wealth in remedying the evil, and thus prove that the Anglo-Saxon is willing and able to exert himself to overcome existing educational difficulties in Quebec.

AN AMERICAN MAGAZINE WHICH LIBELS TORONTO PHYSICIANS IS EXCLUDED FROM CANADIAN MAILS.

THE Postmaster-General of Canada, Sir William Mulock, has determined to put an end to the circulation through the Canadian mails of magazines, books, or publications of any kind which contain anything of an immoral, libelous, or indecent character, and, in furtherance of this view, the following notice has been issued:

"If it is established to the satisfaction of the Postmaster-General that any person is engaged in the business of publishing any obscene or immoral books, pamphlets, prints, engravings, lithographs, photographs, or other publications, matter, or thing of an indecent, immoral, seditious, disloyal, scurrilous, or libelous character, or in the business of an illegal lottery, so-called gift concerts, or other similar enterprise, offering prizes, or concerning schemes devised or intended to deceive and defraud the public for the purpose of obtaining money under false pretences, or in the business of selling or in anywise disposing of, counterfeit money, or what is commonly called 'green goods,' or of drugs, medicines, instruments, books, papers, pamphlets, recipes, prescriptions, or other things, with the object, or with the pretended object, of committing a crime, and if such person shall, in the opinion of the Postmaster-General, endeavor to use the Post Office for the promotion of such business, it is hereby declared that no letter, packet, parcel, newspaper, book or other thing sent, or sought to be sent, through the Post Office by or on behalf of, or to or on behalf of, such person, shall be deemed mailable matter."

We heartily commend this ordinance, and intend to act as a censor, moreover, drawing attention from time to time to the misdeeds of the quack medicine manufacturers, who have used, and continue to use, Canadian newspapers with the pretended object of committing crimes.

An important example of quite another feature of the new regulations cropped up last January. The October (1903) number of a monthly magazine, called *Physical Culture,* contained a libelous article, in which five Toronto physicians were attacked The magazine in question is published in New York, but the ob-

jectionable article purported to have been written by a correspondent living in Toronto. The full names of the libeled physicians were not given, their identity being thinly veiled under the guise of initials. The first was described as an unfair medical examiner, the second as an imbecile, the third as a rogue, the fourth as a drunkard, and the fifth as a special resident agent of His Satanic Majesty. When this disgraceful lampoon was brought to the attention of the authorities of the Postmaster-General's Department, prompt action was taken, and it was decided to put an end to the circulation through the Canadian mails of such disgusting literature. During January of this year *Physical Culture* was not offered for sale by Toronto newsdealers, for the reason that transit through the Canadian mails was refused. During February the libelous magazine was for sale in Toronto, and we learned from a newsdealer that it had been brought to Canada as freight. A precious freight, indeed! The literary style of this magazine is of the poorest, its information vapid, photographs of the fleshly type being freely used for padding.

People who have devoured the husks of *Physical Culture*, expecting to learn something about dietetics and hygiene, should turn to the well-written articles of *The Sanitarian* or *The Dietetic and Hygienic Gazette*, both of which are published in New York.

In addition to moral reasons, the motive which animated Toronto physicians in prescribing heroic treatment for *Physical Culture* is sufficiently clear:

> "The purest treasure mortal times afford
> Is spotless reputation! that away
> Men are but gilded loam or painted clay."

The ban imposed on *Physical Culture* by the Canadian Postmaster-General has not been raised, and we hope it will not be raised. As *Physical Culture* has jumped the fence, and is resolved to get into the Canadian fold by hook or by crook, onlookers on this side of the line will be curious to learn what effects, if any, have followed the severe depletion which has been tried in his case. Perhaps it may do good; at all events, the patient cannot consistently object to it, for he is an advocate of a low diet, amounting to semi-starvation, and should not refuse to practise what he preaches. J. J. C.

"FINE WEATHER INDADE FUR TINTIN' OUT."

Among the new inventions chronicled in *The Lancet*, London, Eng., Jan. 30th, is a patent health tent, manufactured by Messrs. S. Wilson & Co., of Bedford Street, Belfast, who have sent to Bartholomew's Hospital an illustrated description of their "patent health tent," in which there are no poles visible when the tent is erected and an air space six inches wide is provided between the inner and outer layers of canvas for the purpose of reducing variations of temperature. A centre pole is not used. A special feature of the tent is stated to be the employment of stretchers and of cross-stays connecting the vertical poles together in such a manner as to be adjustable lengthwise. These stretchers are, in fact, strong spiral springs, and in this way the canvas is firmly held both in wet weather and in dry. The makers believe that the tent will be found useful in the open-air treatment of tuberculosis and in the isolation of cases of infectious disease.

The Western Hospital, Toronto, claims to have made a great success of the treatment of those of their patients who have been domiciled in tents. Certainly the idea is gaining in favor among medical men, but that the laity need further enlightenment upon the subject was brought to the notice of one of our staff recently, on a day when the thermometer registered several degrees below zero. While awaiting change in a florist's, the customer standing beside him ordered some roses sent to a patient at the Western Hospital. After giving the address carefully, "In a tent in the grounds," was added. The florist was an Irishman, born and bred, and had evidently "come over" lately and brought his accent with him, and with a gleam of humor in his eye he looked up and said: "In a tint, sor? Begorra! it's the foine warm weather fur tintin' out." As he went on with his work he laughed to himself and repeated: "Tintin' out. Shure, it would fraize the tail off a brass monkey, but the divil himself couldn't be up to the invintions in this country; sorra a tint fur me, bad cess to them!"

A wayfaring man and a fool, perhaps, but fools and children sometimes speak the truth. W. A. Y.

EDITORIAL NOTES.

Balsam of Peru in the Treatment of Compound Fractures of the Bones.—A communication made to the recent French Congress of Surgery, by Dr. Van Stockum, Chief Surgeon of the City Hospital of Rotterdam, shows that progress in the art of surgery occasionally reverts to the practice of the older surgeons. Like others, Dr. Van Stockum had treated recent compound fractures by a free opening down to the seat of the fracture, thus permitting a careful toilet of the part by the removal of splinters or the resection of bony fragments according to the case, by end to end coaptation of the broken pieces, with or without bony suture and by superficial tamponment. Becoming dissatisfied, like other surgeons, with the results obtained, he had recourse to a line of treatment, which was said to have been uniformly successful in the hands of one of his predecessors, Dr. J. Van der Haven. The method is very simple. It consists in impregnating the seat of fracture with balsam of Peru. Dr. Van Stockum applies it as follows: The injured person is laid on an operating table, and the surgeon, having diagnosed the injury as a compound fracture, removes, with a sterilized dressing forceps, any foreign bodies found on the surface of the wound. Neither the wounded limb, the skin surrounding the wound, nor the wound itself, is washed or disinfected in any manner whatsoever. No ligatures are applied to stop hemorrhage unless a large artery should bleed. The entire seat of fracture and all the recesses of the wound are filled with a large quantity of sterilized balsam of Peru, by separating the edges of the wound with forceps. Slight movements are imparted to the limb in order to obtain a displacement of the fractured extremities and the penetration of the balsam. The fracture is then reduced as if the surgeon were treating a simple fracture. When the skin orifice is very small a sterilized syringe is employed to inject the balsam. In no case is a gauze drain introduced into the wound. After the fracture is reduced the surgeon applies an aseptic gauze dressing, the first compress being soaked in the balsam of Peru, which thus flows to the surface of the wound and the surrounding skin. Over the gauze compresses he puts a thick layer of absorbent cotton and fixes the whole dressing with a gauze bandage. When the dress-

