

PAGES

MISSING

The broad fields east and west are calling for young people who are in love with the great outdoors. Idealists, above all, are wanted, for the true idealists are the ones who can "toil terribly." They are those who, in order to make their dreams come true, can harness themselves up and tug and pull. Our country needs, moreover, young people who so keenly want to get at the truth that they will tease nature with their questions and never stop till they get the right answers, with all the proofs. Especially does it need those rare persons who know how to intensify their own working power by joining with others in a common cause.

—Dora Williams.



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Photo-Study by H. H. Chestern, of Crookston, Minn.

The Public Health Journal

State Medicine and Sanitary Review

VOL. III

TORONTO, CANADA, AUGUST, 1912.

No. 8

Special Articles

THE MEDICAL INSPECTION OF IMMIGRANTS

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Immigration is a subject of vital importance to every loyal citizen, especially to the medical profession, creating as it does many complex problems—economic, social, moral and physical—and being the chief source of increment to our population.

The Dominion of Canada has a definite immigration policy, based on needs and conditions, with an immigration Act sufficiently flexible and admirably adapted to permit the effective carrying out of such a policy. The policy of the government is to promote and encourage the emigration of settlers for the agricultural regions, by means of wise and discriminate selection and to discourage the migration of such classes that settle in towns and cities.

No race or nationality are excluded by the immigration Act, but a discretionary power conferred upon officials charged with the administration of the Act makes in a measure discrimination possible.

In the last ten years the Dominion has expended several million dollars in its campaign to promote emigration by the advertising and the sending of farmer delegates as lecturers to various countries. The information imparted by these delegates has been the means of removing the deep-rooted prejudices against settlement in Canada and in conveying a correct knowledge of

the country, its advantages and possibilities.

The emigration of poor and homeless British children to Canada is now encouraged and supervised, but not otherwise assisted by the Dominion government. They are sent to Canada by charitable and religious organizations and the majority are placed in the families of farmers, but the demand for them far exceeds the supply. In nine years 19,034, of these juveniles were admitted. This form of immigration is very commendable and most desirous for the upbuilding of a new country. It has passed the experimental stage and the wisdom of such juvenile immigration is becoming more manifest each succeeding year in the development of self-respecting, useful and industrious citizens for the agricultural and industrial centres of the Dominion.

Until recently the United States was the destination of by far the greater part of immigration to this continent, but since the opening up of the vast agricultural areas in the Dominion emigration has increased, until Canada to-day is one of the great immigrant-receiving countries of the world. During the nine-year period 1900-1909, the total immigration to the United States was 7,753,816, and during the same period Can-

ada received 1,244,597—of whom 582,339 were from North and West Europe, including Iceland; 235,076 were from other European countries, including Syria; 393,908 were from the United States; 21,495 were Asiatic, and 11,779 others.

The immigration to Canada has yearly increased and for the fiscal year 1910-1911 there were admitted 311,084 — of whom 123,013 were British; 121,451 were from the United States and 66,620 were from European countries. The immigration to the United States for the same period was 1,085,712. Considering the population of the two countries the immigration to Canada has been relatively much greater.

Although Canada is making persistent efforts to promote emigration, its laws relative to the exclusion of the undesirable are hardly less rigid than that of the United States, but they are more adaptable to emergencies or changed conditions, while greater discretionary powers and authority are conferred upon civil and medical officers. The United States medical officer is limited to the certification of the physical and mental condition of immigrants, except in cases where rejection is mandatory under the law; their admissibility being the function of the boards of special inquiry, Commissioner General of Immigration or the Secretary of the Department of Commerce and Labor. The duties of the Canadian medical officers are administrative as well as professional.

While increasing legislation has been the means of a gradual elevation of standards and additional restrictive laws are under discussion and pending enactment, provision for better and more stringent enforcement of the existing law is needed in both countries.

From a humane standpoint every effort should be made to detect excludable cases at the port of departure by Government medical officers who have been trained at ports of entry, in order that hundreds yearly of such immigrants may not have to suffer the hardships of family separations, disappointments, as well as the pecuniary loss which most of them can ill afford and a useless voyage across the Atlantic; or as frequently happens, after they have gained admission, acquired a domicile and perhaps brought many of those dependent upon

them into the country, to be then deported from public institutions, as is provided by the immigration laws, which permit such deportations at the expense of the steamship lines, within three years, if it can be demonstrated that their malady existed prior to landing.

Trained Government medical officers should be detailed in addition to the ship-surgeon, upon every ship carrying immigrants, as is now the custom of the Italian government, who assign a medical officer of the Royal Italian Navy upon every ship sailing from an Italian port. These officers, known as Royal Italian Commissioners, have unlimited powers of supervision of food, accommodations, medical and surgical care, hospital facilities; in short every condition which may affect the comfort or safety of the immigrant. Such officers in their intimate contact with the emigrant, ranging in duration from six to fourteen days, would have exceptional opportunity for observation and detecting evidences of quarantinable infectious or contagious disease; minor mental or physical defects, which might otherwise be overlooked, but of a nature sufficient to warrant detention and further careful examination by either quarantine or immigration officers upon arrival. Such a provision besides minimizing the unfortunate aliens hardships, would materially assist port medical officers, improve ship sanitation, tend to solve many quarantine problems, as well as being a further obstacle to the introduction of quarantinable disease and an aid to the preservation of public health.

The United States Immigration Law, which is practically identical with that of the Canadian Act, excludes the following classes of diseased aliens from admission:

“All idiots, imbeciles, feeble-minded persons, epileptics, insane persons, and persons who have been insane within five years previous; persons who have had two or more attacks of insanity at any time previously;—persons afflicted with tuberculosis, or with a loathsome or dangerous contagious disease;—those who are found to be and are certified by the examining surgeon as being mentally or physically defective, such mental or physical defect being of such a nature which may affect the ability of such alien to earn a living.”

The U. S. law imposes a fine of \$100 upon any steamship company bringing any alien subject to any of the following disabilities: Idiots, imbeciles, epileptics, or persons afflicted with tuberculosis, or with a loathsome or dangerous contagious disease, if it shall appear that any so brought were afflicted at the time of foreign embarkation and such disease or disability might have been detected by means of a competent medical examination at such time.

The Canadian Immigration Act has no such provision, but civil actions have been brought and judgments awarded against various steamship lines for bringing out and not reporting on the bill of health, physical and mental defects, as is provided for by the regulations.

Tuberculosis in the above-quoted law has been legally construed to mean tuberculosis of the respiratory, intestinal and urinary tracts, but there is now pending a law which, in addition, will include tuberculosis in any form; skin, bone, joint or visceral. It has also been suggested to add to the above law—"Aliens afflicted with chronic alcoholism and those exhibiting marked psychopathic tendencies." If these additions were made to the law many cases now certified by the examining surgeon would come within the mandatory deportable class, whereas at present many of such cases are landed, as the law does not specifically state that they shall be excluded. It is just such cases as these that become insane a short time after arrival and find their way to public hospitals and institutions for treatment or commitment.

Of the 311,084 immigrants applying for admission to Canada during the last fiscal year, 1,868 were certified as either physically or mentally defective; while in the United States, of the 1,085,712 applying for admission during the same period 27,158 were similarly certified.

The medical department of the Canadian Immigration Service is ably and efficiently administered by a corps of medical officers, whose chief, Dr. Bryce, has said: "The approximate maximum of efficient work at the seaports under existing methods of inspection and the requirement of the Act, has been reached," but Dr. Pagé, Chief Immigration Medical Officer at the port of Quebec, has recently written in his able paper, read before the Canadian Public Health Association, "There will be yet a

certain number of mentally and physically diseased persons who will slip through our hands to be detected soon after landing and deported from various points of the interior,—and the best filter to oppose the penetration of the undesirable into the country, will be found in the ship-surgeon's services as soon as it is organized on some reasonable and systematic basis,—no innovation or modification of any existing method of inspection on either side of the Atlantic will ever accomplish the equivalent of what the general ship-surgeon is in a position to do, if qualified and if he lives up to his obligations.—While it may take some time yet before we can borrow surgeons from a Canadian Navy, steamship corporations should be persuaded to pay their ship-surgeons such salaries that would be an inducement for men of recognized qualification to enter the service on an initial salary of not less than \$1,000 per annum, with a rising scale for a certain number of years."

To the casual spectator the medical inspection and examination of immigrants doubtless seems hasty and superficial, but the trained examiner with a definite formulated method of scrutiny, beginning at the aliens' feet, when he is about ten feet away and marching toward the examiner and ending by the turning of the eyelids, exposing the superior cul-de-sac and the examination of his scalp, cultivate an ability of rapidly "sizing up" and detecting physical and mental defectives, as is evidenced by the wide range of diseases and defects certified during the year. The primary inspection is principally for the segregation of suspects and the obviously diseased and defective, who are held for a second and more searching examination, or for treatment and observation, sometimes for weeks before a positive diagnosis and certificate is rendered.

While inspection is made of the immigrants at many continental border stations from a quarantine point of view, the medical inspection of immigrants from an immigration standpoint, begins at the port of embarkation, where the emigrant is examined either at the emigrant boarding houses or the landing stage (one might say as with a fine tooth comb), first, by the Board of Trade examiner and, if found free from quarantinable, infectious or contagious dis-

ease, he is passed and presented to the shore examiner of the transportation line and the ship-surgeon, whose duty it is to exclude and deny passage to any found otherwise diseased or of the excludable classes under the Immigration Law. Those who survive this gauntlet of inspection are received aboard ship and are then under the supervision of the ship-surgeon, who should daily inspect every immigrant as well as their quarters, and vaccinate those not vaccinated. Obviously the object of this inspection is ship sanitation, care of the immigrant and the discovery in its incipency of any contagious or infectious disease and its immediate isolation, as well as the study of the immigrant's physical and mental caliber.

When the ship arrives at the entrance to the port of entry, it is boarded by the quarantine officer, who should make an inspection of each immigrant.

One would naturally wonder how, after all this seemingly exhaustive medical inspection, there could arrive at our doors any who might be of the excluded classes, or quarantine disease reach the immigration stations.

There are several reasons which might account for this. The examiners at the port of foreign embarkation are not trained government officers and they will frequently take chances of the possibility of a case escaping detection or its possible acceptance, by the port medical officers. The ship-surgeon in many instances is untrained, insufficiently informed as to his duties, inadequately paid, and often but merely taking advantage of a cheap trip across the Atlantic, without any realization of his responsibilities. Another cause, I believe, is the difference of opinion of medical men, as to what is and is not Trachoma, particularly those who are not trained and have not had the opportunity of personally examining many Trachomatous eyelids. And yet another reason, in Canada at any rate, is the unsafe and dangerous method, as will be shown later in this paper, of granting pratique to ships at quarantine without inspection before sunrise and after sunset, upon the sworn statement of the ship-surgeon, of the absence of quarantinable, infectious or contagious disease.

In spite of the vigilance on the part of the steamship lines, the number

of those denied admission at the ports of arrival, because of Trachoma, for the last ten years, has increased from one in 1,800 to one in 400, while, in Canada, last year the ratio was 1 in 161. It has been said by a representative of the transportation interests, that steamship companies were rejecting in Europe, on account of Trachoma, over 100,000 applicants for passage a year, so that it can be readily seen that this one malady alone is the sole obstacle in the way of hundreds of thousands emigrating to the United States and thousands as well to Canada, many of whom are bound by family ties to those already domiciled or citizens of either country.

Examiners at the ports of entry nowadays do not find so many well marked cases of Trachoma, as was the custom a few years ago, and the majority of cases now held for disease of the eyelids require observation and treatment for a few days to as many weeks to definitely diagnose cases of Trachoma. Many cases are seen of long standing Chronic Trachoma, in which the conjunctiva of the lids have become replaced by scar tissue or partly so, either in one or both eyes, by the spontaneous arrest of the disease, before the destruction of the conjunctiva has become complete. To all intents and purposes such a condition is cured Trachoma and is so accepted, but whether it remains permanently cured is a question, as cases have been found months later in which the disease was again active. Medical officers of the United States Public Health and Marine-Hospital Service, as examiners of immigrants destined to the United States, are instructed by their regulations to rely upon definite clinical manifestations, as conclusive evidence requisite for the issuance of a certificate of Trachoma as follows: A characteristic connective tissue hyperplasia, lymphoid cell proliferation with degeneration of the encapsulated follicles and destruction of conjunctiva. The essential diagnostic features being, the formation of firm organized follicles, which coalesce with the conjunctiva, break down, causing progressive destruction and permanent scar tissue formation. There have been about thirty or more kinds of bacteria isolated, as being responsible for inflammatory conditions of the conjunctiva or cornea, but the cause of Trachoma is still unknown.

In Canada, for the last fiscal year there were 463 immigrants certified for Trachoma and in the United States there were 2,301.

Insanity and allied mental defects make up a large percentage of undesirable immigrants, for whom the medical examiner is constantly on the lookout. Many are readily detected as obviously insane or mentally deficient, but it is those cases mentally inferior or unstable on the border between fit and unfit which predominate and are the source of a great deal of apprehension, as many of just such cases shortly after landing in their new surroundings, with changed modes of living, foreign tongue and the strife for existence, need but such exciting cause to render them perceptibly insane.

Statistics for the past years as to admissions, readmissions, nationality and race are so incomplete and unreliable that a comprehensive comparison of native and foreign born insane in public institutions, is practically impossible. Without doubt, insanity in the alien is the cause of a very great burden upon Provincial, Dominion, State and National resources, as recent statistics compiled in New York State show that twenty-six per cent. of all immigrants destined to the United States remain in New York State and that there is admitted to the psychopathic wards of its county and state institutions aliens in the proportion of 1 in 250, during the first year after their arrival. The majority of the alien insane patients in public institutions are recruited from the urban population of the Teutonic races and represent a group who must be provided for, for many years at an approximate per capita cost of \$180.00 per year, and of whom fewest recoveries are obtained. The largest percentage of them are of the age period 25-44 years, the time in life when the struggles for sustenance, wage earning and child-bearing period are the greatest, and their inability to speak the language and their forms of mental defects tend to make them less liable to derive as much benefit from hospital treatment as do others.

The total number certified for insanity and other mental defects during the fiscal year at the ports of entry in Canada was 79, while in the United States there were 369.

Sir James Barr, in a lecture given at a recent convention of the Canadian Medical Association, speaking of Canada, said, "You have got here a young country, a virgin soil and you should see that it is peopled by a vigorous and intellectual race. You should shut out all degenerate foreigners as you would exclude a mad dog. During the last fifty years the insane population of England and Wales has increased 250 per cent., while the whole population has only increased 81.6 per cent., and in Ireland, with a falling population, the increase has been about 100 per cent. The ratio of the insane to the general population, in England and Wales, is 1 in 278; in Ireland 1 in 158, and in Scotland 1 in 256. There are some 150,000 (estimated) defectives in England and Wales, and for every defective there are from six to a dozen of his relatives only a shade better than himself."

From this statement alone one cannot but realize the importance of a careful scrutinizing examination of all aliens, as, has been said, it is the United Kingdom, some of the northern European countries and the United States that Canada regard as most likely sources to furnish the classes of aliens desired.

Time will not permit me in this paper to given even a resumé of the undesirables certified by medical officers, but nearly every affliction, infirmity, or disease that flesh is heir to, has at times been found at ports of entry among alien immigrants. To emphasize the importance of quarantine inspection as referred to in a previous paragraph, the following case, because of its unusual interesting features and its international scope, may be described in detail.

At Quebec during the time of the Cholera epidemic in Europe in the fall of 1910, during a primary line inspection of a ship which had been granted pratique at quarantine without inspection, the night previously, the writer's attention was drawn to a Russian-German, who was obviously ill and from whom the following history was obtained:

"Starting on October 18th, 1910, from the Village of Michelsdorf, District of Wlodawsky, Province of Szedlicki, Russia, he traveled by team to the City of Wlodawa, and thence by rail, a two days' journey, to Libau. His baggage consisted of a small

hand basket in which he carried provisions, consisting of bread, sugar, tea and boiled meat, besides three handkerchiefs, one towel, a bottle of eye medicine and dropper. He had no other baggage or effects, except clothing worn. En route from Wlodawa to Libau, he purchased at the railroad station four apples and some bottled beer, which he ate and drank before reaching Libau. At Libau he was detained for one day and night in an emigrant boarding house, where there were about thirty other emigrants detained, Russians, Jews, etc. At Libau his effects were not disinfected. He boarded a Danish ship for London, which port was reached, he claims, in eight days. During this voyage he ate only food supplied by the ship, no uncooked vegetable or fruit. From London dock he was taken to an emigrant boarding house, where there were many Russians and emigrants of other nationalities detained. In this house he remained either seven or eight days and then proceeded via rail to Bristol, Eng., which port he reached the day of sailing, November 8th. On November 12th, at sea, he was taken ill with severe cramps in his extremities and abdomen, chilly sensations, vomiting and great thirst. The day following the symptoms were more marked with weakness and diarrhoea. These symptoms continued with more or less severity until November 17th when the vomiting ceased and he had but few liquid movements.

"He disembarked at Quebec November 17th, with an unsteady gait, anxious expression, pinched nose and cheeks and blue lips. His temperature at the time was 39.2 Centigrade, weak thready pulse of 138, and complained of abdominal cramps and intense thirst. He had been unable during the five previous days to retain anything in his stomach except a few bits of bread and had no control over his bowel movements. At no time during his whole voyage had he eaten any uncooked vegetables or fruit, except the four apples purchased and eaten unpeeled in Russia."

A specimen of this alien's feces and his effects, contained in a small reed hand basket, as described above, were forwarded to Professor Adami, of McGill University, for bacteriological examination on November 17th, and the immigrant was returned with the ship to quarantine, where after a day or two his symptoms subsided and he was apparently well. On November 19th, the

following telegram was received from Professor Adami: "Definitely decide case one of Cholera." In a later report he stated that he had also isolated spirillum from one of the soiled handkerchiefs. Professor Adami and Dr. Vallée, director of the Municipal Laboratory at Quebec, made frequent bacteriological examinations of the stools of this alien and found Cholera bacilli continuously present in them for six months.

Russian investigators, Zlatogoroff among others, have been able to demonstrate Cholera bacilli in the feces not longer than fifty-six days and twenty days is conceded as the average.

This case undoubtedly was a Cholera-Carrier, similar to the now well-known typhoid-carrier, but it presents several unusual interesting features. The period of incubation for Cholera is given as from two to five days, and here we have a man falling ill twenty-two to twenty-four days after leaving Russia, an infected country, with what was bacteriologically diagnosed Cholera. Bacilli were found in his personal effects and he continued to pass them in his feces for six months thereafter.