ing has been applied, the limb is immediately placed in a plaster splint or an apparatus for supplying continued extension. Dr. Van Stockum prefers the plaster splint, because a rigorous immobilization appears to him to give the most precious help in the method he employs. The first dressing is allowed to remain on ordinarily for three weeks. During the first day the temperature rises regularly, often by the fourth or fifth day it reaches 102.2 F., but after the fifth or sixth day it begins to fall rapidly, and finally remains normal. When the dressing is taken off after three weeks, the surgeon finds a wound which has cicatrized, or one in which granulation goes on without the least inflammation. Mortified tissues are found in a mummified condition in the midst of the granulations. The edges of the wound are neither tumefied nor red, and the firmest pressure does not cause the expulsion of pus or any discolored fluid from it. In the deeper parts bony union is perfect, or on the way to become so. One or two dressings with the balsam of Peru—rarely more—applied like the first one, suffice to complete the cure. Dr. Van Stockum's statistics show that from August, 1899, to October, 1903, he treated 90 cases of compound fracture (58 of the leg, 4 of the thigh, 9 of the forearm, 6 of the upper arm, 2 of the pelvis, 1 of the patella, 2 of the calcaneum, 8 of the inferior maxilla), in fact, all the cases of compound fracture brought to the Rotterdam Hospital. The treatment failed in 4 cases (4.5 per cent.), in which the seats of fracture suppurated. Of these 4 cases, 3 (1 fracture of the leg, 1 of the thigh, 1 of the arm) healed without any secondary operation; in one case only a gaseous gangrene necessitated a secondary amputation, but the patient recovered. In the 86 remaining cases, that is to say, in a proportion of 95.5 per cent. the fractured bones became solid, and the flesh wound healed without the least suppuration, except in 8 cases, in which a fistula appeared. In the greater number of the fistula cases, the wound was kept open by the presence in its deeper parts of infected foreign bodies, such as bits of wood, pieces of straw, or bone splinters, which had to be extracted. Of the three cases of fracture of the inferior maxilla, which belong to the fistula category, the surgeon, in one case, had to remove the fractured ends of the bone, which had been sutured with silver wire. Bony union was, however, complete; in the two other

cases, he merely curetted the little fistula. Dr. Dumont says, in *La Presse Medicale*: "The results obtained by Dr. Van Stockum are really remarkable. If any surgeon will compare them with the results obtained by other methods in compound fractures, he will be convinced that the method of "embalming wounds" deserves to be tried by practitioners; all the more because it is so simple that it can be applied by the least skilful surgeon, and anesthetics are not required. It diminishes, in a notable manner, the pain and disagreeable sensation which are inseparable from frequent dressings of fractures. With regard to the *modus operandi* of the cure little can be said. The high temperatures observed during the first days of treatment and the still higher temperatures which supervene after a premature change of the dressing, prove conclusively that the wound is an infected one. Besides the bactericidal effect of balsam of Peru is almost nil. The balsam of Peru may act simply by assisting in the natural defence of the organism, *i.e.*, the development of leucocytosis. In this connection the experiments of Landerer may be noted. That observer, after injecting balsam of Peru, or one of its component parts, cinnamic acid, into tubercular patients, observed that the patients developed a considerable leucocytosis. So much for theory. Dr. Van Stockum has demonstrated that the embalming of compound fractures with perfect rest is good surgical practice.

Phototherapy or Aerotherapy in Treatment of Granulating Wounds.—Some curious and remarkable instances have been recorded by medical writers indicating the potency of sunlight in causing the cicatrization of wounds. Thus Dr. Bloch informed the Societe de Biologie (Paris) that to his own knowledge, burns, chronic ulcers and fistulæ, which had resisted classic treatment, had been cured by exposure to sunlight. He observed that almost immediately after any case of this kind had been exposed to light a notable and occasionally a surprising improvement took place. Ulcers dried up, rapidly becoming covered with a thin pellicle, their infiltrated borders softened, and cicatrization rapidly advanced from the periphery to the centre. Dr. Bloch, who attributes these results to sunlight, observes that they are less satisfactory when red light is used and that they do not occur when the sore is covered. Hence he concludes that it is white light which

vivifies atonic ulcers, energizes the work of cicatrization, and by the desiccation of the sore and the formation of a pellicle supplies a kind of protection from the microbes contained in the air. A curious fact recently reported by Dr. Sorgo to the Society of Internal Medicine of Vienna, seems to support Dr. Bloch's theory. Dr. Sorgo was treating a man, who suffered from a well-marked tubercular laryngitis. His treatment consisted in submitting the lesion to the action of sunlight, the rays being brought to bear on the ulcerated mucous surface of the larynx by means of a laryngoscope. After thirty treatments by phototherapic laryngoscopy, each sitting lasting about an hour, the vocal cords resumed their normal color and the tubercular ulceration healed. Strange to say, the same treatment completely failed when it was tried on a case of syphilitic laryngitis. It may be the air which helps to cicatrize wounds. Dr. Wagner, in *Centralblatt fur Chirurgie,* attacks the ordinary methods of dressing wounds. In his opinion, no matter how it is applied, there is always an occlusive covering, such as gauze, oil, or powder, and the principal effect of such a covering is to retain the secretions of the fleshy granulations, as well as those of the sweat and sebaceous glands. He thinks that this covering produces an effect similar to that resulting from a damp room, or a hot oven, conditions very suitable to increase the virulence of germs and to stimulate the vitality of the granulations. To cause the cicatrization of wounds covered with granulations, it is necessary, in his opinion, to reduce as much as possible the hurtful effect of an occlusive dressing. Hence he tried the effect of covering the sore with an absorbent powder during the night, and exposing it uncovered all day to the action of the air. He says that the results of this plan are very satisfactory. The first noticeable effect is that the secretion of the sore diminishes, and soon dries up completely. The granulations retract, flatten, and become less and less prominent, while the infiltrated, indurated borders of the ulcer become thinner, and finally fade insensibly into the surface of the ulcer. Then an epithelial border appears, a pellicle, the concentric advance of which becomes noticeable in two days. Simultaneously, in the centre of the ulcer, and a little in all parts of it, epidemic islets appear, derived from the epithelium of the sudoriparous and sebaceous glands, and they are so

many centres of cicatrization. From day to day this epidermization progresses so that, in wounds as large as the palm of the hand, cicatrization is complete in from eight to ten days. More time is required in old varicose ulcers. Dr. Wagner declares that this treatment is usually successful, and that an ulcer treated by aerotherapy does not get infected, unless it is exposed to the infection of erysipelas. Dr. Wagner's theory of the cicatrization of wounds by aerotherapy is that it is due to the action of the air, which excites the epithelial cells, and, at the same time, to the drying of the wound, which causes the death of the virulent germs abounding in it.

Poisoning by Methyl Alcohol (Wood Spirit).—In the *Montreal Medical Journal,* January, 1904, Dr. Buller, Montreal, publishes a paper showing the extremely dangerous effects of wood alcohol on the eyesight of persons who use it as a beverage. Dr. Buller reports three cases of blindness due to this cause, which had come under his treatment during the last year. As wood alcohol is occasionally used for beverage purposes, Dr. Buller thought that bottles in which it is put up should bear the lable, "Liable to cause blindness." Another source of toxic amblyopia is the inhalation of the fumes of wood alcohol. During the process of hat-making, a room in the hat factory is saturated with the fumes of wood alcohol. Workpeople breathing air so contaminated are liable to suffer from amblyopia, although the toxic effects of the wood spirit are developed more slowly than when it is drunk.

J. J. C.

Provincial Board of Health Dined.— A very enjoyable dinner was given by Dr. Kitchen, of St. George, Ont., Chairman of the Ontario Provincial Board of Health, on February 3rd, at the King Edward Hotel. Many were the speeches—witty, wise and congratulatory. The subjects of the latter, or rather the mortals who bore their blushing honors thick upon them, were Dr. P. H. Bryce, the newly-appointed Inspector of the Department of the Interior, whose future residence is to be Ottawa, and the newly-appointed Secretary of the Ontario Provincial Board of Health, Dr. Charles H. Hodgetts. We congratulate Dr. Kitchen upon the success of his perfectly planned hospitality, more especially as we have just read (with sorrow) in a New York magazine that such occasions are, ere long, to become but memories of the past,

for Boards of Health, medical men, and microbes alike are to be deprived of employment by the influence of condensed sunlight, and, over all, radium is to reign conqueror. Refrain from tears, at least, until all, like Pat, "are kilt and murdered entirely, and out of work!" While that evening we were meeting, greeting, and picking a turkey bone in Toronto, over in Gotham the New York Technology Club were drinking "the toast of the evening" at their annual banquet, in a radium cocktail, called "liquid sunshine." According to the magazine, the recipe consists of "one part of sulphate of quinine, fifty thousand parts of water dissolved. Insert a tube of radium until sufficient radio-activity is developed to cause the water to become fluorescent. Drink in darkness." Such a beverage may become popular, but let us hope like Moses Ikenstein's accidental fire—"Not this Tuesday, mine friend. Oh, no, next Tuesday!" We wish Dr. Bryce and Dr. Hodgetts many happy years of usefulness in the respective high places to which their fitness and ability call them, and to Dr. Kitchen ever his cup of life overflowing with sunshine.

W. A. Y.

PERSONALS.

Dr. Fabian Blanchard, of Lindsay, has been appointed associate coroner for Victoria.

Dr. W. M. English was last month elected Chairman of the Civic Board of Health of London, Ont., by a toss of a coin.

Dr. Walter Crawford, formerly of London, Ont., has successfully passed his examinations in London, Eng. Dr. Crawford was married in London, on February 9th, to Miss E. May Grimes, a poetess, who has already spent eight years in mission work. The young people will leave shortly to undertake missionary work in East Africa.

Mr. Geo. H. Macfarlane, who for many years has represented the E. W. Gillett business in Manitoba, North-West Territories, and British Columbia, has been appointed assistant general manager of E. W. Gillett Company, Limited. Mr. Macfarlane's long experience in the business, and knowledge of the requirements of the trade, fit him for this responsible position. His

many friends in the West and elsewhere will be pleased to hear of his promotion.

A PRETTY and very quiet wedding was solemnized in St. John's Church at 2 o'clock, on January 25th, when Mrs. F. M. Fraser, of "Hylinda," Toronto Junction, was married to Dr. S. H. McCoy, of St. Catharines. The wedding ceremony was conducted very quietly, and only the immediate relatives of the contracting parties were present. Rev. F. H. DuVernet, rector of St. John's Church, officiated, and the groom was supported by his brother, Mr. David H. McCoy. After the ceremony the guests enjoyed a wedding breakfast served at the residence of Mrs. L. Cook, the mother of the bride. Dr. and Mrs. McCoy left for New York late the same afternoon, whence they sailed on the *Cedric* for London. They will remain in Europe about a year, and on returning to Canada will take up their residence in St. Catharines.

Homewood Sanitarium, Guelph.—The Homewood Sanitarium, Guelph, had the most successful year in the history of the institution during 1903. The Superintendent, Dr. A. T. Hobbs, in his annual report to the directors, stated that there were one hundred and fifty patients under treatment during the year, of which a little over one hundred were new admissions. Accommodation for ten more patients was made during the year by the building of a Nurses' Home in the grounds, apart from the institution. This was found insufficient to meet the demands for more room. The directorate then decided to build a house for the Superintendent, and to remodel the apartments now occupied by him for the accommodation of voluntary lady patients only. This suite of apartments will be up-to-date in every particular, and will be opened sometime in April of this year. There is also under contemplation the erection of another large building to accommodate forty to fifty mental cases, which will allow of a still better classification. This will then increase the accommodation of the Homewood Sanitarium to one hundred, with all modern appointments, and it is the intention of the directorate to make the Homewood Sanitarium second to none on the continent, for the treatment of Nervous, Mental and Habit Cases. The directorate, who are spending money so freely in improvements and additions, hope to retain the confidence of the profession at large, in endeavoring to meet the wants of their patients in every possible way, and in affording them every care and protection while under treatment.

Obituary

THE LATE DR. SANGSTER.

Dr. Sangster, of Port Perry, than whom there was no physician more widely known in Ontario, died suddenly on January 27th, of heart disease, at the King Edward Hotel. Dr. and Mrs. Sangster came to Toronto the day before to meet their daughter and son-in-law. Miss Sangster was married a few weeks ago to Dr. S. C. Corbett, of Winnipeg, one of the leading physicians of Western Canada, and the head of the Dominion Government Medical Service there. They had been on a wedding trip to Bermuda, and were just returning for a short stay in Port Perry and Port Hope before going back to Winnipeg.

Dr. Sangster, who had been a sufferer from attacks of heart disease for two years, was in good health and spirits the day before. About three o'clock in the morning Mrs. Sangster noticed that he was breathing in a peculiar manner, and called Dr. Corbett, who was in an adjoining room. Dr. Corbett gave him all the assistance possible, but Dr. Sangster only breathed once or twice after he entered. A physician was also hurriedly summoned, but Dr. Sangster was then beyond human aid.

Dr. Sangster, who was seventy-two years of age, leaves a wife and four children: Dr. Sangster, of Port Perry, two sons in the civil service at Ottawa, and Mrs. Corbett. The remains were taken to Port Perry the same afternoon.

Dr. Sangster, known to men in the thick of the fight to-day as the author of "Sangster's Arithmetic," and the teacher of teachers, will be remembered by laymen chiefly as the physician who made such a strong fight against the method of composing the council of the Medical Association of Ontario. The council was composed of representatives elected by the profession throughout the Province, representatives of the colleges and of the homeopathists. Dr. Sangster claimed that colleges not teaching medicine should not have representatives on the council, and this fight was carried to the Legislature, where he won a good part of his case. Of late years Dr. Sangster had been an elected member, and had become in sympathy with the council as now constituted.

The late Dr. Sangster was an Englishman by birth, son of the late John Alexander Sangster. He was born in London on March 26th, 1831, but came to Canada with his parents when very young.