The question naturally arises, when and how did this man infect himself to become a Cholera Carrier? There are two probable hypotheses. First, he may have left Russia as a Cholera-Carrier, but owing to lowered bodily resistance dependent upon the rigors of a sea voyage, he set up a mild choleraic attack, which soon subsided shortly after disembarking at Quebec, leaving him well, but a carrier. Second—He may have infected some of his personal effects while in or passing through Russia, but not until later during the voyage did he consume in some manner the Cholera bacilli, setting up a mild choleraic attack, which soon subsided leaving him well, but a carrier.

This poor unfortunate showed signs of dementia after his long incarceration at Grosse Isle quarantine, and when it was found in May of last year that he was no longer a Cholera Carrier, he was deported to Russia as Insane.

Canada is a young, but a rapidly growing, country with extensive uncultivated areas and vast natural resources. Canadians have wisely framed their immigration laws, they have benefited by the earlier experiences of the Republic to the south and they

have a systematic propoganda to induce emigration of the desired classes. They are receiving to-day a far better class of immigrants, taken in the aggregate, than the United States were receiving at relatively the same period in its development. Canadian laws should be so restrictive and stringently enforced as to admit only those who are physically and mentally sound,

capable of developing and building up this great and glorious Dominion, and upon the shoulders of the medical profession, in a great measure, rests the responsibility for this development. The conservation of the Canadian race is vastly more important than that of the Natural Resources, as the real wealth of a nation is its people.

VINES AND HEDGES

BY RACHEL R. TODD, M.D., C.M.

In these tiresome days of stifling heat and burning winds, when every poor mortal seeks what relief he can obtain from shady nook and sheltered corner, the wise gardener, who had a little forethought, took care to prepare for this trying time and is now enjoying a delightful reward. He can sit calmly and coolly in his own little domain and view with satisfaction the results of his own handiwork. His eye may roam where it will and meet no offence; no unsightly outbuildings, no glaring bare, board fences; no dilapidated porches; no unspeakably ugly corners.

And why?

They are all hidden. Hidden behind hedges—thick, bushy, smelly hedges that form a living green wall—an effective and beautiful background of which the eye does not soon weary; hidden beneath luxuriant green vines, with graceful creeping trailers that stretch out eager fingers in every direction, only too anxious to do their share in covering unpleasant places.

And what a plentiful reward from so little labor. A few carefully chosen, healthy plants well placed, a few minutes spent daily training rapidly-growing trailers, a generous drenching with the hose early in the morning before the sun's rays have warmed up, and after sundown, and a casual watch on the weeds, and what a reward is obtained.

The reward? A feast, physically and mentally, through all the long hot days and nights. Physically, because the eye, the ear, yes and the nose too, is fed on and pleased by a never ending succession of color and smell; mentally, because one cannot be constantly associated with beautiful sights and smells without being very materially benefited thereby.

Think of the mental condition of a person who allows himself to gaze day in and day out, on a hard ugly—oh, unspeakably ugly—bare board fence that separates him from his neighbor, when with so little trouble, he might enjoy a glorious succession of vivid greens, ranging from the tenderest misty yellow green of the last grown leaves to sombre bronze and myrtle green of the older branches

Consider how many happier hours the busy housewife might enjoy on her back porch if, instead of making it the store-all for the innumerable kitchen utensils, the corners filled with mops and brooms, tubs and pails, the walls hung with dusters and floor cloths, shelves of various kinds stocked with—oh stacked with everything the everyday mind can think of—if, instead of all this, she should transform that very back porch into a veritable fairy arbor of cool and odorous greens, the walls draped with delicate climbing fringes, the corners filled with tubbed plants, the shelves (if they must be present), brightened with a few potted flowers, and right beside her door-step, a huge bush of sweet clover to keep away the hateful fly.

Why, she might even enjoy many a delectable cup of tea there, even if it is only the kitchen porch. Many a woman wisely insists on making this part of her establishment the pleasantest. And why should she not when most of her day is spent there? And think how delightful, as she works away, to breathe the fragrance of the lily-bed wafted through the window curtained with, say, wistaria vines, whose long, luscious racemes of dainty lavender or rich creamy-white, laden with the intangible perfume of the East cannot fail to soothe the weary mind.

How Nature Can Be Assisted in Covering Ugly Places.

That very old and trite saying, "Nature abhors a vacuum," has its companion in "Nature abhors ugly places." Turn your attention to the wild places of the earth and notice how quickly Nature lends her kindly aid in covering and protecting and preserving with thick-growing moss or vine or bush all old stumps, blighted and dead trees, dilapidated and ruined walls and buildings. When the Spirit of Growth is forced by unchanging laws to journey elsewhere for a season, along comes blustering old Winter who does all the mischief he can and then he, too, does effective work in softening and beautifying things.

Now, if only we all would set out to help in this work, how lovely the world would soon become.

If people could only be made to realize that they can take many of their heart-breaking troubles out into the garden and bury them deep out of sight and on their graves plant a flower bed! If people could only be made to realize that every moment spent in the garden, however small it be, will bring a two-fold blessing, a mind, strengthened and refreshed, and material aid to the garden.

Let us see then in what respect we can imitate or improve on Nature's methods. First, turn our attention to the subject of vines and see how we can make use of some of the easiest grown varieties.

The Choice of Suitable Vines for the Purpose in Hand.

The selection of suitable vines is, by no means an easy task, especially if one is forced through ignorance to depend on the questionable help to be obtained from the ordinary catalogue. The number and variety of vines one may use, for even the most ordinary purpose, however, is legion and since fortunately most of them are easily grown, shade and protection at least are obtained with little trouble. But when one desires to obtain the greatest amount of beauty and luxuriance of bloom as well, then one must make a judicious choice. This means the study of certain very necessary points, otherwise much useless labor and disappointment will follow.

In the first place vines fall naturally into two classes, the hardy vines and the annuals.

The annuals grow from seed and must

therefore be planted every season. Many of them are very lovely, their growth luxuriant, the bloom profuse, and beautiful, and they give great satisfaction. But, since they die down every year, there is no permanency of effect. Almost without exception the first touch of frost causes quick destruction to the entire vine thus leaving no old branches to form a support for the new growth the following year. The whole growth then of an annual must be accomplished between the early spring planting and the arrival of frost, so that no matter how rank the growth or how dense the shade produced, the effect can only be temporary.

With hardy vines, however, conditions and results are quite different. With the first touch of Spring tiny leaves and shoots appear from countless parts of the old vine-stalk left standing from former seasons; creeping in and out in every direction, weaving a thick, close, yet airy curtain of waving tendrils, the new growth produces a very appreciable shade in an incredibly short time; while, on the other hand, an annual will have barely commenced to form its central supporting stalk. This being always borne in mind, one can readily understand how the hardy vines are capable of giving such a much more adequate protection from the earliest part of the season and especially through the hottest days of summer. Also unlike the annuals, the first frosts do not have such disastrous effects, many of the varieties retaining most of their leaves and continuing to blossom long after their foliage has become entrancingly beautiful with autumn tints. This is one of the most important differences between the two classes of vines, and is one of the reasons why the amateur gardener will do well to have some knowledge of his vines before planting.

The gardener who owns his garden is a lucky man. He can plant for permanent effect. This means much. It means he can choose his vine and plant it. He can watch his vine grow in beauty and grace year by year; he can count on an ever increasing growth of protection and shade; for every year it will become more deeply rooted, will gather more strength, and by its greater luxuriance of growth and profusion of bloom, more than pay for every minute of time that has been spent on it.

But there are other points of difference between annuals and the hardy vines than this one, although this being far the most important. There must be considered soil exposure as well as the purpose for which the vine is chosen, and the support which can be readily given for it.

Every vine has a special and beautiful characteristic of its own, either for purely ornamental purposes, or for the purpose of making a thick and effective protection, or for the two purposes combined. But it is quite possible to procure utility and beauty and profusion of bloom from one well-chosen variety if one possesses a certain amount of knowledge and uses it in making the selection.

With regard to soil, perfect growth requires much. A deep rich fertile soil with plenty of moisture, the ground well trenched and quantities of well-rotted manure thoroughly dug in, are absolutely necessary. When one considers the amount of vegetation borne by a single specimen, it is easy to understand the great amount of food necessary for the perfect nourishment of it. Only too often this point is not attended to, with the result that a poor, spindly, half-grown, wholly-starved vine is obtained. Give your vines plenty of good rich food (you can scarcely overfeed them), and they will give you good measure in return.

Now let us turn to the question of exposure. While individuality of vine must of course be considered, there are some general rules one may follow. For instance, most evergreen vines, such as the true ivies, and the euonymus, thrive best when they are given cool or shady positions; therefore, they should be planted on the northerly sides of trellises, arbors, walls or whatever structures they are destined to cover or decorate. On the other hand, deciduous vines, that is those which shed their leaves, but whose main stalk and branches live and sleep through the winter,—these flourish in sunny places; the clematis for example. But in every case, the special requirements of each vine must be allowed for, and proper provision made.

Lastly, in preparing the support for your vine, you must absolutely have some idea of the possibilities of your vine. Compare, for instance, the requirements and possibilities of the ordinary Boston ivy with, say the wistaria vine. Can you imagine

anyone planting a Boston Ivy, with the idea in his mind that it will cover successfully a wire screen or something of the kind; or expect a wistaria to climb up a wall as the Boston Ivy does. If one has to depend on a catalogue for information, that is about the amount of help he will receive on the subject. And so, let me repeat, one must know what his vine can accomplish.

But let me encourage the amateur gardener by assuring him that he can turn a sickly, poorly-nourished, unsatisfied vine into such a strong, healthy, luxuriant climber, by a little thoughtful and judicious attention, that he will have difficulty in recognizing the starveling he started with.

Some Reliable and Tried Varieties from Which to Choose.

The following well-known vines give great satisfaction in producing a cool, thick shade in a remarkably short time:

Dense Shade.

The Wild Grape
The Virginia Creeper.
The Kudzu Vine.
The Boston Ivy.
The Honeysuckle Vines.
The Matrimony Vines.
The Wood Vine.
The Japanese Hop Vine.
The Celastrus Vine.
The Aristolochia.
The Jassimines.
The Ivies.

Partial Shade.

The Wistaria Vine.
The Clematis Vine—Virgin's Bower.
The Matrimony Vine.
The Passiflora Vine.
The Trumpet Creeper.
The Akebia Vine.
The Actinidia Vine.

This may seem rather an alarming list to place before the amateur; but notice, several vines are mentioned in both columns, which means that these varieties require a season or two in order to produce their best results. For example, nothing can exceed the thick shade produced by the Matrimony Vine; it will not accomplish the same result in one season that the Kudzu Vine will.

At the risk of making this article appear like a page from the ordinary flower

catalogue, I shall describe as I know them a few of the varieties named, with this exception that I hope to give some much more satisfying information, gained from experience.

The Wild Grape vines are so well known that we can pass them by with but little discussion, together with the various Ivies (the true Ivies), and the old-fashioned Virginian creepers. They might almost be called "The Poor Man's Vines," so easy of culture are they, and so cheaply purchased. These facts, however, do not by any means make them the less desirable, because they are absolutely necessary in the ordinary scheme of things. They fill a place that no other vines can fill. For such purposes as covering large areas in a short time, places that require permanent vines, such as line fences, back sheds, or ordinary outbuildings of all descriptions, or for forming the groundwork of coverings for arbors, summer houses or porches, nothing can take their place. A summer house covered with the ordinary Wild Grape in early summer, when the vine is in blossom, is one of the most delightful places the most exacting person can demand; the blossoms are very faintly fragrant, and are a great attraction for the bees, which come in swarms from everywhere, and, as they work away among the vines, to sit beneath the shade and hear the deep humming and buzzing, to watch the tiny dainty green stars that fall softly over everything, and to hear the gentle rustle of the breeze is really very pleasant. While the Wild Grape is often a prey to most bothersome insects, a careful spraying night and morning with the ordinary hose, especially in the early weeks of summer, and an occasional dose of some medicated spray, will entirely prevent these pests from breeding, beside affording drink to the vines.

With the first touch of frost the grape vines lose their beauty, but anything more gorgeous than the burning blood tints of the Virginian Creeper I have yet to see. Unfortunately the leaves remain but a few days on the vines after they have grown so beautiful. It is not ordinarily known that the Boston Ivy and the Virginian Creeper belong to the same family, but such is the case; it too takes on beautiful tints in autumn.

Since we have mentioned the Ivies, let us finish with them. Few words need be said

concerning them. Their utility is well known. There are so many members of the family, from the ancient ivies storied in history and song, to the small hanging-basket varieties, that a volume might very well be written on them. Here, suffice it to say, that their equal does not exist, for covering walls, rocks, and ruins of every description. When they have attained a very great age, flowers and berries are borne although the Boston Ivy and Virginian Creeper do bear berries when they are a few years old. These last two are not true ivies, but belong to the *Amelopsis*, a family that belongs peculiarly to this country.

The history of the *Wistaria* is lost in the mists of Time; China claims the vine, likewise Japan; United States also lays claim to this grand climber, and it is from a former Professor of Anatomy in the University of Pennsylvania, living at the end of the nineteenth century, one Caspar Wistar, that the name is derived, so that the name at any rate is American. Of the three varieties the Japanese *Wistaria* is undoubtedly the most desirable, it being of more luxuriant habit. The bloom rivals description, the long racemes of pendulous, pea-shaped flowers, from thirty to quite fifty in number, the whole cluster usually reaching anywhere from eighteen inches to three feet in length and appearing early in the season, before the leaves have opened out.

There are the three kinds, a rich creamy white, a very dark double purple, and a delicate light lavender flower, and which is the most beautiful would puzzle any one to decide. The heavy pungent perfume is appreciable for a long distance. The leaves are pinnate, very green and the vine itself is entirely free from pests of any description. It is best trained with a single central stem which should be kept free from branches for a distance of quite eight feet, and then spreading branches should be encouraged from this distance upperwards.

After the vine has become thoroughly well established, which should be in at least three years, conditions being favorable, all ragged growth should be discouraged, and rather severe pruning indulged in, which will force the vine to bear profusely. By removing all auxiliary shoots and forcing the vigor into one main chan-

nel, a splendid trunk-vine will be obtained in a few seasons; in this way a permanent vine is gained. Should disaster through severe frost occur, or should the vine be damaged by storm, a new start can be obtained from the strong old root.

As to soil, for the best development of this vine, a rich loamy earth, well manured, is necessary. Since it is most unwise to interfere in any way with the root, it being injured in the easiest way, other roots should not be planted. All the nourishment in the surrounding neighborhood will thus be secured, and a certain well being assured. I nearly lost a fine old vine last year by allowing a young rosebush to be planted at the foot of a purple variety, and while working around the roots of the rose disturbed the Wistaria roots, which immediately gave warning of its wish for undisturbed possession of that particular spot.

A sunny exposure is advantageous, in short necessary. I may seem to have taken up rather much time over this vine, but when I say that I know of no other climber that will repay to the utmost degree, the trouble expended on it—no, not trouble, say rather pleasure—pardon will be granted. The fortunate possessors of these vines will bear me out in my few observations.

Not unlike the last described climber is the Matrimony Vine, or, often called the Tea Vine. It also should be trained to one main stem, and managed almost precisely as already described. It is of truly graceful habit, its long slim trailers, bearing alternate tea-shaped leaves in whorls, from the tiny inch-long ones, to those sometimes six inches long, giving it an exceedingly elegant appearance. The color is a clean grey-green. It is entirely free from insects, and it blooms continuously, bearing small trumpet-shaped, five-petaled flowers borne singly. These flowers are very deep lavender in color, fading day by day to creamy white; deep red waxy berries about the size of large fat peas take their place. As the vine shows flowers and berries borne on the vines at the same time, and as the older branches are often covered with soft brownish-green spikes, the whole appearance is unusual and striking, and never fails to call forth much admiration.

This vine may be trained as a shrub quite successfully, if say, three main

stems are allowed to reach a height of about five feet, and are braided around each other for purposes of support, all shoots and branches being removed so that the growth is forced to the top of the braided stems; dozens of slim trailers will appear drooping languidly towards the ground, and in some cases reaching quite to the ground. If this method of training is made use of in a fence corner, and the trailers draped gracefully over the fence post, some long sprays being trained along the fence in opposite directions, one of the most unique and ornamental effects that can be imagined will be achieved, especially if the fence should chance to be a wire or an iron one.

Any situation where the soil is fairly fertile will give good results, but since the vine is a rampant grower it should receive plenty of good feeding.

See to it that your tea vine has plenty of sunshine, with fresh currents of air playing around the undergrowths, otherwise a fine, soft, sticky, grey-white mold will appear on trunk and branches and leaves, causing a very unhealthy and unkempt appearance.

The Honeysuckles and Clematis.

Both of these climbers have very large families and are old well-known favorites. Almost without exception the Honeysuckles are sweet-scented. Not so the various Clematis vines, only one or two of which are fragrant. The Honeysuckles and the Clematis vines run about evenly in public favor. Which is the most valuable in general utility it is hard to decide.

The unusual grace and beauty of nearly every member of the Honeysuckle family add unmeasured value to the charm of any garden. The delightful pergola, restful arbor, shaded verandah and porch afford unlimited opportunities to an enterprising gardener who delights to revel in profusion of bloom and perfume. The different varieties have each their own time of bloom, some flower quite early in the early spring, while others prolong the flowering season into late fall. So that it is quite an easy matter to have an unbroken succession of flowers for many months from the Honeysuckles alone. A pergola planted with these vines only, will produce an effect that cannot be equalled for harmony of outline, practical screening, and unrivalled profusion of many-colored blossoms,

fruit and perfume; an ordinary wire or iron fence offers splendid opportunities for experimenting with a number of different varieties, providing unlimited air, sun, and support.

The ordinary yellow Honeysuckle is the earliest flowering, sending out lovely bright yellow fragrant clusters of slender trumpets laden with honey, in early May. Following close come the Chinese and Italian vines, the first named producing exceedingly fragrant flowers of creamy white shading into a deep lemon tint, with showy evergreen foliage, while the latter variety bears bluish-white flowers that are rather a deep purple on the outside of the trumpet. Both are in bloom continuously throughout the whole season. The storied Woodbine is rather a low climber with very dark shiny leaves, that respond delightfully to the call of autumn. And the immense clumps of glowing crimson white-throated "Horns of Plenty" are the resort of busy bees until the hard frosts of winter drive them to their sleep.

One of the most satisfactory vines for training up the porch pillars is the Coral Honeysuckle. The growth is so rampant that the pruning shears are in constant demand, the leaves are a deep dark restful green, grey-blue beneath, and will not harbor insects of any kind. The trumpet heads are composed of from twelve to twenty immense scarlet horns shading to a waxy pink at the bases and literally drip thick yellow honey from their depths. The perfume is so pungent that a jar filled with flowering twigs, and placed in a room for a short time renders the room quite unbearable.