His early education was received at the Upper Canada College. Entering the teaching profession, he became connected with the Provincial Model School at Toronto in 1846. After a few years there he went to Hamilton in 1853 in order to organize public schools in that city. Five years later he returned to Toronto, and was appointed first master in the Provincial Grammar School. The following year (1859) he became lecturer in science and mathematics in the Normal School, and in 1865 was made headmaster. In the meantime he had graduated in arts with honors at Victoria University, Cobourg, in 1861, and in 1864 had taken his M.D. at the same institution.

Dr. Sangster continued in the headmastership of the Normal School till 1871, and held also the posts of Professor of Chemistry and Botany at Victoria University. In 1874 he made an unsuccessful attempt to get elected as the teachers' candidate in the Council of Public Instruction, his successful opponent being Professor Goldwin Smith.

Later Dr. Sangster determined to enter on the active practice of his profession, and started at Port Perry. His name soon became known in the medical world. In 1894 he was elected to the Ontario Medical Council, and of the Medical Defence Association connected with that Council he was the leader.

Dr. Sangster is widely known from his writings. Between 1858 and 1871 he prepared and published a number of school books which took rank as the exclusively authorized text-books for the public schools of the Province. He has also written extensively on public questions and was a powerful platform speaker. He was the orator of the day at the "hoisting our flag" demonstration at London, Ont., in July, 1892, when he took for the subject of a capital address, "One Century's Transformation in Canadian Life." At the celebration of the jubilee of the Normal School, Toronto, in 1897, he delivered an able speech on "Progress in Education." Dr. Sangster also wrote a series of letters in the *Mail* over the signature of "Gracchus" during the Equal Rights Movement in 1890.

Dr. Sangster was a member of the Church of England. He was twice married, in 1851 to Miss Mary Price, of Toronto, and in 1871 to Miss Caroline Elizabeth McCausland, also of Toronto, who survives him.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

MEDICAL CERTIFICATES FOR SCHOOL CHILDREN.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY:

DEAR SIR,—At a meeting recently held in the Normal School of this city for the purpose of discussing some questions pertaining to school hygiene, some things were said that objection was taken to at the time, and I believe will be very emphatically objected to by medical men generally.

The Chairman—Mr. Scott, Principal of the Normal School—in discussing Dr. Bryce's paper, was understood by the writer of this letter to say that he (Mr. Scott) did not believe that teachers should pay much attention to the medical certificates presented by children who had recovered from contagious diseases and wished to be allowed to return to school. In support of this contention, he cited a case to show how much more reliable a teacher's diagnosis was than the medical certificate. A child handed the teacher a medical certificate. The teacher looked at the child and then at the certificate. The child began to cough. The teacher decided that the child had whooping cough, and that the certificate had not, so promptly separated one from the other—the child going back whence it came, and the certificate, as we may presume, duly labelled as a medical curio, and sent to the Health Officer to show the great void in the intelligence and integrity of our profession. In naval parlance such a statement—which not only assails the status of our profession, but also menaces the veracity of any reputable physician who gives one of these certificates—would be considered as a shot across the bow of our ship, and treated as a signal to clear the deck for action.

In reply to this statement, if time or space permitted, it could easily be verified by indisputable evidence that, in no other calling has there been greater zeal shown in the pursuit of knowledge, a more fruitful harvest reaped, and a quicker application made, of the use of this knowledge for beneficent purposes. One proof of what has just been said was furnished in Dr. Bryce's paper, where it was stated that the strict application of scientific methods in the prevention of contagious diseases could be reckoned with about as accurate precision as the value of coal as a power-producing factor. If this be true, why is not the reputable physician—

who has attended the child, and who has had very full opportunities for observing how carefully these scientific methods have been carried out—in every way better qualified than the teacher, to say when the child may be safely admitted to the class-room? For Mr. Scott to make any comparison between the ability of these two classes as to which is the better qualified to act as judge in this matter, is to take a position that is not only untenable, but absurd. We as physicians have the highest respect for our teachers, and therefore strenuously object to anything being done that would mar the pleasant relationship that now exists between us. Coming now to speak of the veracity of physicians. If they cannot be trusted to write an honest certificate about a disease, how is it they are the confidantes of their families far more unreservedly than any other class is—the clergymen not excepted? Not only have physicians won an honorable standing in the social and moral world, but such great financial concerns as life insurance companies stake their very existence on the veracity of medical men. Why, then, should the truthfulness of physicians in regard to medical certificates be so disparaged by the teachers?

There was another phase of this question presented at that meeting the propriety of which will be questioned by most medical men, viz., Dr. Hodgetts' literal interpretation of the Act bearing upon this question. The doctor bore down heavily on the unwary practitioner, and would have him understand, once for all, that it was only at the fiat of the Board of Health that a child could be admitted into the class-room after recovery from a contagious disease. Many of the readers of this journal will smile at the doctor's assurance, and take the liberty to ask—notwithstanding that he is clothed with authority—by what occult process Bill Jones and Dick McGinty, famous ward-heelers, became suddenly transmuted into medical experts, whose knowledge of contagious disease and veracity were to be considered "far and away" beyond those of the medical attendant? Most medical men have had some rather amusing experiences with these underlings of the Health Department. However, Dr. Hodgetts will doubtless gather wisdom along the rugged roads of experience. His predecessor, Dr. Bryce, being a very wise and prudent man, with a judicial cast of mind and much political sagacity acquired from long association with statesmen, scented danger in the too literal translation of the legal code by his successor. Dr. Bryce would have the general practitioners very clearly understand that all the laws and regulations framed by the Provincial and municipal Boards of Health were specially designed to be of the most benignant character toward them. If the irritable mother objects to her child being kept out of school too long, the medical attendant has only to take off his hat, make a low bow, and say:

"Excuse me, madam, I am only a physician, and not supposed to know when it will be safe for your child to mingle with others. The Health Office, madam, will send up a gentleman! ! ! who alone is able to judge in this matter." The doctor, as a sort of penance for having the lady inadvertently mistake him for a person of some intelligence, remains bare-headed, and keeps bowing until he backs out to the street. Under such circumstances, we can surely appreciate the benevolence of Dr. Bryce and the Health Boards for all it is worth.

JOHN HUNTER.

8 O'Hara Ave., Toronto.

School Gardens.—Miss Louise Klein Miller, director of the Lowthrope School of Horticulture and Landscape Gardening for Women, says that in Austria-Hungary alone there are 18,000 school gardens, and in France there are said to be 28,000, and in all Europe over 100,000. In France the teachers are required by law to be able to instruct their pupils in the elements of agriculture and horticulture, and normal schools have been established for the purpose of giving teachers such training. No plans for school buildings to which the State contributes are approved unless accompanied by plans for a school garden. In these gardens the pupils are shown practically the simpler details of horticulture, and are given charge of every stage of the cultivation, from the preparation of the soil to the gathering of the harvest. In this country the system has been successfully undertaken, and it is likely to extend rapidly. It can be combined with other instruction, as is well shown by the work at Hyannis, Mass. At the school gardens of the State Normal School there the "products of the garden are sold, the money is taken to the bank and deposited, and the children learn the method of depositing and drawing checks." The study of horticulture is compulsory in Belgium. In Germany and England school gardens are encouraged, but not regulated by law. A difficult problem, says Miss Miller, for the economist and sociologist to solve, is the herding together of a large population in a crowded city. Strenuous efforts are being made to turn the tide countryward and induce persons to seek homes where life will be freer and more wholesome. If the elements of agriculture and horticulture were taught in country, town and, so far as possible, in city schools, in an intelligent and attractive manner, life in the country would be the joy that the opportunity affords. Those interested in the subject may consult "How to Make School Gardens," by H. D. Hemmenway; Doubleday Page & Co., 1903.—*Am. Med.*

News of the Month.