One more variety and my knowledge of Honeysuckles as far as my own experience is concerned is ended.

A very useful variety is a half-wild kind, rampant throughout Central Canada; it is easily transplantable with excellent results. The foliage is vigorous, thick, grey green, and very beautiful, but the flowers are not to be compared with those produced by the other Honeysuckles. It is at the end of summer and beginning of fall that this variety is most lovely, countless bright red shiny berries appear all over the vines, giving it a decidedly Christmas effect.

What is absolutely necessary for the

proper nourishment of all Honeysuckles is moisture and sun, and plenty of both.

For the planting of the vine, the following plan is a good one; a wide fairly deep hole should be filled to the depth of about two feet with well-rotted manure, on top of this rich loose earth must be placed at least one foot in depth; now place your vine-root, taking care to arrange the main central root in an upright position pushing it down firmly through the earth, then spreading the other rootlets in their natural position fixing them so with earth in order as they grow, in no case should any of them come in direct contact with the moist manure itself, as the close heat from this material is detrimental to their growth causing mold to form and insects to breed on the very roots.

Anything queerer-looking than the Clematis root it would be hard to find. It makes one think of a number of short fat snakes whose heads are all hidden in one large nest. In some of the varieties the long slender bulbs are attached the whole length of one long bulb. It is really a most fearsome looking object. When these roots are being planted, all these bulblets should be carefully separated and the earth packed in between, packed in quite loosely too, because, while all roots require plenty of air circulating around them, the Clematis is very exacting in this respect. A good plan is to mix with the earth a quantity of old withered chopped up grass or hay—something that will provide a number of channels for the air to enter, and will also serve to hold any surplus moisture, every extra drop of which is needed.

A very sunny exposure is necessary in every case. With the exception of a couple of members of the family, their purpose is purely ornamental. The well-known Virgin's Bower, a hardy graceful creeper, producing stout trailers from ten to fifteen feet long in a single season, is capable of making a dense shade, but does not bloom before July, when it suddenly covers itself with panicles of snow-white flowers, and continues to so decorate itself until late autumn.

A very popular vine of recent years is the Japanese Clematis, *Clematis Paniculata*. Not only for shading purposes, but also from a purely ornamental standpoint, this is one of our grandest climbers, and to my mind runs a close second to the Wis-

taria Vines. The leaves are persistent long after all other creepers have become bare, and do not take on that rusty withered look common to so many frost-touched plants. After this vine has been successfully wintered a couple of years, one may count on it as a permanent vine, and with ordinary winter protection the vine stalks should not die down, although it must be expected that the frost will do some little pruning. This is one of the very few scented Clematis plants, not only the splendid white plume-like heads of blossoms exhaling a lovely odor, but the bright green leaves themselves are fragrant; this faint smell becomes quite distinct when the plant is hosed or after a gentle shower.

For the forming of a hedge, Clematis *Paniculata* makes a grand ground-work. Used in company with a number of the early-flowering annuals, presently to be described, such as the Mountain Fringe, with delicate fern-like foliage, and the exquisite *Centrosema* (Butterfly Pea), the most perfect and wonder-exciting hedge can be obtained that any eye has ever seen.

The large-flowering Clematis, a hybrid, requires a specially prepared loamy soil, as rich as one can manufacture, constant drenching with water, and a position that will secure for it every minute of sun that it is possible to capture. There are many different sub-divisions of this branch of the Clematis family, and they one and all require careful protection throughout the long hard winters, to enable them to come through safely. After they have reached a few years age the old vines may for the most part survive, in such cases, enabling the climber to make a better showing each succeeding year. Of the many, Clematis *Jackmanni*, a velvety purple, free-flowering; *Henryi*, a vigorous creamy-white; *Andre*, a dainty pink; and *The Gem*, a marvelous sky-blue; these are by far the most well-known and appeal most to popular fancy.

There are many other varieties all most fascinatingly described in the various plant books; but the few kinds already described are all we have the pleasure of knowing, and, therefore, can only speak with authority on those that come within our own experience.

Speaking in general about these plants, it does seem a pity that they are not grown

in greater numbers. It is just as easy to set out a hedge composed of Clematis vines, as it is to plant a bed of geraniums, and I am sure a much more satisfactory result will be gained. Of course they are rather expensive to start with, but once planted, remain for good. Then again, it is quite possible to obtain a number of these vines by allowing some of the fruiting blossoms to proceed to the bearing of seed, only possible, however, with vines of some age. These seedlings do remarkably well if they are lifted and wintered in the cellar during the first year of their life. The plants will give a few blossoms the second season, so that one may see what the new visitor is like, and the following year, all things being satisfactory will certainly bloom quite freely. It is quite true that plants raised from seed are much more likely to do well than those propagated from cuttings, always a most uncertain method of increasing one's stock. The Clematis family has been experimented with most assiduously, the last few years, and wonders have been accomplished, and doubtless the future will more than bear out the rich expectations promised.

It is to be regretted that the Trumpet Vine is so old-fashioned that of late years it seems to have dropped out of public favor. It is a creeper with many possibilities and to show its owner what it is capable of accomplishing should be grown in numbers. For a hedge composed of one variety alone, it quite equals if not surpasses a hedge of *Weigelas*, and that means something. If used for this purpose however, it must be given steady and permanent support for at least three years. To make the hedge thick as well as shady, the plants should be placed about four feet apart and a good strong stake allowed for each specimen, to which it is firmly secured. In a few years each plant will have acquired a fairly sized trunk, if all auxiliary shoots have been constantly removed, and every succeeding year that hedge will add fresh beauties to itself until it has indeed become "A thing of beauty and a joy forever."

The Trumpet Vine may also be trained as a single ornamental decoration for a pillar, trellis, or decorating a window frame, or for forming an arch over a garden gate it has no equal. The great

clusters of rich crimson, in terminal clusters at least two inches across, are most striking and form a decided and welcome contrast to the clean green leaves.

REHOUSING IN CANADA

BY W. D. LIGHTHALL, K.C.

I confess myself a little in despair at the subject assigned me, "Rehousing in Canada." If it is to be descriptive, it is like the book on the snakes of Ireland. If I am to deal with the need of re-housing, the titles of the other discourses fixed for to-day stand up in protest—"Slums and Diseases," "Insanitary Housing Conditions," "Municipal Powers." Perhaps I may find proper refuge in the future by the spirit of prophecy. Or am I to put on an air of Delphic wisdom and dispense advice? Surely our audience would remember Job—"who is this that uttereth counsel without wisdom?" The short of it is, that re-housing in Canada is a new, a scarcely tried subject, and we must all put our heads together if we are to make anything out of its discussion.

The need is great—that requires no argument. One has only to go to St. Maurice street, or a number of others here in Montreal, and look well over and into the little ancient wooden shanties, tumbling down of their own rottenness, known to the authorities as "uninhabitable," yet tolerated because of the fear of causing loss to the proprietors; or on many congested streets, the jerry-built rack-rent-ridden tenements of more recent date, surrounding yards, with the filthiest sanitary arrangements: or some of the settlements of foreigners living in cellars or one family in a room without reasonable air or light and subject to horrible forms of tuberculosis and other disease—and then to learn the statistics and stories showing how extensively the population in such conditions is disappearing by the hand of death, and deteriorating morally, intellectually and physically—one has only to come face to face with these ready to hand facts and conditions to arrive at the conclusion that those old dilapidated shanties should be forthwith demolished, and the new ones forced to full amendment by the strictest exertion of authority. Recently a Westmount physician told me how he had been called to a house not far from

the City Hall of Montreal. There he found sixteen Galicians sleeping in two small rooms only large enough for one person. The single window was hermetically sealed. He was told that one set slept there by day and another by night. The floor was filthy. One man with tonsillitis was expectorating freely upon it. The same conditions obtain in the foreign quarter of Winnipeg, and to some extent other cities, including Toronto. In demanding demolition laws, we should bear in mind some of the conclusions of old country experience, which is not now so unlike ours as is often thought. Some of these conclusions might be adapted as follows: 1. Demolition, though absolutely requisite for the dilapidated shanty, is an extreme recourse, and should be limited to the worst types. 2. They should be first purchased, if possible, by the city, under authorization from the Legislature to borrow for the purpose. 3. If a landlord refuses to sell at a reasonable price, he should be held strictly to ameliorate. This is one of the points of the recent English Housing Act. 4. But it must be remembered that demolition and reconstruction by the city are very costly. 5. Consequently the hope of the future is in the proper construction and planning of new districts. Fortunately just now this is favored by our growing conditions in Canada. With every energy and earnestness in our power let us urge that this should be done at once. Where will the class we might call old habits of demolished premises go? What is there for them to go to? And what about the great masses whose conditions are partly bad, where they might and should be wholly good and nothing less? Amelioration of the present housing should, in the latter cases, be the aim: and that is a wide subject.

In Canada I know only of two cases of actual rehousing, omitting such as takes place naturally, by voluntary movement of individuals to the outskirts of the cities. The two cases are the experiments

of Mr. H. B. Ames, M.P., and Lt.-Col. Carson, both of Montreal, and both successful.

That of Mr. Ames has been tested by considerable time. It consists of thirty-nine tenement buildings neatly and solidly erected on William street in 1897, replacing dilapidated property. It is entitled "Diamond Court," and is two stories high with a neat paved yard communicating with the street. The apartments are rented at somewhat less than Colonel Carson's, but so as to bring 6 per cent. over all charges, and are in such demand that there are always tenants waiting to enter. The rentals are as follows:

2 let at	.....	\$1.75	per week
5 let at	.....	1.90	per week
22 let at	.....	2.15	per week
4 let at	.....	2.50	per week
2 let at	.....	2.75	per week
1 let at	.....	3.00	per week
Corner shop at \$15.00 per month.			

That of Col. Carson is erected on an old piece of family property on Colborne between William and Ottawa streets, the dilapidated buildings on which were torn down for the purpose. The buildings are of solid brick, fireproof, finished substantially, contain 48 tenements, two storeys, and are built around a fine spacious central square. Each tenement contains four nice rooms, well built with a bath room and closet and electric lighting. All are heated free from a central boiler room. The landlord pays the water tax. The rents are from \$12 to \$14 per month. The property now pays about six per cent. on the investment. All the flats are in great demand and command a good class of tenants. The open square is so highly appreciated that tenants prefer the inside flats to those on the dusty street. It makes a pleasant playground, being all cemented, except a central plot for flowers, and is cleaned by hose every day. The central heating removes the usual putting out of ashes. Colonel Carson found himself met with particular need of costly foundations which increased his outlay, but still finds it profitable. In addition he has yet to rent the basement, consisting of two fine cemented stores of over 8,000 feet square and eight feet high. When rented these will raise the profit. He contemplates

erecting other similar buildings in the neighborhood. Both the Ames and Carson groups are city dwellings. They prove beyond doubt that very considerable building can be safely, effectively, and also profitably done upon similar lines, and that, therefore, a good work lies before any capitalist who leans towards service to humanity.

Another project, now apparently well advanced, is of great interest—the first Garden City Company of Canada. Although I cannot mention the exact lines along which this project runs, I think I may venture to say that it is in hands both capable and devoted, and that it is bound to soon emerge in practical shape, with an extensive undertaking devised on the principles of English garden cities. It will certainly focus public attention, and be a matter of rejoicing when the picture becomes complete. Beyond question, its success will bring imitation all over Canada. One thought that strikes me is that ultimately the two forms of rehousing—that of the Garden Suburb, and of the model city tenement, will be combined in the same company. It is done in New York, where the City and Suburban Homes Company, with a capital of \$4,000,000, offers both classes of home. The company was organized in 1896 "to supply wage earners with improved wholesome houses at market rates of rental." It owns four large groups of model tenements, accommodating 1,238 families, and a suburban estate called "Homewood," in Brooklyn, of 32 acres. In all, about 6,000 people are housed. The shares are a "safe and sound investment confidently recommended to investors of large and small means." The officers are men of the highest standing. "Homewood" is equipped with all up-to-date improvements, and the houses are tasteful, commodious, comfortable, and solid. Ten per cent. cash secures a house, the balance being payable in twenty years with the rent, and the whole secured to the family and the company by an insurance policy on the purchaser's life. Some of the houses are also rented.

The approaching foundation of garden cities leads me to note here some other results of experience elsewhere. It must not be overlooked that the peculiarities of some of the classes whom it is desired to help will have to be studied closely. Among

them are those of foreign origin. Others are those sunk in intoxication and degradation. With the ordinary British-born emigrant, even those of the poorest class, so long as they are workers, I have found that they have a natural turning to trees and gardens when the opportunity presents itself. This is shown by the growth of such suburbs as Greenfield Park, Notre Dame de Grace, and Verdun, to which such people are fleeing for homes out of more crowded neighborhoods and ugly rows. The French-Canadian worker is also ambitious, and though usually caring little for the artistic touch, knows how to appreciate space, air, and comfort. The principal difficulty will be to turn him from his preference for the "soap-box" style of architecture, and the wonderful spiral outside stairs. However, the main idea after all should be health; and art and culture must but follow. Alderman Emard tells how, in opening up the Town of Emard, his company erected two model cottages with pretty roofs and other features, but could scarcely find a purchaser owing to the preference for the "soap-box" style. J. S. Nettleford in his "Landlord and Tenant," perhaps the best short condensation of housing questions in England, gives some more hints which we might take to heart: "In London," he writes, "Miss Octavia Hill has shown by the splendid work she has done, that landlords who recognize their responsibilities, do in the long run, benefit financially from their consideration for others. The owners of property managed by Miss Hill always get a steady 4 per cent., and sometimes 5 per cent. on their investment, which is far better business than to get 20 or 30 per cent. for a few years followed by a closing or demolition order. Miss Hill gives her tenants a direct personal interest in taking care of their homes. A certain sum is set aside each year for repairs, and if less than this amount is required to be spent, then the tenant gets the benefit in some tangible form, such as some household necessity or treasure on which he has set his heart. By this means, and in many other sympathetic ways, Miss Hill makes the interest of landlord and tenant identical, with immense advantage to both. Miss Hill's wonderful success in spite of great difficulties, is due to the fact that she recognizes what so many fail to see, viz.:

that the housing question is very largely a personal question, and cannot be successfully dealt with in the wholesale fashion.

"The successful solution of the housing problem depends more than anything else upon the relationship between landlord and tenant. Miss Hill, as landlord, or representative of the landlord, treats her tenants as human beings, and not as mere rent-producing animals. Her sympathy and practical common sense are more successful than Police Court summonses, and lead the tenants into taking care of their houses, with the result that her tenants enjoy comparative comfort, and the landlord gets better permanent returns on his investment than is the case under the usual thoughtless, heartless system.

"Miss Hill was one of the first housing reformers to draw attention to the unsoundness of the policy of municipal house building, but her opinions have been fully justified by results. Her principles are patience and caution, and, above all, help the people to help themselves instead of attempting to be a '*deus ex machina*,' and do everything for the people without calling upon them to do anything for themselves. It is often very difficult to refrain from rushing in and trying to put an immediate stop to the misery we see, but bitter experience teaches the hopelessness of this policy.

"Miss Hill's principles of patience, caution, and self-help, have undoubtedly succeeded where the attempt to do everything at once has utterly failed. It is only necessary to inspect the London County Council's barracks, and then Miss Hill's happy homes, in order to see that she has succeeded where the slapdash municipal house-builder, who sets to work without first thinking out general principles, has utterly failed."

Still another point, and a most important one to note is that Garden Cities will depend much on good and rapid transit. Their full success will be bound up with improved thoroughfares, underground and other rapid transit lines, cheap fares, and comfortable carriage. Let those planning them give this sufficient attention.

A very serious question all over Canada is that of the growth of "Shacktowns" on the outskirts of the cities, where they escape the buildings laws. There is a good

and a bad side to these. It is a laudable ambition when a workman buys a cheap lot, erects a temporary home, and gives his family the benefit of air, grass, and trees, while gradually improving the building and premises. It is bad when hovels are erected, clustered close with other hovels in insanitary conditions. We need strong provincial supervision to meet such conditions, and also sympathetic direction into right channels.

At any rate, rehousing in Canada, in any form it may take, will be a blessed undertaking, and the mother of vast and

permanent improvements throughout our country. With it is closely wrapped up the welfare of the workingman, of the women of the people, and above all of the helpless world of children. Madame d'Youville was moved to found the Grey Nunnery Foundling Hospital by the sight of an infant found in the ice in spring with a dirk in its breast. I think the device of our housing reformers should be an infant with a dirk in its breast.

All honor to the courageous ladies and gentlemen who have established the movement, and those who are organizing the new companies.

THE INFLUENCE OF DOSAGE ON THE REACTION TO THE TUBERCLE BACILLUS

BY R. J. EWART, M.D.,

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A general survey of the bibliography of this disease during the last 30 years is remarkable for the somewhat dramatic developments that have occurred. Thus, there is a period where the condition was regarded as hereditary, which, subsequent to Koch's discovery, underwent a sudden change. The proof of the identity of many lesions of a diverse nature was permanently demonstrated through this epoch-making piece of work.

It is hardly surprising that the bacteriology of the day should claim tuberculosis as obeying the laws of an ordinary zymotic disease. As a consequence, the infecting agent has received all the attention of investigators, and the nature of the soil in which the organism grew sunk into insignificance.

Now the pendulum is swinging back to the former position. Still there is a difference, for, as Lister has shown that susceptibility is no excuse for sepsis, so the ideal holds good that a hereditary disposition for phthisis does not make death from pulmonary consumption inevitable, though at present absolute prevention is hardly practical.

Our idea of the distribution of this organism has also undergone a considerable change. We now know that it is to all intents ubiquitous. Thus, Henry

Ancell, quoted by Karl Pearson,* found, even as early as 1853, 25 per cent. of all autopsies of St. George's Hospital to contain evidence of the disease, even though the cause of death had no relation to it. From that time to the present this statement has been confirmed times out of number. More delicate tests, especially that of Pirquet, leads us to the conclusion that this disease is as prevalent as measles. Hamburger and Alonte obtained a positive reaction in 90 per cent. of children of 12 years and over.

Thus, the contention that if a large number of persons are exposed to infection, and only a few acquire it, the susceptibility of the individual is of more moment in the causation than exposure to infection hardly applies to tubercle, as all are exposed and all are infected. The probability of death, which is an accident from the point of view of the tubercle bacillus, being consequent on infection, may be dependent on transmitted peculiarities of constitution.

The points that suggest themselves are numerous, a few of which may be enumerated thus: Does the person who has been infected tend to acquire an immunity or does the organism subside in activity after a period of growth? Should life of the host continue? If such an

*A good epitome of the literature on this aspect of the subject will be found in "The Fight Against Tuberculosis and the Death Rate from Phthisis." Karl Pearson. Dulaw & Co. 1911. Pages 19 to 28.

immunity to further infection is acquired, is it transmissible?

We might conclude, though positive evidence is wanting, that man is constantly being infected and small reactions frequently follow, even in the same individual at different times, the general health not being seriously disturbed. The recovery is due more to the life history of the parasite than to active measures on the part of the host. The blood of animals which have recovered after experimental inoculation does not appear to contain any immunising bodies, nor does previous infection seem to have any detrimental effect on the vitality of bacilli subsequently introduced. If this brief summary correctly represents the reactions of the host to this parasite, we naturally ask: What is the relationship of dosage to reaction. It is with reference to this point that I wish to discuss some observations made in young adults. I make an assumption that I hardly think will be questioned, namely, that a person living with a consumptive clinically recognizable is more heavily dosed than one not so placed or what is known as open tuberculosis.

All are subject to infection and, as has been shown, most are infected, but some more heavily than others.

Thus, two classes are formed: firstly, those in whom infection is met in ordinary daily life. These are called non-contacts; and, second, those who have already lived with a person in whom there was a recognizable lesion, or had died of the complaint, and in whom experiment has shown that organisms are present in the ejecta.

The details of this enquiry will be found in the Medical Officer. A few of the more salient points only being given in the present instance. The types are divided into classes—those where an immediate relative—father, mother, brother or sister—has died of the complaint, and those where home environment has been free from such infection. In the first series, 2,362 children from the ages of 4 to 7 were examined and their histories obtained by question of guardians. In these there were 282, or approximately 10 per cent., amongst whom an immediate relative had died of phthisis. In 81 of these the contact was close and continued over a long

period of time. They were 39.48 inches high and 36.83 lbs. in weight. In 201 contact, according to the definition given, did not exist or was only slight, and elaborate precautions were taken. The average height was 40.94 inches and weight 38.04 lbs. Contact in this class made a difference of $1\frac{1}{2}$ inches in height and 2.8 lbs. in weight. An objection arises to the above as to the fairness of the comparison. The very fact that precautions are taken by the parents means that they are of a higher type, and the difference observed may to some extent reflect that peculiarity rather than the direct influence of excessive dosage with infection. Negligence to take simple hygienic precautions is associated with bad feeding and want of attention to the other fundamental details of life, which might be the source of the difference. To get absolutely comparable data is very difficult.

A second series, taken at the 13th year, gave similar results, especially with reference to the weight. They are as follows: Out of 1,478 examined 156 had an immediate family history of consumption. Of these 76 had the necessary degree of contact to satisfy the criteria—80 had not.

Boys—

	Mean Age.	Height.	Weight.
Non-contacts.	13.6	55.71	77.58
Contacts.	13.6	54.31	73.02

Girls—

	Mean Age.	Height.	Weight.
Non-contacts.	13.5	55.98	80.14
Contacts.	13.7	56.21	73.57

If we take the percentage number, amongst whom there was an easily recognizable lesion, we find that where close contact existed it was 23 per cent., and where the conditions were such as all are exposed to it fell to 2 per cent. At the later age period the percentages were 36 per cent. and 25 per cent., respectively.

The reverse aspect of the question is more difficult. In this case only those are taken where the family history, so far as is obtainable, is satisfactory and a class formed of those who, through force of circumstances, were brought into close relationship with infected persons.

In the first group (4 years), out of 2,000 enquiries only two satisfied the criteria

laid down, neither of which appeared to be in any way deleteriously affected.

In our second group (13 years), 18 out of 1,288 had been so unfortunate, and of these four were infected, giving a percentage of 22.2 per cent., as against 1.2

per cent. for all of that age period.

These figures are much too small to be taken as final. Still, from a general view, we may conclude that dosage is a very important factor in the ultimate reaction of the organism to this parasite.

FALSE STARTS IN MUNICIPAL SANITATION

BY A. C. D. BLANCHARD, M. CAN. SOC. C.E.

CITY ENGINEER, LETHBRIDGE.

The steady growth of municipalities throughout the Dominion (even at the expense at times of rural districts) makes the points touched upon in this paper the more fitting at the present juncture. Particularly in the Western Provinces, where cities spring from villages overnight, do we find ever present problems in the endeavor to keep pace with the rapid growth. The provision of proper sanitation in its large sense of a pure and sufficient water supply and an adequate sewerage system are problems not only of great importance but are frequently very difficult of solution.

The optimistic outlook of the average Western citizen and the broad spirit of prosperity tends to bring large areas of more or less developed property under one municipal government. The extension in the way of improvements and public utilities which are naturally expected in the recently incorporated or annexed districts, demand excessive expenditure if the improvements are to be durable and permanent, and there is consequently a great temptation to substitute cheaper materials and less efficient designs in the effort to cover the territory. In the smaller towns, especially in the older provinces all over the country, the expenditure of a dollar or two in sewer and water supply is often regarded as a prodigal act and here too lies the same temptation. It is barely possible that an engineer in making up estimates for works of this character will present a cheap design not representing the best practice along with the more expensive one which he recommends. The choice if left to the corporation, being promoted by the spirit of economy, may fall upon the very scheme which they should avoid, costing less in first outlay, but becoming only

too often by far the most expensive in the long run.

To illustrate the point it is only necessary to consider for a moment the average small town with its outdoor conveniences and no water. After an epidemic of typhoid, threatened or real, the people if not absolutely apathetic are panic stricken; sewers are demanded at once, and a water supply purer than their old wells can afford. But their resources are limited; their Council too may be parsimonious. An engineer is called in. Warned that they are a poor community, he is instructed to give them something which they describe as economical, and which, plainly, means "cheap." To land the job by placing the cost within the supposed limits of their pockets is his problem.

There are so many such cases that one must pause to choose.

A small village recently wanted a water supply. Being near a city it arranged for a connection. Its wooden mains of six and four inches diameter were laid in good faith. They stretched a mile in two different directions. There was not enough money left to complete the circuit. Several four inch laterals led off from the feeders, terminating mostly in dead ends. The only chance of salvation from stale or deteriorated water lies in the confident expectation that the mains will leak sufficiently to provide a pure stream of running water in the mains all the time.

A second case is of a town which had to build a system of sewers; not for sanitation, but because the new water mains leaked so badly that basements were flooded everywhere, and the town adopted the novel expedient of laying drain tile parallel with their sewers, introducing the

water reaching the tile from the water mains into the sewers at each manhole.

Yet a third town, of the writer's knowledge, pumps its water against 150 feet of head and pumps nearly 300 gallons per day for each inhabitant; the quantity escaping from its wood mains being estimated at two-thirds the total supply.

These examples are by no means isolated. The most of the pipe used in the works referred to was of wood wound with wire. The writer does not wish to offer in this paper a wholesale condemnation of wooden pipe, but his experience with the commercial wood pipe laid in cities and towns which have come under his knowledge, shows that if wooden pipe are to be used for any such purpose as the supplying of water under pressure, they must be handled with the greatest care from the time that they leave the factory until the water has been turned into them. They should be used as soon as they are brought from the factory, and should never be stored for any length of time, neither should they lie in the ground without being filled at once with water. It is also practically impossible to make a suitable joint where a wooden pipe is connected with a valve or other cast iron special. The necessary conditions thus set forth to make a proper job are seldom complied with by the average town, and the result is a piece of work which cannot prove satisfactory. In prairie towns the best quality of wooden pipe costs perhaps but little more than half as much as cast iron pipe, and probably three-quarters as much as steel pipe, and its cheapness is its prime recommendation. Other things being equal, and especially where the water works system is a pumping, is there any engineer who would prefer to recommend wood pipe in preference to metal?

It is almost a truism that a water supply without sewers is useless. Sewers then must next be installed. The tendency in this branch of public work is not so much to skimp on the price of the pipe as to skimp on the digging. If there is plenty of "fall" the sewers are laid too close to the top. If the lay of the ground is flat, the tendency is to flatten the grades to a finish. One particularly level town has its small sewers eight inches in diameter laid with the fall of one foot in half a mile or

more; just enough to tempt the sewage to find its own level. Its efficiency in carrying solids to the outfall is questionable. Such grades are naturally adopted to avoid excessive cuts or, possibly, pumping. The expenses connected with cleansing of sewers after this fashion are often more than sufficient to defray considerable extra first cost.

One frequently meets with sewers constructed with too small a capacity. This may be the result either of a faulty forecast or immediate economy. Without investigation they should not be condemned, since the ultimate plan may provide for intercepting sewers which will give the proper relief when the time comes that they are needed, and with less expense than if the individual outlets had been constructed to meet the final requirements in the first place.

When water mains and sewers are installed concurrently they are occasionally placed in the same trench. Even under the best of conditions as far as the supporting soil is concerned the writer believes this practice to be bad, although showing a possible economy of installation. In the first place the percolation of water which might leak from the main breaks down the supporting bench, and the pipe, loosened from its original position sags as its support gets soft or gives away.

In the second place the ponderous iron specials intended to carry the flow around the sewer manhole shafts are difficult to place properly and a stock of every kind has to be maintained for repairs. This portion of the design has equal merit with the rest of the scheme.

With the growth of the movement towards the purification of all sewage effluents, it is a matter of much importance that the Municipal Engineer bear in mind the location of a prospective disposal plant and that he arrange his outfalls so that they may all converge on a suitable location for a plant. This may be done at no extra expense if due thought is given in the designing of the earlier installation.

The growth of sewer systems is unlike most growths, being chiefly from one end, and that the smaller end, so that unless built to a complete and final plan it becomes unequally taxed, in some cases beyond its capacity.

Those municipalities which have built up a separate system for sanitary sewage are at a distinct advantage when disposal treatment is required. All classes of sewers, either storm or sanitary, should also, if possible, be so arranged that the discharge will not contaminate any water supply source.

Another question of some importance and which is to a certain extent debatable is the advisability of providing lanes in residence districts. There can be no objection to lanes properly kept in order and paved, in business districts. There is excuse also for lanes extending from street to street in residential districts, when these can be used to keep telephone and lighting poles and gas and water mains off the city street. The usual lane, however, is uncared for, partially hidden from view; yet with its presence impressed on the traveler's senses by the odors from refuse scattered around. Such lanes are a breeding place for flies and a general menace to health. The matter is referred to here because it is more or less obligatory in some of the Western provinces to provide lanes at the back of each building lot in subdividing, and also because it is hoped that it may lead to a valuable discussion by members of the Canadian Public Health Association.

There are other points in connection with false starts in municipal sanitation which might be brought up here, including the destruction of garbage and other refuse, the choosing of sanitary pavements and the cleaning of streets and lanes. These the writer does not intend to deal with in this paper.

It might, however, be indicated merely by way of suggestion that municipal by-laws deserve a large proportion of the blame attached to municipal authorities for poor sanitation, particularly as far as cleanliness is concerned. This is a subject in itself and properly worked up would make a most interesting discussion.

In conclusion let each community see that its refuse is destroyed without nuisance; its water supply uncontaminated; that the revenue from its water main extensions will pay interest on the investment beyond the cost of pumping or distributing, and that its sewer system is low enough for the basements, and has grades sufficient for the purpose intended. Thus with every sanitary condition in its favor and by building soundly and well, the reputation of the municipality will attract many new citizens, and rejoice in the early wisdom which was displayed when its improvements were first considered.

THE STATISTICS OF HOUSING AND CO-PARTNERSHIP SCHEMES

BY PROF. PERCY E. NOBBS, M.A., F.R.I.B.A., A.R.C.A.,
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I hope to show in the very brief time at our disposal that the statistics, financial, hygienic, and social for our housing and co-partnership schemes, now pressing for solution, are not yet to our hands, and to indicate the preliminary work which must be done before any serious attempt in these directions can be safely undertaken. For if we do not look before we leap the whole cause may be prejudiced irretrievably. There are many conditions which render the housing and co-partnership problems here far more difficult as well as far more urgent than in England and Germany. Let us consider the housing problem first.

Since the passing of what is called the "Housing Act," in 1890, the L. C. C. has perfected types of tenement, terrace, semi-

detached and cottage housing accommodating some 70,000 persons and establishing a marvelous standard of effective accommodation in buildings financed to be paid for in sixty years. By-laws govern the dimensions of rooms, their construction and the number of persons to be housed in them. Standing orders govern the arrangement of sculleries and sanitary conveniences and the disposal of refuse. Supply and demand dictate the rent—and borrowing and expropriating powers make the thing possible. The L. C. C. that is to say can buy up any slum at its market value, and some slum land is very valuable. It can then write down the value of that land in an arbitrary way as if nobody else could use it for any other purpose than housing; it can then build tene-

ments under its own severe by-laws and after the tenement is built *it cannot show a profit over 1%. That is to say these tenements cannot be erected on a business basis or in other words pay 5%.* They can by a stretch of imagination be considered to just pay their way on the theory that the community at large is well recompensed for the loss on the land by the removal of a slum area likely to promote, if left in existence all the ills that flesh is heir to.

The application of all this is that (1) we have not got expropriatory powers for this purpose here. (2) We do not know whether the community would be willing to write down the value of expropriated land for the benefits aforesaid. (3) We know that the cost of building is just twice as dear here as in London, and (4) we have no official data as to what the minimum dimensions of rooms and the minimum hygienic requirements ought to be:—for to accept the L.C.C. standards in these matters would be in the highest degree unscientific. (5) Our climate is radically different, and (6) the habits of our people differ in a hundred matters which radically effect a plan. So that with what we do and do not know, one thing alone is certain and that is that there is a great deal to be found out. As to how this is to be done I shall venture a suggestion later.

Turning now to the co-partnership problem we are met with even graver difficulties. A Garden City is a place where all the inhabitants are each other's tenants and each other's landlords. A place that is where there are no \$50,000 shareholders, a place where the chance of any property being depreciated by what goes up on the next lot is reduced to a minimum. A place which qualified observers inform us has many of the qualities of the millenium as popularly conceived by Mr. Wells and other well wishers of humanity.

Now an estate managed on the co-partnership basis was impossible in England until certain laws had been torn from the statute books and replaced by new codes. As our laws of property are radically different from those in England it is obvious that very great care not to copy too closely in detail the English precedent in these matters would be necessary before we could make a Garden City possible here. In one matter we could follow that precedent

pretty closely. I refer to their first battle: the freeing of the garden city from the local building by-laws, which had the tendency to make building at once expensive and hideous and which were mainly responsible for the agricultural depression, as they precluded the building of country cottages that a laborer could afford to live in or a builder afford to erect. The garden city cottage competition of 1905 proved that there were lots of excellent illegal ways of building a decent home.

We are happily exempt from the tyranny of vested rights of light and air over adjoining properties, another great difficulty in England, but our freedom has been sadly misused and our co-partnership companies will have to educate themselves not to seek every available dollar to be got out of every available foot of land—the land will have to be put into their hands with many unfamiliar restrictions as to its use and abuse.

Then again the ideal so many of us have in mind of a population of happy working men (and who in Montréaf is not a working man) each with a separate home in a separate garden will have to be abandoned. Corner houses cost a lot to heat and do not rent well. I fear even the semi-detached house will be too much for the financial side of our hopes. But terrace houses and two storey tenements need not necessarily be vain repetitions.

One factor, the heating question, will dominate both the size and the character of our co-partnership schemes. The central heating station is, I believe, the altar on which the co-partners will sacrifice their individualism and there are limits of numbers both ways to decide how few and how many homes can most economically derive heat from one station. This golden number, the full unit of our co-partnership scheme, the engineers have not yet been asked to compute. They must be put to work on it before much useful thinking can be done on other aspects of the problem.

But our greatest and most urgent difficulty is the land question. I fail absolutely to see how a co-partnership scheme can be launched here without expropriatory powers both as to the acquisition and the option of land. England has her great land owners and they can well afford to sell at moderate prices large parcels of

land, the development of which will enhance the adjoining property. Here on the Island of Montreal it is, as we all know, impossible to purchase a single "arpent" from one man without the price of adjoining "arpents" owned by other men becoming unduly inflated in price, while there are very few spots on the Island where sufficient land could be bought from one landowner to admit the inauguration of a co-partnership estate of adequate size to pay. We do not even know how much a co-partnership company here could afford to pay for land.

The terms on which co-partnership is possible here must be most carefully studied and embodied in a law granting expropriatory powers to co-partnership companies in exchange for safeguards and guarantees as to the use to be made of the land so acquired. The control of the actual building on co-partnership estates should within certain very wide limits be left entirely in the hands of the co-partners. Only thus can invention both in planning and in the use of materials have full play: only so can true competition be stimulated and progress be made towards our ideal, the cheap, comfortable, right and, therefore, beautiful type of small home:—a rational organism, self explanatory and complete. So there is much to be done before we can cut the virgin sod for our first garden city with any assurance that the result is not a hole in which to bury our hard-earned septic equivalent of the talent of old time.

How then should we proceed to collect our statistics since experience gained in other climes by other communities is so likely to be misleading.

1. First of all our city should seek by direct practical experiment to prove what can or what cannot be done by housing her own servants, we have a regiment of firemen who do not live in the firestations and who might very properly be accommodated on the premises as they are in Europe.

We have an army of road makers and scavengers, with their foremen and managers, who could with economy and satisfaction to all concerned be housed as part payment of their dues. Our minor civic officials might well be established in an experimental garden city. Should these things be done intelligently we should soon know just how much a dollar will buy in the way of accommodation. It was largely in the housing of the fire brigade that the L.C.C. learned at first hand the thousand and little things that made their later tenements so perfect.

While these things are doing there is need of people of imagination, lawyers, politicians, business men, engineers, social workers, laboring men and their wives, employers, doctors and last, but not least, architects and builders, proceeding in an orderly and businesslike manner to collect the material for a (1) "Housing Act" and (2) a "Co-partnership Act" conformable to our very special needs.

2. And while they are at work there is need of the creation by good men and true of the public spirit which will ensure the necessary legislation. But the first step is to collect and to conceive the statistics for these problems *in their local aspect*. In matters of practical reform no less than in matters of political ideals it is wise to count the cost well before going to war.

These remarks are entitled the Statistics of Housing and Co-partnership. I trust I have not disappointed anyone if I have only sought to maintain the thesis that as far as we Montrealers are concerned these statistics have not yet been written down.

If I have felt it necessary to adopt a somewhat admonitory tone I trust my more sanguine fellow workers will forgive it. There will be need of all their enthusiasm before the things we desire to see are accomplished.

SOME REMARKS ON THEATRICAL ATMOSPHERE

BY ADDISON MANN.

"There have been changes in the theatre since the poet Cowper's time," said the managing editor of *The Public Health Journal*, as he settled himself comfortably in his stall at the Royal Alexandra.

"Don't you remember? 'Not such his evening who with shining face sweats in the crowded theatre.' One must have paid through his purse in those days."

The remark was characteristic of the

man and his message. Everyone has his own special yard-stick with which to measure the world, and his, naturally enough, measures degrees in sanitation and public health.