DR. RICHARD MOULTON'S VISIT TO TORONTO UNIVERSITY.

In the visit of Dr. Richard Moulton, of Chicago University, to Toronto, on January 23rd, academic and popular interests are united in a rare degree. Richard Moulton is the youngest but the best known of three eminent brothers. The eldest was the headmaster of one of the schools at Cambridge, and as a student and critic of Biblical Greek, had a seat upon the committee which revised the New Testament. The second, Mr. Fletcher Moulton, is the foremost patent lawyer of England, a member of the Imperial Parliament, and an intimate personal friend there of Hon. Edward Blake.

Richard Moulton is a Cambridge man, who made a name for himself a quarter of a century ago as the first and greatest of successful university extension lectures. His subjects were Milton, Shakespeare, and Goethe and kindred masters of literature, and his treatment of his authors was at once so popular and so profound that persons of all classes and every sort of education, from the honor graduates of universities to the members of mechanics' institutes, found something to take away, and competed with one another in the weekly examination papers, which it was part of his system to exact. The academic cynics and wit , who delighted to launch academic scoffs at extension work, found nothing more damaging to say of his work than is implied in the familiar sobriquet, by which he has since been known, of the "molten idol," not a bad form of idolatry.

The amazing success of Mr. Moulton in England attracted the attention of the American universities. He was invited to Philadelphia in 1880, received his doctor's degree from the University of Pennsylvania, and was afterwards appointed Professor of English Literature in the extension course of the University of Chicago. There he has labored for several years, generally engaged in touring the middle west, lecturing in a different centre each evening, and sleeping four nights in the week on the trains, an appalling programme to an apostle of less magnetism and less devotion to his mission. That he may not break down physically "in journeyings often in perils of porters, in perils of robbers, in perils of his own students, in perils by the heathen, in perils in the city, in perils in the wilderneses, in perils among academic

brethren," Chicago graciously bestows upon him at intervals comparative rest for a year, when he lectures within the walls of the university proper, like an ordinary professor. But, after all, to most people in Canada, Dr. Moulton is known, not as the brilliant extension lecturer and the liver of the strenuous life, but as the exponent of the most popular classics; as the editor of "The Modern Reader's Bible," as the author of "The Ancient Classical Drama," and of "Studies of Shakespeare." These books have gone everywhere, and are going everywhere, and rest as little as their author.

On the afternoon of Jan. 23rd, at Wycliffe Convocation Hall, Dr. Moulton lectured before the University of Toronto on "The Bible as Literature." On Sunday morning at 11 o'clock in the same place Dr. Moulton delivered what he calls "An interpretative recital" of the Book of Job. This is one of the college sermon series, and was intended primarily for undergraduates of the various colleges, though hitherto there has generally been room for a few persons not included in that category who come in good time. No such restriction, however, applied to the evening service, when Dr. Armstrong Black placed St. Andrew's pulpit at Mr. Moulton's disposal. His programme was "An Interpretative Recital of the Revelation of St. John the Divine."

DR. C. A. HODGETTS, THE NEW SECRETARY OF THE PROVINCIAL BOARD OF HEALTH.

An order-in-council was passed on January 29th, appointing Dr. C. A. Hodgetts, M.D., L.R.C.P. (Lond.), to the position of Secretary of the Provincial Board of Health and Deputy Registrar-General for Ontario to fill the vacancy caused by the resignation of Dr. P. H. Bryce, who has accepted the position of Medical Inspector of Immigration and of the Department of Indian Affairs for the Dominion Government. Dr. Hodgetts has filled the position of Inspector for the Provincial Board of Health since 1890 and received a permanent appointment of medical inspector three years ago. We understand that it is not the intention of the Government to fill the position of medical inspector, as the present satisfactory conditions of the Province are such as to permit Dr. Hodgetts to perform the duties of both positions.

Dr. Hodgetts is the third son of the late George Hodgetts, of Toronto, who was one of the founders of the Ontario College of Pharmacy, and for many years its registrar. He was born in 1859 and received his early education at the Provincial Model School, where he secured the first Dufferin silver medal for general proficiency. He graduated from the Ontario College of

Pharmacy with honors in 1878. He studied medicine while engaged in business as a pharmaceutical chemist and graduated from the Toronto School of Medicine in 1886, taking the degree of M.D.C.M. at Victoria University. He was for a time a house surgeon at the General Hospital, after which he studied for three years in England at the London and Birmingham Hospitals and at Stafford Infirmary. During this three years he obtained his degree of L.R.C.P. (Lond.). Soon after his return to Toronto he was appointed to take charge of an outbreak of diphtheria in the Nipissing District, after which he took up general practice.

C. A. HODGETTS, M.D.,
New Secretary of the Ontario Provincial Board of Health.

In the fall of 1890 he was sent to Pelee Island to suppress a smallpox outbreak. Since then he has been in charge of the suppression of all the serious outbreaks of contagious diseases in Ontario, the chief one being the smallpox outbreak at Sudbury in 1901, which continued for five months.

Dr. Hodgetts was for a time connected with No. 4 Bearer Company, under Major Fotheringham. He now holds the rank of captain. During the South African war he acted as honorary secretary to the Canadian Red Cross Society, for which he re-

ceived the reward of being made an honorary associate of the Order of Saint John of Jerusalem, England. He entered upon his new duties at once. Dr. Bryce assumed his new duties at Ottawa on February 5th.

ITEMS OF INTEREST.

Presentation to Dr. Bryce.—An interesting session of the Provincial Board of Health was held on February 3rd, when Dr. Bryce, who left next day to accept the position of Dominion Health Inspector at Ottawa, was made the recipient of a handsome grandfather's clock. The presentation was made by Dr. Kitchen, of St. George, Chairman of the Board, who, in his remarks, laid stress upon the efficiency of the retiring secretary as an officer, and his kindly nature as a man. Dr. Bryce, in accepting the gift, expressed his gratitude in a feeling manner.

The Merging of Two Medical Journals.—Messrs. E. B. Treat & Co., the publishers of the *International Medical Magazine* and *Archives of Pediatrics*, have concluded to merge the two journals. During the five years that Dr. Boardman Reed had charge of the *International Medical Magazine* it was his constant aim to have the periodical of the highest character, readable and reliable. The publishers regret that they must discontinue the *Magazine*, and extend to Dr. Reed their appreciation of his editorial labors. It is hoped that the friends of the *International Medical Magazine* will continue their interest by reading *Archives of Pediatrics*, and thus extend its field of usefulness.

Play.—Dr. Woods Hutchinson, in the September *Contemporary Review*, makes a plea for "Play as an education," ingeniously representing that the infant, in its overmastering desire to put everything in its mouth, is really the modern representative of the ancient cave-dweller, and that, as it grows older, it passes rapidly through the later stages in the history of the race. In play, Dr. Hutchinson finds the factor which secures man his place in nature. He outlines a plan for school playgrounds, saying that every school should have a playground containing ten square yards for each pupil in attendance, and that they should have great freedom, and should be under the supervision of a playmistress, who should act as a "moderator."

Medical Practices for Sale.— When a physician desires to sell his practice and property, it is of first importance that it should be done with as little publicity as possible; hence the purchase and sale of medical practices forms an important department of medical affairs, and one that nearly all physicians find necessary to

use at some time or other. Appreciating the needs of the profession in this line, Dr. Hamill has for ten years been perfecting a system which we consider almost faultless as to efficiency, promptness, and secrecy, and we cordially recommend Dr. Hamill as an expert in this line and advise our readers to take advantage of his ripe experience when they think of selling out their practices. See list of practices for sale by Dr. Hamill among our advertising pages.

A President Whose Work is Appreciated.— The January, 1904, issue of *El Boletin Comercial,* published by the Latin American and Foreign Trade Association of St. Louis, Mo., contains the following paragraph: "With sincere pleasure we present to our readers the portrait of the new President of this Association. Mr. Cramer is Vice-President of the famous firm of G. Cramer Dry Plate Co., of this city, whose products are well known in many parts of the world, and whose reputation ranks ahead of all other firms in its line. Great success has crowned the efforts of this firm, to which happy results the subject of this sketch has contributed in a large measure. Mr. Cramer has travelled extensively in Mexico and Cuba, and undoubtedly his many friends in those countries will observe with much pleasure the distinguished honor which has been conferred upon him by electing him President of this famous organization, an honor which he justly merits. This association is proud of its new president, and we predict all kinds of prosperity during his administration."

Portrait for Toronto University.—The portrait of Dr. Goldwin Smith, presented to the library of Toronto University by Mr. John Ross Robertson, was unveiled recently before a large number of the friends of the university and Dr. Goldwin Smith. Rev. Professor Clark, of Trinity College, who represented Mr. Robertson, who is *en route* to Egypt, spoke briefly of Mr. Robertson's public spirit and admiration of the subject of the portrait, and of Dr. Goldwin Smith's prominence in the intellectual world and of his value as a citizen of Toronto. President Loudon accepted the portrait on behalf of the University, and in eulogium of Dr. Smith spoke of him as the greatest living authority on academic policy. Dr. Goldwin Smith spoke briefly, his speech being largely reminiscent. He referred to the cordial relations that existed between Mr. Robertson and himself. A man never changes his country after he is forty, therefore he was still an Englishman, but he earnestly tried to be a good Canadian citizen. There must always be conflicts of opinion between those who take independent views. There were those who believed in Imperialism, while he believed in building up a series of independent nations, aiding each other in reaching a higher standard of civilization. Others might believe in Empire, he believed in humanity.

The Physician's Library.

BOOK REVIEWS.

A Text-Book of Legal Medicine and Toxicology. Edited by FREDERICK PETERSON, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy and Toxicology, Rush Medical College, in affiliation with the University of Chicago. Two imperial octavo volumes of about 750 pages each, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Canadian agents: J. A. Carveth & Co., Limited, 413 Parliament St., Toronto. Per volume, cloth, $5 net; sheep or half morocco, $6 net.

We had the satisfaction of reviewing, a month or two ago, Vol. I. of Peterson and Haines' "Text-Book of Legal Medicine and Toxicology," and now beg to express our humble opinion of Vol. II., just out.

We find that, among the contributors to Vol. II., such names appear as Dr. H. N. Moyer, of Chicago; Dr. J. H. Salisbury, of Chicago; Dr. E. S. Wood, of Boston; Dr. Chas. Harrington, of Harvard Medical School; Dr. Reid Hunt, of Baltimore; Dr. W. A. N. Dorland, of Philadelphia; Dr. W. T. Belfield, of Chicago; and Dr. Marshall D. Ewell, Professor of Medical Jurisprudence, University of Michigan.

Vol. II. consists of two parts: the first 200 pages being devoted to such subjects as Malingering, Legal Aspects of Pregnancy, Legitimacy, Abortion, Infanticide, Impotency, Sterility, Rape, Marriage and Divorce, Malpractice, Medical Legal Relations of the Roentgen or X-Rays, and Laws Relating to the Insane; the balance of the 800 pages deals with Toxicology, *e.g.*, Inorganic, Alkaloidal and Non-Alkaloidal Organic Poisons, Gaseous Poisons, Food-Poisoning, Ptomains, the Post-Mortem, Imbibition of Poisons, and the Medico-Legal Examination of Blood and Seminal Stains.

One of the most interesting chapters is that which deals with the medico-legal relation of the X-rays, written by Harold N. Moyer, of Chicago. This is something which is deeply interesting, owing to the fact that during the past few years many actions

at law, involving possible heavy damages, have been entered, owing to serious injury from too lengthy exposure to the X-rays. We think that we will be advising in the right direction when we say that, if only for the information contained in this one chapter, it will be found worth while to purchase both volumes. Under the section given over to "Laws Relating to the Insane," the author deals separately with the statutes of all the States and Territories and the District of Columbia as to the commitment, care and custody of the insane. The statutes, of New York are given in full, it being the only State in the Union to adopt a uniform system of State care for its dependent insane, and to assume the entire financial cost thereof.

The author devotes ten pages or so to considering Death from Grounded Glass and other Mechanical Irritants," a subject which becomes important owing to glass having been figured in more than one case of comparatively recent date.

Victor C. Vaughan's contribution of fourteen pages on "The Post-Mortem Imbibition of Poisons" is interesting and instructive.

Those who have in their library a copy of Peterson & Haines' "Text-Book of Legal Medicine," possess a work that gives them the most recent views on medical jurisprudence in all its phases, and need not be afraid to quote the source of their information.

W. A. Y.

Essentials of Pelvic Diagnosis, with Illustrative Cases. By E. Stanmore Bishop, F.R.C.S. (Eng.), Author of "Uterine Fibromyomata, Their Pathology, Diagnosis and Treatment;" Hon. Surgeon, Ancoats Hospital, Manchester; Vice-President, British Gynecological Society, London; ex-President Clinical Society, Manchester, etc.; and an Appendix on Examination of Blood, etc., by Chas. H. Melland M.D. (Lond.), M.R.C.P., Hon. Physician, Ancoats Hospital, Manchester; Platt Physiological Scholar, etc. New York: Wm. Wood & Co. 1903. Canadian agents: Chandler & Massey Limited, Toronto, Montreal and Winnipeg.

Can diagnosis be learned from a book? As a general thing, No, and yet this book being planned practically upon a new system would lead us to think—and I have no doubt correctly, too—that it is possible to learn the diagnosis of many, if not all, abdominal conditions if we follow the instructions herein contained. Diagnosis is supposed to be taught by most writers on the inductive principle. They start out with a description of a known disease, giving all the symptoms in detail. The symptoms in many diseases, however, differ but slightly, and the writer goes on to show how in his mind these do differ, but our mind is perhaps not his mind. He thoroughly understands the subject about which

he is writing, and has a store of experience and practice to draw from, of which the reader knows nothing. His sense of touch has been educated. The reader probably has no educated touch, and neither experience nor practice to help him. He must discover the disease by reason. To him the symptoms are known; they are the realities, but the disease is not known. That has to be deduced by reasoning.