One does not need to be a specialist in these matters, however, to appreciate the atmosphere of the Royal Alexandra Theatre in Toronto.

We were a little late, the curtain was up on the first act of "Green Stockings," and the large audience was already under the spell of Miss Percy Haswell and her company. We succumbed in turn, and the fortunes of Celia Faraday and her fictitious fiancée, Colonel John Smith, claimed unbroken attention. It was not until after the second act, when Miss Haswell had made a neat little speech in response to her sixth curtain call that the hygienic bug hit my friend again.

"Funny thing, I never thought of it before, but there is a lot of good copy in the theatre and its relation to public health. Miss Haswell has played in innumerable theatres and must have a lot of interesting information stored away."

"Suppose we go behind and interview her," said the writer.

"That is a bold idea," said the Doctor. "Let us talk to her manager."

We found Mr. W. L. Grove in the vestibule. "Talk to Miss Haswell?" said he. "Certainly not. It is half my work keeping her from speaking to people."

A little explanation paved the way, however, and two minutes later we were shaking hands with Miss Haswell in her dressing-room. We were to be pardoned if for the moment we forgot completely what our real mission was. Miss Haswell has a radiant personality, and there was a sense of being "in the presence" until she broke the ice:

"Confess you are disappointed," she said. "You expected to find this a topsyturvy place, did you not; all cluttered up with rogue pots and patchouli?"

"Well, we actresses are much more orderly and hygienic than the public imagine. Physical fitness and proper surroundings are positive necessities in our profession. The opposite spells failure."

"Are the theatres as a rule fairly healthy to work in?" asked the writer. "We were just discussing the excellent ventilation here, and the delicious, perfumed coolness."

"Ah," said Miss Haswell, "but the Royal Alexandra is really an exception, and the perfume, that is Mr. Grove's secret. Of course, the new theatres are steadily improving. Architects are beginning to be less prodigal of gilt and plush and are paying more attention to comfort and to hygienic necessities throughout the building.

"Of course, there are some old theatres which are sad places, positively poisonous, both for actors and audience; but I think the public will gradually discriminate against them. The finest acting will not atone for an evening spent in a vitiated atmosphere.

"There is another thing that should be mentioned," she said. "Some people imagine that an actress ruins her complexion with cosmetics. It is not true. Constant use of pure cold cream and other good essentials of the make-up, including the massage required, have a beneficial effect, and I think it is only just to say that women of the stage who are the least bit careful in other ways have the very finest complexions."

The call boy's voice shrilled down the passage, and she was gone, with a smiling flash of lovely teeth and a swish of silk. After all, "the play's the thing!"

Looking back over those few minutes with Toronto's favorite actress, one recollects a cordial personality, intensely magnetic and absolutely sincere. In our school days we would have voted Percy Haswell "a jolly nice lady." And it would have meant a great deal more than all the compliments one can devise in after years.

REFRIGERATORS

BY R. RUTLEDGE.

If the old proverbs are still true, that "an ounce of prevention is worth a pound

of cure," and "a dollar saved is a dollar earned," then sanitary refrigeration is

one of the most important questions of the age, because a modern refrigerator, constructed on scientific principles, is the one outstanding medium by which we can most effectively put into practice the above axioms. When scientific refrigeration is better understood and more universally adopted, the present high cost of perishable food will be greatly reduced. It is the want of proper facilities for refrigeration that is the cause of the continual heavy loss in foodstuffs, through deterioration, and which keeps up the extraordinary high prices of perishable food. This loss begins at the point of production and ends with the consumer, hence it is he to whom the refrigerator is the greatest benefit. Prevention of disease is the doorway to health. Medical science has proved that the enormous mortality in hot weather, especially among infants, is attributable largely to milk and food having become charged with bacteria, through careless handling and unsanitary refrigerators. A modern refrigerator is an agent of economy. It is the least understood of all household articles, in the home or in the hotel, so much so, that the general idea of a refrigerator is almost directly opposite to the true principle on which it is constructed. A refrigerator is usually associated with the thought of dampness and foul air, a place requiring constant scrubbing, at best, a place in which only to keep things cool and not to preserve them by means of pure dry air. This delusion is due to the fact that many so-called refrigerators are nothing more than elaborate ice chests. The system of circulation in these inferior refrigerators is as adverse to the natural laws of air circulation as the material of which they are made is to the laws of sanitation. The air in a scientifically constructed refrigerator is dryer and purer than the air outside. It is perfectly dry; so dry that wet cloths and wet matches will become dry inside.

The successful refrigerator is lined with a non-conducting material, so that when the provision door is opened and the outside air rushes in, it will not condense on the walls of the interior and cause dampness. If it is safe to line a refrigerator with zinc or galvanized iron, then it is safe to feed a baby milk from a

zinc or galvanized iron vessel, an act that would be little less than criminal. Yet it is common practice to store sensitive foods in a galvanized iron lined refrigerator. Glass and tile lined refrigerators are attractive and are apparently clean and sanitary. But it must be remembered that all such hard materials are good conductors, and when cold, as they are in the refrigerator, and come in contact with the warm outside air when the door is opened, condensation follows and dampness in the refrigerator is the result. If not perfectly dry, a refrigerator is not only useless, but dangerous. Dryness is the only safeguard against germ life. A scientific refrigerator has no outside ventilation holes, but is tight as a corked bottle, when the door is closed. Instead of ventilation, it has a system of condensing the gases and impurities generated and of carrying them off automatically with the running water from the ice. Some refrigerators are built with the ice directly over the provision chamber, allowing for the cold air to fall naturally. Others are constructed with the ice chamber at the side, called side icers. In the latter case the cold air from the ice enters the provision compartment at the bottom, and it is claimed that the cold air ascends rapidly. Many manufacturers build both types and claim both are right. It is evident that one is wrong. The correct way is nature's way. The ice should be on top, because cold air descends. A furnace is put in the basement and not in the attic of a house because warm air ascends. The whole question of refrigeration resolves itself into two systems. It is obtained either by artificial ice or natural ice. The great difference in the cost of installing these two systems is not the only question to be decided when choosing between the two, nor is the fact that one system will produce a temperature below freezing, while the other will not go much below 36°F. Right here, on the question of temperature, is where the greatest mistake is made by many who contemplate installing a refrigeration plant, because the idea prevails that a cold storage is almost useless unless it will freeze, while for nearly all practical purposes, it would be useless if it did freeze, because the percentage of meat and produce which re-

quires freezing to preserve it is very small. The difference in the cost of installing, operating and maintaining the two systems represents a lot of money, but even that is not the most important factor. One system is directly opposite to the other. While in operation, artificial ice is at the freezing point, producing a cold, unchanging, stagnant air. Whereas natural ice cold storage is obtained when the ice is at the melting point, and, when scientifically applied, produces a uniform, pure, dry air, automatically condensing and carrying off the impurities by means of the running water from the melting ice, a result impossible to obtain from artificial ice, or any ice while at the freezing point. The fundamental principle of refrigeration as applied to per-

ishable meat and produce is pure, dry, circulating air. Cold air alone will not keep meat fresh, it must be dry and circulating. Meat will keep better in a dry circulating atmosphere of, say 45F., than in stagnant air as low as 34F.

To keep meat for an indefinite period, it must be frozen solid, but this method is not always profitable, because of the high cost of keeping the plant running below freezing; and meat so kept will begin to deteriorate in a short time after it is taken from the freezing atmosphere. The atmosphere produced by natural ice is more neutral to meats, fruits and all kinds of produce, and does not impair the aroma and flavor that should be retained in them.

PSYCHROPHYLIC ORGANISMS IN WATER

BY JOSEPH RACE, F.I.C., TORONTO.

During the past winter it was found that during the extremely cold weather, when the atmospheric temperature was 20° below zero and Lake Ontario was frozen over for a considerable distance south of Toronto, the bacterial count of the water suddenly increased to 175,000 bacteria per ccm. (Gelatine 3 days at 20-23°C.) On this occasion Typical B. Coli was found in 0.1 ccm, but on other days, when bacterial counts in the neighborhood of 100,000 were found, the

smallest quantity of water showing B. Coli was 10.ccms. The phenomenon could not, therefore, be due to sewage pollution; and it was further observed that at least 95 per cent. of the colonies were small yellow ones, and required at least three days for their development. A number of these colonies were fished and their cultural characteristics determined. All proved to be identical, and the results are given in the following table, with a number of others, for the purpose of comparison:—

	Yellow Bacillus (Lustig)	Rhine Water Bacillus (Burri)	Yellow Bacillus (Race)
Found in water at	Cagliari	Rhine	Toronto
Gelatine	Slow liquifier	Slow Liquifier	Slow Liquifier
Size	Short and thin, often in long threads	0.7×2.5—3.5 Broth cultures often longer	0.5×3-4 Broth cultures long threads
Motility	Non-motile	Rotatory	Rotatory
Spores		Negative	Negative
Color of Colonies	Golden Yellow	Yellow	Gelatine— Lemon Yellow Agar — Pale yellow and finally ochre
Aerobic or non- aerobic		Aerobic	Aerobic
Optimum Temp.	Only grow at 15-20°C.	Grows 15—20°C Will not grow at 37°	Optimum 23°C. Will not grow at 37°C
Reduction of Nitrates		+	+
Indol.			—

The last organism is a non-fermenter of saccharides.

The organism is probably of the same species as the yellow bacillus of Lustig and the Rhine water bacillus of Burri, if not identical with them. It also corresponds to the yellow bacillus mentioned some years ago by Prof. Shuttleworth in a report to the Local Board of Health. Numerous other yellow organisms are described in Franklands "Micro-organisms in Water" that also correspond in several particulars with this organism, and when it is remembered that these descriptions were given 20 years ago, when the science of bacteriology was not so well developed on standard lines, it is at least probable that they are identical. The organism was found to be present in lake water, lagoon water, polluted bay water and ice in the vicinity of the Toronto Island. The same or similar organisms have been found in water from the River Thames (England), River Lee and Loch Katrine; at Chemnitz, Vienna and Freiburg, so that it is more or less ubiquitous. It is essentially psychrophilic, a slight elevation of temperature above the optimum resulting in total destruction of the organism. It is obvious that the bacillus is of no sanitary importance, but owing to its ability to multiply at low temperatures it interferes with the efficiency of slow sand filtration when the results are judged on low temperature counts. The presence of considerable numbers of psychrophilic bacilli in water renders it desirable that the temperature of incubation should be sufficiently high to prevent the development of these organisms, but not too high to prevent the growth of the normal water bacilli, such as *B. Fluorescens*. The objection might be raised that these bacilli also have no hygienic significance, and that the temperature of incubation should be such as will exclude all organisms except those of the intestinal origin. This seems to be the present attitude of the American Public Health Association, for, in their recently issued report on "Standard Methods of Water Analysis," they recommend the use of Agar at 37°C and an incubation period of 24 hours. If this method enumerated only those organisms of intestinal origin, it would leave nothing to be desired, but it is well known that such is not the case. The results ob-

tained in the laboratories of the Metropolitan Water Board of London, where both gelatine at 20°C and agar at 37°C have been in use for some time, show that, although the counts at 37°C vary in some measure with the amount of typical *B. Coli* present, other organisms are present that develop rapidly at the same temperature, and their numbers may be sufficiently large to obscure the bacilli of intestinal origin. The writer has used agar at 37°C in conjunction with other methods for counting the organisms in the filtered and unfiltered Lake Ontario water, and has found that during the period when flood waters are rapidly raising the lake level the colonies developing at 37°C are quite out of proportion to the organisms of intestinal origin, as indicated by the *B. Coli* test. The use of agar at 37°C is, therefore, open to the same criticism as the other methods of enumeration previously in use, and the only advantage obtained is a reduction in the period of incubation. Results are obtained after 24 hours, a distinct advantage where the results might affect public health. The writer has for some months used agar at 27°C, the colonies being counted at the end of 1, 2 and 3 days, and the results so far obtained indicate that this temperature is sufficiently high to enable the organisms of intestinal origin and some of the normal water bacilli to produce visible colonies within 24 hours, and also to prevent the growth of psychrophilic bacilli. As psychrophilic bacilli usually develop in about 60 hours at 20°C, the counts made after 48 hours at this temperature rarely include them, so that the counts on agar at 20°C and 27°C after 48 hours incubation ought to approximate. The results obtained in May, 1912, at the Toronto filtration plant laboratories show that such is the case, and as the 24 hours' count is at least five times as great as the one at 37°C, after a similar period, the one and two-day counts at 27°C provide a simple solution of the whole problem. The one-day count gives a result obtained as rapidly as time will permit, and the two-day count enables an estimation to be made of the organisms other than those that act psychrophilically. The writer is continuing these experiments on comparative counts and hopes shortly to be in a position to publish them.

Editorial

[Editorials speaking specially for any one association co-operating with *The Public Health Journal* are not published in this Journal until passed by the publishing committee of that association.—Ed.]

PROVISIONAL PROGRAMME OF THE CANADIAN PUBLIC HEALTH ASSOCIATION CONGRESS

The programme for the meeting of the Canadian Public Health Association, which will be held in Toronto on Monday, Tuesday and Wednesday, the 16th, 17th and 18th of September next, is being rapidly filled.

The Annual Conference of Medical Officers of Health of Ontario will be held in connection with this meeting.

The public address will be given on the evening of Monday, September 16th, by Dr. W. A. Evans, of Chicago, who is recognized as one of the foremost public health authorities in America. The president, Dr. Charles A. Hodgetts, medical adviser to the Commission of Conservation, Ottawa, will make his address on Tuesday.

The meetings will be held in the Medical Buildings of the University of Toronto, and the Committee on Arrangements are making special efforts to ensure the success of the social features.

Dr. J. W. S. McCullough, chairman, Committee on Papers, Parliament Buildings, Toronto, requests that those desiring to present papers will please communicate with him or without delay with Dr. Chas. J. C. O. Hastings, chairman Committee on Arrangements, City Hall, Toronto.

The provisional programme has been arranged as below; sectional meetings to be held on Tuesday, September 17th.

There will be a general meeting of the Association at 10 a.m., Monday, September 16th, followed by a meeting of the Executive Committee at 11 a.m.

Arrangements have been made with the Eastern Canadian Passengers' Association whereby a Standard Certificate may be obtained at any Railroad Station in Canada and the United States entitling the holder to reduced return fare. *When purchasing your ticket ask for a Standard Certificate.*

It is estimated that the attendance at the Congress will be about 2,500.

1.—SECTION OF MILITARY HYGIENE.

J. T. Fotheringham, Lieut.-Col., P.M.O., A.M.S., chairman.

(a) "*Sanitation of a Besieged City or town.*"—G. Carleton Jones, Col., A.M.S., D.G.M.S., Canada.

(b) "*The Sanitation of the Bivouac.*"—D. B. Bentley, Lieut.-Col. A.M.C., District Officer of Health, Ontario.

(c) "*Simple Means for Ensuring Supply of Drinking Water on Active Service.*"—Campbell Laidlaw, Lieut. A.M.C.

(d) "*Some Observations on Sanitation for the Soldier.*"—T. B. Richardson, Major A.M.C.

(e) "*The Militia as a Factor in Public Health.*"—Lorne Drum, Major A.M.S.

2.—SECTION OF MILK INSPECTION.

Andrew R. B. Richmond, V.S., B.V. Sc., chairman.

(a) "*Municipal Milk Inspection in Toronto.*"—G. G. Nasmith, Director of Laboratories, City of Toronto.

(b) "*Municipal Food Inspection.*"—Robert Awde, Chief Food Inspector, Toronto.

(c) "*Dominion Meat Inspection.*"—L. A. Wilson, in charge of Dominion Meat Inspection Staff, Toronto.

(d) "*Municipal Meat Inspection.*"—Andrew R. B. Richmond, Chief of Staff of Veterinary Inspectors, Toronto.

3.—SECTION OF SANITARY ENGINEERS.

T. Aird Murray, C.E., chairman.

(a) "*Toronto Filtration Plant.*"—F. F. Longley, C.E., Toronto.

(b) "*A Complete Sewage Disposal Plant for a Public Institution.*"—T. Lowes, C.E., Toronto.

(c) "*Filtration of Water from an Engineering Point of View.*"—T. Aird Murray, C.E., Toronto.

(d) "*How to Obtain Efficiency from Pressure Filters.*"—H. W. Cowan, C.E., Toronto.

4.—SECTION OF MEDICAL OFFICERS OF HEALTH.

James Roberts, M.D., Medical Officer of Health, Hamilton, chairman.

(a) "*A Modern Hospital for Communicable Diseases.*"—Dr. Chas. J. C. O. Hastings, Medical Officer of Health, Toronto.

(b) "*The International Hygiene Exhibition, Dresden.*"—Dr. J. F. Honsberger, Berlin, Ont.

(c) "*Municipal Control of Milk Supplies.*"—Dr. Whitelaw, Medical Officer of Health, Edmonton, Alta.

(d) "*The Importance of Trained Sanitary Inspectors.*"—Dr. A. J. Douglas, Medical Officer of Health, Winnipeg, Man.

5.—SECTION OF MEDICAL INSPECTION OF SCHOOLS.

Dr. W. E. Struthers, Medical Inspector of Schools, Toronto, chairman.

(a) "*Tuberculosis in Children.*"—Dr. J. H. Elliott, Toronto.

(b) "*Nursing Side of Medical Inspection of Schools.*"—Miss L. L. Rogers, R.N., Toronto.

(c) *Lantern Slides of the Work of Medical Inspection of Schools in Toronto.*—W. E. Struthers, B.A., M.D., Toronto.

(d) "*The Feeble-Minded Child.*"

6.—SECTION OF SOCIAL WORKERS.

Joint Secretaries—Vincent Basevi, Editorial staff, the *News*, Toronto; Dr. W. B. Whyte, Medical Superintendent, Riverdale Hospital, Toronto.

Convener—Helen MacMurchy, Toronto.

(a) "*Prevention of Social Misery.*"—J. Howard T. Falk, General Secretary Associated Charities, Winnipeg, Man.

Discussion—

Dr. J. A. Page, Medical Superintendent, Immigration Hospital, Quebec.

Dr. MacAuley, chairman Board of Health, Halifax, N.S.

Mr. J. W. Smith, president Children's Home, Victoria, B.C.

Dr. W. E. Home, Victoria, B.C.

Rufus D. Smith, secretary Charity Organization, Montreal.

Mrs. Smillie, Women's Club, Montreal.

Dr. H. Mullin, Hamilton.

Mr. Edward Gurney, Toronto.

Mr. Jos. W. Bonnier, Recorder of Vital Statistics to the Quebec Government, Que.

Mr. Rowland Dixon, clerk of Statistics

to the Manitoba Government, Winnipeg.
Miss Alice Ravenhill, Shawnigan Lake, B.C.

Mr. G. A. Smith, general supervisor, Toronto Playgrounds Association, Toronto.

Mr. G. Frank Beer, president Toronto Housing Co.

(b) "*The Dentist as a Social Worker.*"—Dr. A. W. Thornton, Toronto.

Discussion—

Dr. Albert E. Webster, Toronto.

Mrs. Adam Shortt, Ottawa.

Mr. Joseph Likely, St. John, N.B.

Dr. W. H. Delaney, D.P.H., Quebec, P.Q.

(c) *A Symposium—The Scientific Management of Household Work and Workers. From the Viewpoint of—*

The Mistress—Mrs. L. A. Hamilton, Lorne Park, Ont.

The Maid—Miss Yates, O.A.C., Guelph, Ont.

The Physician—Dr. T. F. McMahon, Toronto.

The Church—Rev. Daniel Strachan, Toronto.

The Settlement—Miss Helm, University Settlement, Montreal.

The University—Miss Cartwright, Lady Principal, St. Hilda's College, Toronto.

(Ten minutes for each speaker.)

Discussion—

Dr. Grace Ritchie England, Montreal.

Professor Stevenson, University of Toronto.

7.—SECTION OF LABORATORY WORKERS.

John A. Amyot, M.D., Toronto, convener.
Paper.—Dr. H. A. Hill, Director Institute of Public Health, London, Ont.

Paper.—Dr. Revell, Edmonton.

Paper.—Dr. G. G. Nasmith, Toronto.

8.—GENERAL SECTION.

(a) "*Diet in Relation to Disease.*"—Dr. H. B. Anderson, Toronto.

Professor V. E. Henderson, Toronto, and Professor Fotheringham will open discussion.

(b) "*How shall Canada Save her People from the Physical and Mental Degeneracy due to Industrialism as seen in the Great Cities of Older Civilization?*"—Dr. P. H. Bryce, Superintendent of Immigration, Ottawa.

(c) *Symposium—“Tuberculosis.”*—Dr. J. H. Elliott, Toronto.

Discussion—

Dr. G. D. Porter, Toronto.

Dr. Harold Parsons, Toronto.

Dr. W. B. Kendall, Muskoka Sanatorium.

Dr. C. D. Parfitt, Gravenhurst.

Miss Dyke, Toronto, and others.

"Prevention of Tuberculosis in the Country."—Dr. H. G. Roberts, Guelph, Ont.

Paper.—M. D. White, M.D., Medical Sup't. Riverdale Hospital, Toronto.

Paper.—Dr. Fleming, Department of Health, Toronto.

"Hospitals as Factors in Promoting Public Health."—Dr. Bruce Smith, Inspector of Prisons and Public Charities for Ontario.

"Dust in the House and on the Street."—Dr. Adam Wright, chairman Ontario Board of Health.

"The Ontario Public Health Act."—Dr. John W. S. McCullough, Chief Health Officer for Ontario.

(d) *"Open Air Schools for Children."*—Dr. J. H. Holbrook, Hamilton.

(e) *"The Feeble-Minded."*—Mr. J. P. Downey, superintendent Asylum for Insane, Orillia.

(f) *Paper.*—Dr. W. T. Shirreff, Medical Officer of Health, Ottawa.

(g) *"A Threatened Outbreak of Typhoid Fever in Fort William, and Means Taken to Successfully Abort It."*—Dr. R. E. Wodehouse, District Officer of Health, Ontario.

(h) *Paper.*—Dr. H. W. Hill, Director Institute of Public Health, London, Ont.

(i) *"Medical Inspection of Public Schools."*—Dr. A. P. Reid, Provincial Health Officer of Nova Scotia.

(j) *Symposium*—*"Communicable Disease."*

(k) *Paper.*—Dr. H. G. Murray, Owen Sound.

(l) *Housing and Ventilation.*—N. Couchon, C.E., Ottawa.

(m) *"The Value of a Public Health Laboratory to a Municipality."*—G. G. Nasmith, City Bacteriologist, Toronto.

(n) *The Effects of Immigration on the National Health.*—Will W. Lee, Secretary of Immigration Branch of Y.M.C.A., Quebec.

(o) *"Vitality of Bacilli in Water Supplies."*—Joseph Race.

(p) *"The Open Window."*—J. Fleming Goodchild.

"Of What Value are Sanatoria as a Public Health Measure?"—Dr. W. B. Kendall.

THE MUSKOKA SANATORIUM

We notice with regret an editorial in the July number of our esteemed contemporary *The Canadian Medical Association Journal*, attacking, we think, unfairly, the National Sanatorium Association. As the "pioneer institution of its kind in Canada which has undoubtedly done much, both directly and indirectly to stimulate an interest in the care and cure of early cases of tuberculosis," a journal representing the medical profession of Canada, exhibits a remarkable degree of provincialism in its references to the use of the name "National" and its objection to the support which the Muskoka institution has received from all parts of the Dominion in recognition of its excellent work. The views of the writer of the editorial as to the inadvisability of patients travelling a long distance to a "Kurort" are purely personal, and we fail to see their special application to the National Sanatorium or the subject under discussion. Such criti-

cism appears as rather the forcing of an argument to make a case. We have, fortunately, not reached that stage of paternalism where either physician or patient may not exercise his individual judgment with regard to the institution best suited to his requirements, and certainly no general medical rule can be laid down by any journal as to the distance patients may travel or the expenses they should incur.

That "adverse criticisms" should have been heard from time to time with reference to a public institution is surely no unusual occurrence, and if *The Journal of the Canadian Medical Association* considers such a sufficient warrant for attack, it has undertaken a large task. Into the merits of a recent regrettable incident, not being in possession of the facts, we do not propose to enter. When the writer of the editorial, however, from any individual occurrence concludes "that it shows luridly that those in control of the Muskoka Sanatorium regard their medical

coadjutors not as fellow workers in a great cause, but as servile instruments necessary, it may be, for the commercial success of the undertaking, but otherwise unworthy of consideration," one is forced to wonder upon what process of reasoning such a remarkable generalization is justified. This paragraph reminds one more of the "lurid" appeal of a yellow journal to a constituency incapable of judgment than the utterance of a sane medical journal to intelligent readers. Those who know the members of the National Sanatorium Association Board, as earnest, public-spirited citizens and

philanthropists, who have given freely of their time and money to promote the interests of the greatest work of the kind in our country, are not likely to be misled by such criticism.

Human judgment and action at best are not unerring; mistakes will occur, and men may differ, but those most closely in touch and best informed with regard to the National Sanatorium and its work must deeply deplore any attack, especially from a medical quarter, which might tend to prejudice the public against an institution so deserving of confidence and support.

INTER ALIA

A convention will be held in Cambridge, Massachusetts, this month and attended by 500 distinguished physicians and savants from all parts of the world who will take up the problem of noise. Dr. Blake, professor of otology at the Harvard Medical School, in discussing the programme for the proposed meeting, says that modern conditions of life in the cities are seriously affecting the hearing. The ear is becoming abnormal and blunted. In the effort at excluding the din of the city the sensitive mechanism of hearing is thickening. The roar and distraction of the city is almost imperceptibly working upon the nerves of the people as well as making them deaf. Scientists, therefore, propose to see what can be done toward relieving humanity of the present useless strain.

Dr. Blake points out that noise is largely an indication of waste energy, just as is the heating of a bearing in a machine. Furthermore, it is barbarous because much of it is unnecessary. There is not any doubt in the minds of laymen even that noise has an important effect upon nervous people and those who are ill. It also has its effect, although not so evident, on those who are robust and apparently immune. The truth has been recognized in the organization of societies for the suppression of unnecessary noise, in ordinances against bell ringing, whistling of locomotives and other forms of needless disturbance within city limits. And while some progress has been made there is much more to be done.

The doctors who will assemble in this convention should be able to start a campaign of publicity that will result in eliminating much of the annoyance of city living at present. The main thing to be done at the outset is to arouse public opinion on the subject. The people should be made to appreciate the consequences of unnecessary noise; to realize that it is an imposition on them and all others; and to know that they have the remedy in their own hands. It is not to be expected that all noise can be banished, but there is an immense volume of nerve-racking sound that can and should be stopped.

Canada's gain is a serious loss to the Minnesota State Board of Health in the acceptance by Dr. H. W. Hill of the directorship of the Institute of Public Health at London, Ontario. Dr. Hill's work as director of the Division of Epidemiology of the Minnesota Department of Health, is well-known to the readers of *The Public Health Journal*, work which, in addition to other important undertakings since his graduation as Bachelor of Medicine in the University of Toronto, in 1893, was recognized last year by his Alma Mater conferring upon him, as the first among her graduates, the degree of Doctor of Public Health. Dr. Hill is a versatile writer, an excellent speaker, and a most welcome acquisition to the active membership of the Canadian Public Health Association.

CURRENT PERIODICAL COMMENT AND WORKING NOTES

Our Boards of Health and the Fly.

The first great duties of a Board of Health, as the *Quebec Chronicle* notes them, is to see that the people within its jurisdiction have fine air to breathe and clean water to drink. We were told the other day by our worthy Mayor, that journal further remarks, that the conditions of some parts of our sewerage system was not under the immediate supervision of officialdom. We need no Board of Health to tell us that the air we have to breathe, whenever an automobile passes us, is unfit for our lungs, while we have only to hold up a glass of the city water to the light to see for ourselves that it is not safe to drink it without having it boiled. Nor is Montreal one whit better off than Quebec is—in fact, not as well off—either in the matter of pure air to breathe or clean water to drink. Now, however, the fly above everything else has had public attention drawn to it as a carrying agent of typhoid germs. But no man or woman needs much of an encouragement to go for the fly. Mr. *Musca* is a nuisance, and we all know it, and we have been steadily going for it for ever so long with every kind of contrivance purchasable that would lead to its decimation or extermination. But the Montreal Board of Health does not seem to think we know all about the little pest, and so has issued a circular to every ignoramus and intelligent person in that city that might well frighten every mother's son and daughter of them out of their wits over the plague which every little sinner of a fly carries under his wing. Moreover, where is the circular about the dust and the smoke and the water that is being served to us every day? One automobile will provide more poison for our lungs while passing, than millions of flies would supply us with; and everybody knows that the water the masses have to drink in the big city is a big city of microbes of itself all afloat. We know what the phrase means: "Straining at a gnat and swallowing a camel." And, while we

sympathize with our Boards of Health in going for the gnat for all they are worth, we would make less light of their enthusiasm if they would turn their attention once in a while to the unwholesomeness of the canal as well—that is, to the unsanitary condition of the air we have to breathe and the water we have to drink.

Schoolroom Ventilation.

Dr. W. A. Evans points out in the *Chicago Tribune*, that schools are usually well lighted but poorly ventilated. In fact, they usually suffer from too much, rather than too little, light. Nor has he ever been able to see much danger from schoolroom dust. But, he says, in ventilation, including regulation of temperature and moisture, conditions are bad. They are unfit for grown people to stay in, to say nothing of children. It is the fault of ventilation methods, which are overdeveloped on their mechanical side. They are so bad hygienically because they are so good mechanically. Why?

All school ventilation by a mechanical system is based on the idea that the carbonic acid gas of a room is poisonous and we must add enough diluting air to keep its percentage down. We know now that carbonic acid gas is nearly harmless. Rose-nau has shown that there are harmful chemicals in air that has been breathed, but not even this alters the opinion that the proper plan is to remove and not dilute.

A ventilation system which is based on the dilution of breathed air is inefficient, and, at the same time, expensive. It is wasteful because it requires 2,000 cubic feet per person per hour, while, if the temperature is kept down, the humidity up, and the rooms are blown out from time to time, a much less quantity gives much better results. Dr. Evans hopes school administrators will read his opinions thus expressed.

Mechanical systems are faulty for a sec-

ond reason. The air is too still and too uniform in temperature. Hill proved that still air is harmful; Pflugge's pupils that air uniform in temperature is harmful.

The teacher can watch the temperature and humidity of the room with profit to herself and with no material increase in her trouble. Let there be a wet and dry bulb thermometer in each schoolroom. Make it the duty of one student to make an hourly reading of each. From these readings the humidity can be determined by the chart, which is a part of the hygrometer equipment. The temperature of the schoolroom must not be allowed to rise above 70. The humidity must not be allowed to fall below 50.

How these requirements are to be met is the problem of the engineer, not the teacher. But if she will be insistent enough that these requirements are met she will be able to teach with far less effort than now. In addition, from time to time, let the rooms be aired and the temperature lowered by opening the windows. The blowing that is good for sick air is the blowing that can be felt.

These are easy and worth while things. The doing of them adds but little to the teacher's burdens. On the other hand, when they are successfully done, they lighten the teacher's load. Attended to, 3 o'clock comes earlier in the day, Saturday gets nearer Monday, and June gets in speaking distance of October.

Of course, in time the entire method of school ventilation must be made over from cellar to garret. The hygienists must lay down new standards and the ventilating engineers must meet them.

Health Through Right Thinking.

The mind furnishes the model; the mental attitude is the pattern which is woven into the life web. So says Orison Swett Marden in *Nautilus*. Picture health as vividly as possible continually. Think of yourself as strong, vigorous. Never allow yourself to carry a mental image of weakness. Thrust out the disease picture as you would thrust a thief out of the house. Think health, vigor, strength perpetually.

If you carry an image of yourself as complete, as a magnificent specimen of

humanity, think of yourself as the perfected image of your Creator, as made by perfection hence perfect in the truth of your being, you would be amazed to see what an uplift will come into your life. You will become more robust.

We can not rise physically higher than our mental picture of ourselves. Whatever picture you carry of yourself physically, mentally, morally, that you tend to become. Act health just as an actor acts the part he impersonates, and think health vigorously; carry an ideal picture of your physical self. Refuse to see anything else but yourself in an ideal condition. Your life will soon follow your thought, pattern after your mental attitude. There are multitudes of people who are the slaves or victims of their belittling, weak, sickly pictures of themselves. No one can be robust without a healthy and vigorous image of himself perpetually in his mind.

Many people carry a sickly mental attitude. They picture weakness, poor health. They are always holding unfortunate pictures of disease, or some ill-health image. It is like one who is trying to succeed thinking in terms of failure and holding failure images in his mind. It is fatal to what one is trying to accomplish.

If you wish health, think health, visualize images of health, carry in your imagination picture of robustness, strength, physical wholeness, completeness and not the opposite.

Health and Hygiene.

To the popular mind this title may suggest a cool verandah, a palm leaf fan, and plenty of ice water. But a greater degree of comfort may be obtained by the observance of these simple rules, given in the *Bulletin of the North Carolina State Board of Health* than by using any amount of iced drinks.

First, use plenty of water. Drink all the cool water you wish, but avoid ice water. It is really an enemy in disguise, as it retards digestion.

One of your best friends during this season is the bathtub. Frequent baths are necessary for removing the excretions of the skin and keeping the pores open. Surf bathing is excellent, but those who cannot indulge in it will find an occasional sea

salt bath refreshing and invigorating.

Secondly, choose your food much more carefully than in cool weather. Avoid all heavy, heat producing foods, such as meats, rice, gravies, hot pies, puddings and cakes. Substitute a diet consisting in fruits, green vegetables, cereals, eggs, light meats, and simple desserts, and you will overcome that feeling of depression which follows a heavy meal on a warm day.

Wear loose, porous, light clothing. It should be changed frequently, as it soon becomes clogged with the excretions of the skin. Take plenty of sleep if you do not wish to be a heat victim. Take moderate exercise, but avoid violence. Do not allow yourself to worry over trifles or to become unduly excited. Follow the hot weather rule of Kipling's famous doctor: "Go slow and keep calm."

If troubled with sleeplessness, eat an early and light supper of easily digested food, or, better, eat no supper at all. Do not engage in exciting conversation or amusements during the evening. At an early hour, prepare to retire determined to sleep. Just before going to bed, soak the feet ten minutes in hot water, cooling it a little at the close.

Eating between meals is a gross breach of the requirements of good digestion. The habit many have of eating fruit, confectionery, nuts, sweetmeats, etc., between meals is a certain cause of dyspepsia.

Filth and stagnant water breed flies and mosquitoes. Flies and mosquitoes give us typhoid, malaria and a lot of intestinal diseases. See the point?

Never use the eyes when they are tired or painful, nor with an insufficient or dazzling light. Lamps should be shaded.

The outdoor season is here. Make the most of it.

Good habits make for good health.

Cats and Disease.

Dr. Caroline A. Osborne, in an article published in the *Chicago Medical Record*, after her extensive investigation of the transmission of disease by the cat, declares that, "for the safety of the public, especially children," the following conclusions must be drawn:

1. A cat should be kept under as complete control as any other domestic animal.

This will result in keeping it away from common sources of infection, especially from all people ill with transmissible diseases.

2. A cat which has become infected, or one which is suspected of being infected with any transmissible disease, should be quarantined.

3. All tramp cats ought to be kept from contact with children until it is certain the animals harbor no infection.

4. Boards of Health in towns and cities can no longer ignore the cat as an active agent in carrying many kinds of disease. They should, therefore, take such measures as will eliminate cats from public streets, alleys and all places under public jurisdiction.

Leprosy in the United States.

A survey of the prevalence of leprosy in the United States and its possessions was recently made by the U.S. Public Health Service. This report is reviewed in a recent number of the *Journal of the American Medical Association*. Health officers of the several States, Porto Rico, Hawaii and the Philippines were requested to submit a statement of the number of new cases reported in 1911, and of the total number on January 1, 1912. The results were not complete, because in only eighteen States and the District of Columbia is leprosy a specifically notifiable disease. In all, 146 cases were reported in the United States, of which forty were new cases having been first observed in 1911. In 1911 a commission of officers of the Public Health Service found 278 lepers in the United States. Of these, 145 were foreign-born, and thirteen were of unknown nativity; 186 were reported as probably having contracted the disease in this country. Only seventy-two of the patients were isolated and cared for by the local authorities. The 146 cases reported in the present survey do not indicate a decreased prevalence. Rather these 146 cases reported by health authorities are comparable to the seventy-two cases of patients cared for by health officials in 1901. Three States—California, Louisiana and Massachusetts—have specific provision for lepers in leprosariums. In other States varying degrees of care and isolation are provided. There

are known to be twenty-eight lepers in Porto Rico. In Hawaii and the Philippines the disease constitutes an important public health problem. In the Philippines about 6,000 lepers have been transferred to Cullion. Cebu, an island with one-tenth of the Philippines' population, furnished one-half of the cases. On this island many instances indicate that leprosy is a so-called house disease. The Treasury Department recently amended the interstate quarantine regulations to the effect that common carriers may not transport a leper except under specified restrictions, and a special permit from the Surgeon-General of the Public Health and Marine Hospital Service. A leper who violates this regulation is to be returned to the original State or to a designated federal quarantine station.