The writer of this book fully appreciates all this, and so instead of naming a disease and describing the symptoms of it afterwards, he takes a certain lot of symptoms and massing them together, names the disease. His book is divided into four parts. In the first part he goes very minutely into everything connected with the examination of the abdomen, nothing that is of any importance being omitted; the value of an educated touch, and how to gain it; the proper position of the body when examination of its different parts is undertaken; the use of instruments as a means of diagnosis, with a chapter on "Pain as a Factor in the Diagnosis of Abdomino-Pelvic Disease."

The strong part of this book is contained in its second and following parts. In the second part, the lines of diagnosis are laid down, and in the third part these are arranged in diagnostic tables. To illustrate what is meant by lines of diagnosis, it will be necessary to give an example from the book itself.

A comparatively superficial swelling is discovered in the abdomen. If it is found to float over the deeper contents of the abdomen, bulge forward when the patient attempts unassisted to rise from the dorsal to the sitting position, it is probably in the abdominal wall. This being further proven to be the case, if it has certain peculiarities and a certain history, it is probably a fibroma of the abdominal wall. If its peculiarities are of another character and history, it is lipoma. In this way it would seem that every diseased condition or form of growth occurring in the abdomen may be definitely diagnosed. The tables in the third part contain all this information tabulated in such a way that it is very easy of reference, but of course like all other tables, more difficult to learn, unless the reader had some practical knowledge of the subject.

Part IV. is composed of illustrative cases. These are very interesting. Some of them read like beautifully arranged clinical conundrums. They have to be read to be thoroughly appreciated, and very few will read them without feeling how well they have been put together.

The book closes with an appendix which is devoted to an examination of the blood, tubercle bacilli, and gonococci. The procedure connected with these examinations is given in concise and easily followed shape, the whole being illustrated by eight plates,

all of an excellent character. This book must be read to be appreciated. To the student and the practitioner alike, the book will be undoubtedly useful. It is of use to know beforehand some of the things that we want to observe, and after observation, a reminder of what we have discovered is often very useful also.

A. J. J.

Morrow on Social Diseases. The Relation of Social Diseases and Marriage. By PRINCE A. MORROW, A.M., M.D., Emeritus Professor of Genito-Urinary Diseases in the University and Bellevue Hospital Medical College; Surgeon to the City Hospital; Consulting Dermatologist to St. Vincent's Hospital, etc., New York. In one octavo volume of 390 pages. Cloth, $3.00 net. New York and Philadelphia: Lea Brothers & Co., Publishers. 1904.

As far as we are aware, there is no modern work of any magnitude in existence in this country which treats of social diseases, a subject which must come under the daily notice of the general practitioner, and which of necessity involves the use of the greatest possible tact on his part, not to speak of delicate feeling. Since Fournier's volume, "Syphilis and Marriage," came out almost a quarter of a century ago, nothing of any moment has been written dealing with this department of the earnest physician's duty, so that Dr. Morrow may be said to have filled a vacancy when he recently presented to the profession the book under review.

The introduction of venereal disease into marriage is fraught with such terrible results, that may affect not only the parent, but the future offspring, as to become nothing short of a social problem, and who is better fitted to deal with such an embarrassing topic than the trusted family physician, a man who, at least should be, of such honor that no matter what it may involve, he would treat anything told him professionally as being nothing less than sacred.

Dr. Morrow's book takes up not only the dangers of the introduction of disease into marriage, and the results of the same, through irradiation into family and social life, but dissemination. As the author says, "the fulfilment of this duty realises the highest ideals of preventive medicine." Such a duty is surrounded with a maze of difficulties, and it will be found that, in order to reach the proper exit from this network, the medical man will have to not only make a study of human nature, but call into use a form of wisdom that is not taught in the medical school or university. The author points out what should form the basis of his conduct under many very difficult conditions, and lays down what he considers to be the proper directions to lead him to a successful issue.

Modern Surgery: General and Operative. By JOHN CHALMERS DACOSTA, M.D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. Handsome octavo volume of 1099 pages, with over 700 illustrations, some in colors. Fourth edition, greatly enlarged and entirely reset. Philadelphia, New York and London: W. B. Saunders & Co. 1903. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

In this fourth edition of Professor DaCosta's work one observes a conscientious effort to bring the work up to the standard of the most recent improvements, discoveries and developments in surgery. The whole book shows evidences of a thorough overhauling of previous editions with a view to the elimination of obsolete views and practices, and to the introduction of everything that is new and practical in recent surgery. The chapter on X-rays is treated almost entirely from the point of view of diagnosis in relation to fractures and location of foreign bodies, and one is gratified to observe that no extravagant claims are made for the curative effect of the X-rays in malignant disease. One of the greatest evils resulting from an ill-founded hope in the cure of disease by methods other than the use of the " knife " is, that patients are disposed to seek relief by means of the less repulsive method, and thus squander valuable time, so that when they, in despair, ultimately resort to the surgeon, their condition is beyond hope. It is to be feared also that sometimes specialists in this line are apt to give the patient a prognosis altogether too reassuring.

One is gratified also to see Kocher's method of reduction of dislocation of the shoulder given fully and illustrated by figures which represent the method adequately. It has taken a long time for this method of treatment of a very common injury to obtain recognition among writers on surgery, and it certainly is beyond the shadow of doubt a perfectly adequate form of treatment for nearly all forms of this condition. In illustrations of the deformities in dislocation of the hip, Professor DaCosta has wisely, we think, contented himself with the old, but very graphic, characteristic illustrations given by Sir Astley Cooper Nothing could better illustrate the deformities, and it is a graceful way to perpetuate the memory of this great surgeon.

If one might venture a criticism of the work, it would seem to the writer that there is a lack of just proportion in devoting some thirty pages to ligation of individual arteries, and in disposing of the treatment of rupture of the bladder in three lines—comprehensive, it is true, but adequate. One could also wish to see obliterated forever from works on surgery such illustrations as that in Fig. 74, in which the use of harelip pins is demonstrated. These instruments of torture may have had their use in pre-antiseptic days, but they certainly have been responsible for untold numbers of hideous, centipede-like scars which one sees in many old cases

of harelip operations. Certainly it is unusual in modern days to advocate their use.

On the whole, however, after a pretty careful revision of the work, it would seem to be one which it is perfectly safe to recommend, not merely for the use of students, but also for the use of those who may be engaged in extensive surgical practice.

G. A. P.

The (London) Medical Review. An Indexed and Illustrated Monthly Record of all that is Important to the Practitioner in the Medical Periodicals of the World. Printed in large clear type, on art paper. Subscription, £1 per annum, post free to any part of the world.

By the careful use of words and the suppression of all unessential matter, an article written with any definite object—and such alone is valuable—can be compressed into a comparatively brief report, and yet give a complete, readable, and satisfactory account of the subject, so that nothing of importance is lost, and often, in lucidity, much is gained. In this manner, and in a clearer and more concise form than has hitherto been attempted, The *Review* endeavors to summarise all that is really important to the practitioner in the medical periodicals of the world, giving him proved facts and definite teaching which bear upon his daily work, instead of vague, contradictory, and ephemeral theories on subjects of no practical importance.