Physical Development for City Man.

"The physical development for city man" is treated of at some length in an article on "The Role of Exercise in the Prevention of Tuberculosis," by Dr. Henry M. Friedman of the United States Public Health and Marine Hospital Service, published in the *Journal of Outdoor Life*.

In this article Dr. Friedman treats of the different forms of exercise that are most valuable for building up and preserving a healthy body and lays down the broad proposition that exercise prevents disease. He especially recommends short, brisk walks.

Under the caption "Physical Development for City Man," the writer says:

"The need for a greater physical development and vitality in the civilized and citified person, as a means of preventing disease, is emphasized by the fact that he is subject to greater physical hardships than primitive man or animals known for their strength. Man really has greater physical power than animals and can, and does, stand greater and more diversified hardships. All animal or primitive energy is expended on the muscles. Hence, while they have a greater intrinsic muscular power, relatively when compared with man's, it is in fact smaller, because they are "muscle specialists." Man, of the civilized type, however, spends a great deal more energy on his nervous and mental faculties than would be enough, if ex-

pendent on muscle only, to make him far stronger than animals or primitive man of far greater size."

The human being "wastes" a great deal of energy in the exercise of his mental capacities. We know the mental fatigue, commonly known as "brain fag," is far more exhausting and far harder to repair than muscular fatigue. It can almost be said that man requires a great deal of muscle, used in the sense of energy, for his brain. Moreover, it is highly important that the human being cultivate a physical power or energy large enough from which the nervous energy needed may be drawn, otherwise there will be exhaustion, wasting and disease. With a mental and physical stress of normal intensity, and a normal physical development and strength, the body manages to keep well and free from disease.

"But with an increase in the mental and physical stress or a lowering of the degree of robustness, the balance is broken and there is a proneness to disease. The body should be kept in at least a state of physical strength as is in keeping with its needs. Furthermore, in harmony with the doctrine of over-correction of a defect, the system should be maintained in just a little better shape than its particular need, so that it will be prepared to meet any extra demand on it.

"The human system is, however, a great conservator even where its muscles are concerned, as is shown by the physical development of various races and peoples. Where, from the mode of living, the people are subjected to great physical hardships, we find them well developed. Where they do little work of the manual kind their physiques are poorer. For example, people who live on the coast engaging in trade, are not so well developed, as the farmers of the interior. Mountaineers, who in their daily occupation encompass great heights, are better developed than the farming people. People living in warm climates who do very little manual labor are accordingly poorly developed.

"The average city habitat can come in none of these classes. His need for physical strength and development is greater than the mountaineer's, because of the various demands made on him, yet he has

infinitely less. The city man really belongs in a class of his own. It is he who is so liable to tuberculosis, and from whose class come most of the recruits to the large army of the tuberculous.

"The average city worker sits eight or more hours, usually more, in one position and, though the work is exhausting, he probably moves no more than one set of muscles. These he works even beyond the point of fatigue, to the point of exhaustion and paralysis. This is work, the "drudgery which forms one of the attributes of civilization—it is superhuman toil which allows of no repair." The overworked muscles are unable to repair themselves, and, consequently, waste away, as do the rest of the muscles, the idle ones, because the lack of motion or contractions stagnate the circulation of the blood in them and they die of "starvation." The cramped position these workers assume for so many hours puts "wrinkles," so to speak, into their bodies. The lungs are compressed and expansion in many parts is prevented. It is safe to say that such workers hardly take one deep breath during the entire day, with the result that the lungs do not once fill up to their entire capacity. The parts of the lungs which do not properly expand become inelastic, lose their vitality and become, like all devitalized tissue, fine media for the development of the tubercle bacillus."

A Plea for Rats.

We are told in a recent *English review*, that the ordinary rat is a blessing in disguise, and that if the species were killed we should have once more the old black rat, which is alone the carrier of the "plague" flea.

The history of the "plague" seems to be as follows: The black rat alone carries the fleas which are the "host" of bubonic plague bacilli. These fleas do not like the brown rat. The brown rat does not like the black rat and kills him off whenever possible. Thus, England used to be infested with the black rat and was decimated time and again by the bubonic plague. The brown rat came along, killed off the black rat, and there has been no plague since except in sporadic cases. The black rat now comes to civilization mostly on

ships. If he could be killed off all the ships or kept off entirely bubonic plague would never travel around the world.

We accept this statement for what it is worth, but it seems sound. Every animal has enemies which keep down the growth of population. If the brown rat is really the enemy of the bubonic plague he has more merit than we had suspected. We award him whatever merit is due him, but, nevertheless, we have no use for rats which, as Josh Billings said, "originally came from Norway, and I wish they had originally stayed thar."

The Invalid Habit.

The invalid habit, says the *American Practitioner*, is characteristic of thousands of semi-invalids, who are wasting their precious days 'resting'; these people would find happiness and gain health in the bargain if they would get off their sofas and do a share of the world's work.

In some cases, especially in women, invalidism has originated after a genuine illness. Overcoddling in convalescence, encouragement to 'take care of themselves' and to avoid any kind of overexertion lead to invalid ways, which gradually lapse into the invalid habit. Such people breakfast in bed, lie down again for two hours after luncheon, return to bed before dressing for dinner. Their condition becomes more and more helpless as time goes on; but if the work cure is applied to them vigorously and drastically they very soon become normal beings again.

The difficulty is to get people to understand that their minor dyspepsia, sleeplessness, and nervous ailments are the inevitable outcome of their mode of life, and they would find appetite and cure dyspepsia and insomnia if they would take to work. The new cure for blues, nerves, and general ill-health is cheap, within the reach of every one, and efficacious. It consists simply of work—physical work, mental work, all kinds of work, so long as the patient can be kept fully occupied and allowed no time to think about health. Many are ill simply because they imagine they are ill. The work cure allows no such introspection.

The Rat Guard Used in the Philippine Islands.

The question of securing a rat guard that would give efficient service and at the same time meet the other requirements has long been the subject of consideration by the United States quarantine authorities in the Philippine Islands, says Carroll Fox in *Public Health Reports*. There has recently been put into use a guard patterned after the combined ideas of several of the officers, which answers all purposes. It is, in the first place, an effective barrier against the passage of rats; then it is cheap, readily applied, light, and not easily made un-serviceable by hard usage. It is built on the single disk plan. It has been found that the double disk is cumbersome, though it may be effective, and is readily put out of service by the rough usage which it is bound to receive. The style of rat guard which combines the points of a guard and trap is theoretically all right, but practically of little value.

The special features of the guard under consideration are these: A single disk in two parts with arms (funnels) from both sides. It is hinged by bolting at the periphery of the disk. There is a guide permitting a perfect opposition of the two parts of the disk when closed. It is adjustable to many different sizes of rope and when placed on the line fits closely by tying on both sides. Rivets are used throughout, thus increasing the strength. The distal portion of the arms is cut longitudinally into three strips so that they may be bent to come into immediate contact with the rope when tied.

The details of construction as worked out after considerable experience are as follows: Flat sheet galvanized iron is used for all parts of the guard; 20 to 24 gauge answers best, for that weight of iron is strong enough and does not make the guard too heavy. The shield should not be less than 3 feet in diameter. The funnel tubes should be 18 inches long on each side of the shield. The central aperture can be made to fit any size of rope. One made for a 3-inch diameter rope will serve for all smaller sizes. When made or used for encircling a number of lines at the same time the shield should be 4

feet in diameter and the funnel tube enlarged and supported by five flanges and five rivets instead of three. The guide piece, which is the one important feature of this guard, is riveted on one side only and then bent around the circumference. The rivets which fasten the funnel tubes go through the tube flanges on each side of the shield. One bolt, two washers, and five rivets are needed for each guard. When badly damaged by use or carelessness a block of wood and a hammer are all that is required to restore the guard to its former usefulness.

Reference Guide to Other Journals.

American Journal of Clinical Medicine (Vol. XIX, No. 7)—“The Reign of the Knife,” by Thomas G. Atkinson; “Seminal Impotence and the Athlete,” by Wm. J. Robinson; “The Vaginal Douche as a Therapeutic Agent,” by H. O. Williams; “The Value of the Medical Society,” by E. M. Hoover; “An Appreciation of Mr. Bernard Shaw,” by James Moore Ball; Sexual Immorality and Its Significance,” by Elizabeth Hamilton-Muncie.

American Journal of Nursing (Vol. XII, No. 10)—“The Complete Nurse,” by Annie W. Goodrich; “The Social Development of the Nurse,” by Richard Olding Beard; “Entertainment and Nursing of Children,” by Alice Jane Drew.

American Medicine (Vol. VII, No. 6)—“Altitudes,” by E. S. Goodhue; Absynian Superstition in Gynecology,” by Felix Van Oefele; “Visual Memory,” by Aaron Bray; “The Dispensary Patient,” by Lucretia Morden.

Canadian Engineer (Vol. XXIII, No. 2)—“The Value of a Continuous Settling Basin,” by Alexander Potter; “Culture in the Education of Engineers,” by Wm. L. Saunders; “To What Degree Must Sewage be Purified?” by Chester G. Wigley; (Vol. XXIII, No. 3)—“An Electrical Sewage Disposal Plant,” by C. L. Edholm; “Irrigation Projects of the Canadian Pacific Railway Co. in Alberta,” by A. S. Dawson (to be continued); (Vol. XXIII, No. 4)—“Irrigation Projects of the Canadian Pacific Railway Co. in Alberta,” by A. S. Dawson (concluded).

Canadian Municipal Journal (Vol. VIII, No. 7)—“Economics of City Planning,” by Guy Wilfrid Hayler; “Housing Conditions in Hamilton, Ont.,” by James Roberts.

Canadian Practitioner and Review (Vol. XXXVII, No. 7)—“Grave’s Disease,” by J. W. Crane.

Critic and Guide (Vol. XV, No. 7)—“True Neurasthenia from the Freudian Point of View,” by S. A. Tannenbaum; “Official and Independent Medical Journalism and the Duty of the Independent Editor of To-day,” by Wm. J. Robinson.

Heating and Ventilating Magazine (Vol. IX, No. 7)—“Heating and Ventilation of the Little Theatre, New York,” Editorial; “Sectional Steam Heating in Chicago,” by S. Morgan Bushnell;

"A Paper Mill Heating System," by W. E. Price.

Hotel and Travel (Vol. VI, No. 11)—"The Future of the Country Hotel," by W. E. Defenbacher.

Indian Medical Gazette (Vol. XLVII, No. 6)—"Review of a Year's Medico-Legal Work in the Calcutta Morgue," by Captain St. John Moses.

Journal-Lancet (Vol. XXXII, No. 13)—"The New Public Health," Editorial; (Vol. XXXII, No. 14)—"Tuberculosis Survey," Editorial.

Journal of the Royal Army Medical Corps (Vol. XIX, No. 1)—"Antelope Infected with Trypanosoma Gambiense," by A. D. Fraser; "Our Aryan Brother," by R. H. Firth; "The Papataci Flies (Phlebotomus) of the Maltest Islands," by R. Newstead; "The Anatomy and Life History of *Agchylostoma Duodenale* (Dubini)," by A. Looss.

Journal of the Royal Sanitary Institute (Vol. XXXIII, No. 6)—"Sanitary Fittings," by F. Osborne Smith; "Development of the Cardiff Water Supply," by C. H. Priestly; "Sanity and Insanity," by F. W. Mott.

Journal of State Medicine (Vol. XX, No. 7)—"Reflections, Old and New, on the Condition of Surface Water Supply Systems," by W. Dunbar (to be continued); "On the Role of Carrier Cases," by E. J. McWeeney; "The Present Knowledge of the Etiology of Tracoma," by E. Bertarelli; "The Absence of Eosinophilia in Chronic Cases of Helminthiasis," by George C. Low; "Handicraft for School Girls," by Miss E. P. Hughes; "Housing in Ireland," by A. Scott Quekett.

Journal of the Outdoor Life (Vol. IX, No. 7)—"The Role of Exercise in the Prevention of Tuberculosis," by Henry N. Friedman; "The Doings of a Tenderfoot," by Fred T. Dawson; "Work for Tuberculous Persons," by Josephine Durkee.

Le Journal de Medecine et de Chirurgie (Vile Annee, No. 7)—L'Ensignement de l'Ophthalmologie a Londres," par Gaston Morin; "Le Diagnostic des Epilepsies," par Charles Fiessinger.

Medical Bulletin, University of Toronto (Vol. I, No. 1)—"Neuritis of the External Popliteal Nerve Following Typhoid Fever," by Robert B. Rudolph; "Laboratory Tests in the Diagnosis of General Paresis," by C. S. McVicar, Gordon Bates and George S. Strathy; "Juvenile Parasyphilitic Affections," by Goldwin M. Howland.

Medical Council (Vol. XVII, No. 7)—"Pathology and Treatment of the Summer Complaints of Infants," by Philip F. Barbour; "Anent

'Casin Milk' in Infantile Intestinal Disorders," by Frank K. Green.

Medical Review of Reviews" (Vol. XVIII, No. 7)—"Laennee and Auscultation," by Victor Robinson; "Medical Inspection in Schools from the Standpoint of the Educator," by Thomas A. Storey; "Vaccine Therapy in Medicine," by T. Wood Clarke; "The Deaf Child," by Helen Mac-Murphy.

O. A. C. Review (Vol. XXIV, No. 10)—"The Literature of Nature," by J. B. Reynolds; "The Woman on the Farm," by Mrs. T. H. Bass (concluding article).

Oral Health (Vol. II, No. 7)—"The Educationalist's Interest in the Child's First Quinquennium of Life," by Charles A. Hodgetts; "The Relation of Mouth Health to Child Development," by W. H. Doherty.

Our Dumb Animals (Vol. XLV, No. 2)—"Shall We Have a Birdless World?" by Edward Howe Forbush.

Public Health Reports (Vol. XXVII, No. 27)—"Notes on the Bionomics of Rats and Ground Squirrels," by George W. McCoy; (Vol. XXVII, No. 28)—"Rabies in the United States During the Year 1911," by A. M. Stimson; (Vol. XXVII, No. 29)—"Eradication and Prevention of Bubonic Plague," by William Colby Rucker.

School Board Journal (Vol. XLV, No. 1)—"The Straight Line," by H. Bedford Jones; "The Selecting of Equipment for and the Planning of School Shops," by W. A. Richards.

South African Medical Record (Vol. X, No. 2)—"Hernia with Special Reference to the Workman's Compensation Act," by H. A. Moffatt; "Darwinism in Medicine," by Herbert Caiger.

The Medical Officer (Vol. VIII, No. 1)—"Some Points in the Dietetics of the Acute Specific Fevers," by A. K. Gordon; (Vol. VIII, No. 2)—"Some Points in the Management of a Sanatorium for Pulmonary Tuberculosis," by A. M. Price; (Vol. VII, No. 26)—"The Heating of School Rooms by Slow Combustion Stoves Burning Coke," by H. W. Sinclair.

The Sanitary Record (No. 1179, Vol. L)—"Waterworks for Urban and Rural Districts," by Henry C. Adams (to be continued); (No. 1180, Vol. L)—"Waterworks for Urban and Rural Districts," by Henry C. Adams (to be continued); (No. 1181, Vol. L)—"Waterworks for Urban and Rural Districts," by Henry C. Adams (to be continued).

World's Work (July, 1912)—"Kill That Fly," by Frank Parker Stockbridge.

REVIEWS AND ACKNOWLEDGEMENTS

[Any book reviewed in this department may be obtained direct from the publishers, or from leading booksellers, or through *The Public Health Journal*]

"Problems of Boy Life."

The fact that the writers of this book have personally worked at the problems with which they deal and have thus acquired a first-hand knowledge of both the

needs and difficulties which confront us in relation to this subject and its bearing on slum populations and other questions of public health, greatly enhances the value of this work in the mind of the reader. In

the opening chapter the editor, Mr. J. H. Whitehouse, M.P., outlines the reform of elementary education. The excellent introduction is by the Bishop of Hereford and the remaining chapters as follows: The Economics of Boy Labor, by R. H. Tawny; Boy Labor: Some Studies in Detail, by Spencer J. Gibb; Boy Labor Towards Reform, by Spencer J. Gibb and J. H. Whitehouse; Boy Labor and the Factory System, by A. K. Clark Kennedy; The Boy Criminal, by J. M. Myers; The Station Lounger: A Study, by Norman Chamberlain; Street Trading by Children, J. H. Whitehouse; The Supervision of Juvenile Employment, by J. H. Whitehouse.—*Problems of Boy Life. Edited by J. H. Whitehouse, M.P. Introduction by the Right Reverend John Percival, Bishop of Hereford. London: P. S. King and Son, Orchard House, Westminster. 10/6.*

“The Montessori Method.”

Dr. Maria Montessori introducing to the English readers her excellent work, points out that lack of a preface to the Italian original “Il Metoda della Pedagogia Scientifica” may be explained by the fact that the book was intended to be and is nothing more than a preface to a more comprehensive work, the aim and extent of which it only indicates, in that the method for children of from three to six set forth here is but the earnest of a work that developing the same principle and method, shall cover in a like manner the successive stages of education. The reviewer’s opinion of this work by Dr. Montessori is that of Henry W. Holmes, and he feels it wholly within the bounds of safe judgment to call Dr. Montessori’s work remarkable, novel and important; it should receive the careful perusal of all those practically interested in educational matters.—*The Montessori Method. Scientific Pedagogy as Applied to Child Education in “The Children’s Houses,” with additions and revisions by the author. By Maria Montessori. Translated from the Italian by Anne E. George. With an introduction by Professor Henry W. Holmes, of Harvard University. With 32 illustrations from photographs. 2nd edition. New York: Frederick A. Stokes Co. \$1.75.*

“The School.”

As an introduction to the study of education, Dr. Findlay has written a most excellent book under the above title for the Home University Library. The centre of his theme lies in his contention that if one had to give advice to those who are to take charge of youth he might urge first that normal submission to custom and environment should be enforced, but that variation and even eccentricity should not be too harshly judged; secondly, that variety of outlook and experience, both of men and things, should be afforded; above all, that the best of these, both the personal influence of sympathetic and generous teachers and the guidance of the best in literature, science and the arts should be presented. Much will be rejected, but what is retained will be retained for life. The gratitude of youth to those who provide it with discipline and sympathy is boundless. In this respect the author aptly quotes Stanley Hall in saying: “It is questionable, therefore, whether in early adolescence strong social pressure should ever be brought to bear upon the youth in any one direction. The most normal development will be attained by letting him live in the midst of a society occupied with its customary functions.” The chapter titles are: Origins; The Young of Man; The Rise of Educational Institutions; The Functions of the School; Stages of Growth (or Development); The Organization of Education; Types of School—with Some References to Universities; The Teacher; The Pursuits of School; The Corporate Life of School.—*The School. An Introduction to the Study of Education, being No. 38 of the Home University Library of Modern Knowledge. By J. J. Findlay, M.A., Ph.D., Professor of Education in Manchester University. 256 pages indexed. London: Williams and Norgate. 1/.*

“Bacteria as Friends and Foes of the Dairy Farmer.”