What are now required in medicine, and what make for progress, are not elaborate papers, which contain no new information, but new or not generally recognized important facts. In systematically recording these, and not mere opinions, the *Review* differs from all other journals, epitomes, and year books. In another respect, also, it is a new departure. The articles are not presented merely as isolated contributions; they are collated with one another, so that, as far as possible, medical progress is presented as an organized whole.

The indexing is a special feature of the *Review*. Each month a subject index of the contents is given, which is not merely a means of reference to the text, but a statement of all the important facts therein, *i.e.*, it is analytical. With each annual volume is issued an index which supersedes the monthly indexes and is constructed according to a definite homogeneous system. This facilitates the use of the volume as a permanent work of reference and indispensable supplement to the text-books.

All communications to be addressed to the manager. Cheques and Postal Orders should be made payable to *The Medical Review*, and crossed "The National Provincial Bank of England, Limited."

Clinical Studies. A Quarterly Journal of Clinical Medicine, By Byrom Bramwell, M.D., F.R.C.P.E., F.R.S.E., Physician to the Edinburgh Royal Infirmary, Lecturer on Clinical Medicine in the School of the Royal Colleges, Edinburgh, etc. Printed and published by R. & R. Clark, Limited, Edinburgh, Price, eight shillings, post free to all parts of the world.

The new series of this very excellent quarterly appeared for the first time, October 1st, 1902, and has appeared regularly since that date. Under the able editorship of Dr. Byrom Bramwell, of Edinburgh, the success of the publication is assured. The January (1904) number came to hand recently and contains nearly 100 pages of very excellent material. The regular clinical lecture formed the leading article, the subject being "A Case of Mitral Stenosis with Hemiplegia." The following 64 pages are devoted to nine clinical cases and their consideration, as follows: Epilepsy due to Cerebral Syphilis; Acute Croupous Pneumonia, Peripheral (alcoholic?) Neuritis; Pretaxic Tabes, Addison's Disease, Mitral Disease latent for thirty-five years, Epilepsy with Motor Aura; Tabes, with Optic Atrophy; Chronic Consolidation of the Lung, with marked improvement under open-air treatment; Tumour of the Liver and Neurotic Vomiting. Two other articles follow, one a lecture entitled "The Treatment of Intra-Cerebral Hemorrhage," and the other bearing the title, "The Treatment of Addison's Disease." Any Canadian physician desiring to subscribe for a journal which gives the best of the material coming into the wards of the Royal Infirmary, Edinburgh, had better subscribe for "Clinical Studies."

The Self-Cure of Consumption without Medicine. With a chapter on the Prevention of Consumption and Other Diseases. By Chas. H. Stanley Davis, M.D., Ph.D., Member of the Connecticut State Medical Society; Physician to the Curtis Home for Old Ladies and Children; Author of "The Training and Education of Feeble-Minded, Imbecile and Idiotic Children," etc. New York: E. B. Treat & Company, 241-243 West Twenty-Third Street. 1904. Price 75c.

The author takes the stand that medicines are useless in pulmonary tuberculosis, and that many cases can be cured by fresh air and good food alone. The book is very readable and interesting, but we hardly know to whom we should recommend it.

A self-cure is hardly in the line of the physician's work, and we are quite satisfied it is not safe for a patient to judge his own case, and be guided by any self-cure.

The work deals with foods, and gives the diet lists of the Massachusetts Sanatorium at Rutland, and the Hospital for Con-

sumptives at Blackwell's Island. The book is well worth a perusal by those interested in consumption, but we fear the red-faced, robust Irishman will hardly agree with the author when he says: "It would be a blessing to the race if potatoes were banished from the planet and the more easily-digested rice substituted." Nor do we think our hardy lumbermen in the backwoods will agree with the quotation adopted from Dr. Kellogg, in which he says: "Hogs are very prone to tuberculosis, and that a slice of fat pork is concentrated, consolidated filth. W. J. W.

A Compound of Pathology, General and Special. A Student's Manual in One Volume. By ALFRED EDWARD THAYER, M.D., Professor of Pathology, University of Texas. Second Edition, containing 131 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903. Canadian Agents: Chandler & Massey Limited, Toronto, Montreal and Winnipeg.

An abridgment such as this work is, containing reliable statements and facts, with the latest recognized theories and practical methods, will be invaluable to the student of pathology of to-day.

The author has amalgamated two compends of a former edition with this one of 692 pages, and has added a chapter on the nervous system and many fresh illustrations. The chapter on "Methods," containing a capital description of how a post-mortem examination, from beginning to end, should be conducted, will be found exceedingly useful.

The "get up" of the book is really unique as compared with medical works generally, being handsomely bound in the best loose leather style, and opens like a book should. We congratulate the publishers. W. H. P.

A Practical Treatise on Smallpox. Illustrated by Colored Photographs from Life. By GEO. HENRY FOX, A.M., M.D., Consulting Dermatologist to the Health Department of New York City, with the collaboration of S. D. Hubbard, M.D., S. Pollitzer, M.D., and J. H. Huddleston, M.D. In two parts. Philadelphia and London: J. B. Lippincott Company. 1902.

It does not fall to the lot of many to have the opportunity of studying smallpox in its different phases, and at its several stages, in life, so that the question of diagnosis depends largely upon the study of variola from plates. After studying those in Dr. Fox's two volumes, we do not hesitate to say that every general practitioner should expend the necessary amount to purchase the work, the plates being so excellent, so delicately tinted, and so true to life, that they are almost as valuable for diagnostic purposes as

the cases themselves could be. They are, in reality, works of art, and the firm of J. B. Lippincott & Co. are deserving of congratulation for their part of the work, and have proved that they turn out the very highest-class printing and lithography. The Canadian agent, from whom all the books of this firm can be obtained, is Chas. B. Roberts, Montreal.

A Manual of Medicine. Edited by W. H. Allchin, M.D. (Lond.), F.R.C.P., F.R.S. (Edin.), Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital; Examiner in Medicine in the University of London, and to the Medical Department of the Royal Navy. Volume II.—General Diseases Continued; Diseases Caused by Parasites, Diseases Determined by Poisons Introduced into the Body, Primary Perversions of General Nutrition, Diseases of the Blood. London: Macmillan & Co., Limited. New York: The Macmillan Company. 1900.

Through some mistake Volume II., a continuation on general disease, did not come to hand till this month, although Vols. I., III., IV., and, lately, V., were previously reviewed. We are always pleased to receive this work. The articles are short and to the point. They give you all you want on the subject, without tiresome reading. The work is thoroughly up-to-date, and we can with confidence recommend it to our friends. W. J. W.

Facetiæ Medicorum. The wit and humor of medicine in prose, poem and picture, gleaned from various sources and selected and reprinted from the files of "The Doctor's Factotum." Yonkers, N.Y.: The N. Y. Pharmacal Association.

This is worth sending for, and any physician enclosing his card to the publishers at Yonkers, N.Y., can receive a copy of "Facetiæ Medicorum." It will while away a pleasant hour on a winter's evening and cause many a healthy, hearty laugh.

Handsome Booklets on Antitoxin and Vaccine.—The firm of H. K. Mulford & Co., of Philadelphia, Pa., have recently issued exceedingly handsome booklets setting forth in full detail the manufacture of their different Serums from start to finish. The firm have certainly spared no expense in the work, and it will repay any physician to send for copies, which will be furnished him on application by remitting his professional card.