This is a well illustrated little book written for those interested in dairying. The language is, therefore, clear and free from technicalities. Special attention has been given in chapters two, three and four to the subject of starters in dairying mak-

ing the book in consequence very valuable to the butter and cheese maker. The introduction to the book rightly points out that the product of the dairy farmer, unlike the product of other classes, must be disposed of without delay; that the march of modern civilization and sanitary improvements, while increasing our knowledge as to the great value of the products which the farmer has to dispose of from a dietetic point of view, have at the same time imposed a high standard of purity, flavor and freedom from all sources of contamination on his wares. For this reason the dairy farmer should be acquainted with a knowledge of the world of microscopic beings with which he is beset on all sides, and be able to distinguish his friends from his foes among this host which he cannot see; but to which he owes and from which he fears so much.—*Bacteria as Friends and Foes of the Dairy Farmer.* By Wilfrid Sadler, Lecturer, *Theory of Dairying; Assistant Instructor in Dairying; Demonstrator in Dairy Bacteriology. The Midland Agricultural and Dairy College, Kingston, Derby.* With 8 illustrations. London: Methuen and Co., Limited, 36 Essex St., W.C. 1/6.

“Text Book of Hygiene for Teachers.”

Dr. Lyster here writes from his long experience in public health matters and brings practically up to date his former work, “School Hygiene,” which was produced in the early days of the medical inspection of school children. Dividing his subject into three parts, The School, The Scholar and the Medical Supervision of School Life, the author goes very fully into consideration of school location and its hygienic surroundings. He takes up the question of physiology and the numerous questions bearing on the organization of medical inspection, stating it as his opinion that the hygiene of school life is of paramount importance to the questions of political economy and the prosperity of the nation.—*Text Book of Hygiene for Teachers.* By Robert L. Lyster, M.D., Ch.B., B.Sc., (Lond.), D.P.H., B.Sc. (Public Health); County Medical Officer of Health for Hampshire and Chief Medical Officer to the Education Committee of the County Council; Tutor in Public Health

at St. Bartholomew's Hospital, London; formerly Assistant Lecturer in Hygiene at the University of Birmingham; Bacteriologist and Assistant County Medical Officer for the West Riding of Yorkshire. London: W. B. Clive. 4/6 net.

“Cambridge Manuals of Science and Literature.”

Among the numbers of this excellent library of special interest to our readers, we would mention: The Coming of Evolution; Heredity in the Light of Recent Research; Plant-Animals; A Study in Symbiosis; Links with the Past in the Plant World; The Wanderings of Peoples; Primitive Animals; The Moral Life and the Moral Worth; Pre-Historic Man; and Earth Worms and Their Allies. Each number is authoritative in its class and will pay well for its perusal, the volumes being small and condensed in such a way as not to detract from scientific accuracy or good literary style.—*The Cambridge Manuals of Science and Literature.* Edited by P. Giles, Litt.D., and A. C. Seward, M.D., F.R.S. Bound in rose colored art cloth. Cambridge University Press. New York: G. P. Putnam's Sons, 2, 4 and 6 West 45th St. 40c. per volume.

“A Guide to Prevention of Disease and the Preservation of Health.”

The author states his object in writing this book to be the enlightenment of his readers regarding the proof of the facts presented along the lines of professional advancement toward eradication of disease, the prolonging of life; and timely warning is given against nostrums and patent medicines. The book is well worth reading and may be safely placed in the hands of the laity.—*A Guide to Prevention of Disease and the Preservation of Health.* By Dr. W. A. Chamberlain. Boston: The Roxburgh Publishing Co. \$1.50.

“Modern Methods of Nursing.”

In writing this book so as to fit the curriculum required for a modern training school, Miss Sanders acknowledges that she had to face the drawback that some of the subjects which were to be presented could but be superficially appreciated. Yet the author has taken hold of the subjects

of bacteriology and materia-medica and presented them in a way to be found most useful to nurses in training. This information on all the subjects of the greatest importance to the nurse takes up 881 pages, fully indexed and suitably illustrated.—*Modern Methods in Nursing*. By Georgiana J. Sanders, formerly Assistant Matron at Addenbrooke's Hospital, Cambridge, England; formerly Superintendent of Nurses Polyclinic Hospital, Philadelphia, and at the General Hospital, Boston. With 228 illustrations. Philadelphia and London: W. B. Saunders Co. \$2.50.

“New Demands in Education.”

Prefacing his book with the statement that the fundamental demand in education as in everything else is efficiency—physical efficiency, mental efficiency, moral efficiency, James Phinney Munroe takes up the new demands of education by considering the grievance of the average boy against the average school; the common school; education as prevention; the demands for efficient administration; the demand for a true profession of teaching; the demand for vocational training; the present need for industrial education; the demands of business; the need for real patriotism; the demand for trained citizens; the demand for discipline; the demand for a citizen's high school; how the colleges ruin the high schools; the donning of long trousers; the mechanic arts; the educational value of manual training; the Russian system of manual training.—“The boys and girls in school,” says the author, “are the greatest of all national resources, infinitely more important than those natural resources of which so much is heard; and the province of education is to conserve the most valuable of assets.” And further: “The supreme aim of education reacting from homes, schools and the community in general should be to foster sound and capable bodies, to develop well-trained minds and to build up strong, self-reliant characters.”—*The New Demands in Education*. By James Phinney Munroe, President (1910-11) National Society for the Promotion of Industrial Education; Chairman Massachusetts Commission for the Blind; Chairman Committee on Education, Boston Chamber of Commerce; Sec-

retary of the Corporation, Massachusetts Institute of Technology. Garden City, New York: Doubleday, Page and Co. \$1.25.

“Further Researches Into Induced Cell Reproduction and Cancer.”

This is the second volume of the authors' consideration of this subject. The first book was published on December 15th, 1910, under the title “Induced Cell Reproduction and Cancer,” and described methods by which certain individual human cells could be made to divide in response to chemical agents, together with suggestions as to the association between this subject and the cancer problem. The present volume is suitably illustrated and indexed and describes experiments which go to show how the previous work with individual cells has been confirmed by physiological experimentation.—*Further Researches into Induced Cell Reproduction, and Cancer. Volume II., consisting of papers by H. C. Ross, M.R.C.S., England, L.R.C.P., Lond.; J. W. Cropper, M.B., M.Sc., Liverpool, M.R.C.S. Eng., L.R.C.P., Lond.; and E. H. Ross, M.R.C.S., Eng., L.R.C.P., Lond. With illustrations. The John Howard McFadden Researches. London: John Murray, Albermarle St. W. 3/6 net.*

“Sleep and Digestion.”

The author's desire is to disseminate common sense views concerning health in publishing in pamphlet form this lecture which he states was delivered in the historic dining-room of Sir Isaac Newton. The lecture is arranged under the following headings: Man as King of Creation; A Third of a Man's Life is Spent in Sleep; The Inevitableness of Disease; Sleep is Universal; To Sleep Well is to Prolong Life; Digestion; The First Essential to Digestion is Appetite; Exercise in the Open Air Creates a Need for Food; The Analogy of Sleep to Digestion.—*Sleep and Digestion*. By George Thomson, L.D.S., Honorary Dental Surgeon Royal Hospital for Disease of the Chest. London: John Bale, Sons and Danielsson, Limited, 83-91 Great Titchfield St. W. 1/ net.

"Dr. Goodkin, Eminent English Specialist."

Here we have the story of a quack and a good one; both a good story and a good quack. Those who know quacks will recognize the real thing in the hero of this story. It is worth reading and worth leaving on one's anteroom table so that others may read it.—*Dr. Goodkin, Eminent English Specialist. A Story of a Quack. By E. S. Hanson. With illustrations by F. J. Farrell. Chicago: E. S. Hanson, 440 South Dearborn St. 50c.*

"Gardens and Their Meaning."

We agree with the publishers of this excellent work when they say that it is a practical hand book for those who are teaching gardening to young people. It gives instruction in the fullest detail as to how to select and lay out the ground, how to prepare soil and what to plant and how to plant. The book is scientific but distinctly readable, finely illustrated and with tables conveniently arranged for ready reference and shows among other things not only how to arouse a love for country life, how to educate in elementary agriculture, but how to develop co-operation, initiative and leadership.—*Gardens and Their Meaning. By Dora Williams. Boston, New York, Chicago, London; Ginn and Company, Publishers. \$1.*

Progressive Medicine."

The second number has reached us of Volume XIV., being whole number 54, of this excellent quarterly digest; its province is the advances, discoveries, and improvements in the medical and surgical sciences. The volume under review is excellently illustrated and indexed and contains valuable articles. We look upon "Progressive Medicine" as a most valuable addition to the practitioner's library.—*Progressive Medicine. A quarterly digest of advances, discoveries, and improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., etc. Assisted by Leighton F. Appleman, M.D., etc. Philadelphia and New York; Lee and Febiger. \$6.00 per annum.*

Publications Received for Later Attention

"Progressive Medicine," "The Main Drainage of Towns," "Microbiology," "Time and the Second Generation," "Gardens and their Meaning," "Pellagra," "International

Clinics," "Insect Stories," "An Essay on Hasheesh," "Health in Home and Town," "Handbook on Military Sanitation for Regimental Officers," "The Blues," "Bacterial Food Poisoning," "Mouth Hygiene," "The Healthy Baby," "The Transfusion of Life," "Baby's Teeth," "A Simple Method of Water Analysis," "Aids to Histology," "Small Water Supplies," "Abnormal Psychology," "Statistics of Puerperal Fever and Allied Infectious Diseases," "Practical Eugenics," "The Welcome Photographic Exposure Record," "The Child in the City," "The New Physiology in Surgical and General Practice," "Methods of Air Analysis."

And receipt of the following publications not mentioned elsewhere in this issue is hereby acknowledged: "Toronto City Health Bulletin" for July. "The Canadian Patent Office Record," Vol. XL, No. 5. "Bulletin of the North Carolina State Board of Health" for July. "The North Carolina Standard Sanitary Privy," "Bulletin on Tuberculosis, North Carolina State Board of Health." "Bulletin on the Baby, North Carolina State Board of Health." "Bulletin on Medical Inspection of Schools and School Children, North Carolina State Board of Health." "Bulletin on Malaria, North Carolina State Board of Health." "Bulletin on Typhoid Fever, North Carolina State Board of Health." "Bulletin on Hookworm Disease, North Carolina State Board of Health." "The Purity Advocate," Vol. XI, No. 3. "Monthly Bulletin Ohio State Board of Health," Vol. II, No. 6, and Vol. II, No. 7. "Literature of the Humane Publicity Syndicate," L. H. Packard, Boston, Mass. "The Sentinel." "McGill University Annual Calendar," "Winnipeg Health Bulletin" for July. "Supplement to Animal Sanctuaries in Labrador," Commission of Conservation Report. "A Synopsis of Fevers and Their Treatment," Virol Limited. "University of Colorado," annual announcement. "Bulletin on Typhoid Fever, Michigan State Board of Health." "Report of the Department of Public Health," City of Winnipeg, 1911. "Annual Report of the Medical Officer of Health and School Medical Officer," 1911, Borough of Royal Leamington Spa. "Annuaire de L'Ecole de Medecine et de Chirgie Faculte de Medecine de L'universite Laval de Montreal." "The University of Toronto Medical Bulletin," for July. "Studies of Plague, a Plague-like Disease, and Tuberculosis among Rodents in California." "Public Health and Marine Hospital Service." "The Educational Record," Vol. XXXII, No. 6-7. "The Canadian Teacher," Vol. XVI, No. 19. "Thirty-first Annual Announcement of the New York Post-Graduate Medical School and Hospital." "The Fly Fighter." "The Announcement of the XV International Congress on Hygiene and Demography," Washington, 1912." "Provincial Health Officer's Report," Nova Scotia 1911. "Third Annual Report Commission of Conservation, Canada." "The Treatment of Water with Chlorine," by Joseph Race, F.I.C. "Special Bulletin of the Florida State Board of Health," Vol. VII, No. 8. "Beriberi Caused by Fine White Flour," by John M. Little, M.D. "Monthly Bulletin of the New York State Department of Health," for July. "Preliminary Announcement of the 40th Annual Meeting of the American Public Health Association."

To the Editor, *The Public Health Journal, State Medicine and Sanitary Review*:

Rural Sanitation.

Sir,—Cities have been studying the problem of sanitation and putting into practice the knowledge obtained with amazing success. Hitherto an opinion has prevailed that sanitation was not a problem for the rural communities to consider. A change of view has now come. Village and farm, it has been found, lose a great part of their natural endowments of fresh air and abundant sunshine by neglecting to properly utilize these things.

It has been found, too, that countless men and women suffer from ailments inherited or acquired in childhood which may be healed in youth, that are remediless in maturity. At this point a systematic public sanitation accomplishes the greatest good. Little sufferers whose complaints are regarded as childish whims because the child will often play in pain, are passed by without attention. Year by year the blemish takes deeper and deeper hold, impairing the usefulness and shortening his life.

Weeding out the aches and pains by carefully finding the causes, thereby building stronger bodies, which give clearer minds and on and on the good manifolds, until the results are hard to foretell.

As a close observer of the conditions of rural life, no greater good could be done the whole people than the adoption of countrywide laws of sanitation.

Our present legislatures have already enacted a large number of measures for the general welfare, thereby endearing themselves to the hearts of the people.

To purify one tainted stream in a village or town, removing the cause of sickness, lessening doctor's bills and saving the lives of children—preventing homes from being orphaned, and wives from widowhood; to go into the school-room and find some child who has been embarrassed because of backwardness in his studies, the unknown cause some times being defective

eyesight, impaired hearing or adenoids—locating the trouble and remedying it, and restoring the child to the normal, where he takes his place along with the rest of his fellows, all this and more should be accomplished everywhere.

A Rural Woman.

Hygiene, Health and Habits.

Sir,—Because a few persons are able to eat unwashed and live filthy, the average person is inclined to feel that the precautions we take to preserve the public health are unnecessary. As a matter of fact, the existence of healthy appearing persons who seem to have no need of hygiene proves nothing against the general hygienic system. Some persons seem to be immune to typhoid fever and small-pox. Physicians and hygienists are seeking to protect the susceptible masses. It is possible to prolong the lives of the weakest and most susceptible by hygienic measures.

And this brings me to some habits. The average person puts his hands in his mouth or carries things to his mouth too often, without examining the condition of his hands.

We know definitely how certain diseases find lodgment in the human system. But will it be possible for society to have ideal health as long as so many respectable persons insist on nibbling dirty hands or putting things into their mouths with dirty hands?

More attention also should be paid to the habits of children. Children of all ages will drop anything edible in the streets, and pick it up and eat it without a qualm. Why give a baby pure milk and let it eat a piece of bread that has been used as a floor mop? Good air and good food are better than bad air and bad food, but if hygiene is to be effective it must apply to all human habits.

It would be better if all fruits and vegetables in cities were cooked. Heat is about the only thing that can be relied upon to offset the carelessness and unscrupulousness of those who handle food-stuffs.

J. O. D.

Meetings and Reports

[Material for this department to appear in any month should be transmitted before the 25th of the preceding month to *The Public Health Journal*, 43 Victoria St., Toronto, Canada.]

DOMESTIC

Domestic Notes.

For some time past there has been a feeling in University medical circles that something should be done to keep graduates in touch with the work being carried on by the University staff in the various hospitals and laboratories connected with the University. *The University of Toronto Medical Bulletin* is the outcome of the desire of the Faculty of Medicine to meet the wish so expressed. The periodical will be issued four times a year, and its columns will be devoted largely to clinical and laboratory investigations, as well as to special problems of research. The editors hope that it may prove an inspiration, not only to those who receive it, but also to those who, from time to time, publish the records of their labors in its pages. The first number was received in July.

The first National Town Planning Congress was held in Winnipeg, 15th to 17th July. The arrangements called for three morning sessions, leaving the afternoons open for visiting the Annual Industrial Exhibition. Many valuable papers were read, which will be noticed later in this journal.

Dr. J. W. S. McCullough, Chief Officer of Health for Ontario, has prepared circulars, dealing with flies, mosquitoes and improper sewage, for distribution throughout the province. The question of sewage disposal in the country is a serious one, and a campaign of education is being instituted to make the farmer and the residents of small towns and villages understand the importance of protecting their water supply. The information for distribution points out the law and outlines the means by which sewage can be properly disposed of.

For some years past the Grosse Isle quarantine station has been in a bad state,

the buildings being delapidated or unsuited for the purpose. The Government has decided to improve conditions and a new hospital will be erected and the improvements made without delay.

A Heenan Destructor is to be installed in the new Toronto General Hospital, the Toronto Hospital being the first in Canada to adopt this advanced method of dealing with their refuse.

Advance Notices, Alphabetical.

Canadian Medical Association, annual meeting, Edmonton, Alta., August 10th to 14th, 1912. E. W. Archibald, M.D., General Secretary. This will be the 45th annual meeting. It is expected that the first day, being Saturday, will be devoted to business. The scientific part of the programme will begin on Monday and occupy three days—Monday, Tuesday and Wednesday. At the conclusion of the meeting the G. T. P. offers an excursion to the famous Yellow Head Pass. While it was at first thought that one day of the meeting should be spent in Calgary, that idea has been abandoned. A visit to Calgary may precede or follow the meeting in Edmonton. Everything goes to show that a splendid programme of papers will be ready, and the proverbial hospitality of the West is shown in the numerous arrangements already made for the amusement and the comfort of the visiting members. As to the railway rates, the Standard Convention Certificate Plan will be in force from all points in Canada, that is, the rate will be single fare plus 25 cents for the return trip. Members are urged to ask from their local station agent for the Standard Convention Certificate which will be honored for ticket for return trip. It is necessary that a certain number of certificates be secured before the rate can be valid. It would be wise also to secure sleeping car reservations early. Those members who desire to go on to the coast, or return by one of the United States routes can secure summer tourist rates which are very low. The meeting in Edmonton offers an excellent opportunity to men in the East of seeing the West economically and at one of the most favorable times of the year.

Canadian National Exhibition, Toronto, August 24th to September 9th, inclusive, 1912.

Canadian Public Health Association 1912 Congress, Toronto, September 16th, 17th and 18th, inclusive, Charles J. C. O. Hastings, M.D., M.H.O., City Hall, Chairman; T. Aird Murray, M.C.S.C.E., Lumsden Building; Duncan Anderson, M.D., 28 Wellesley St., and Dr. Helen MacMurchy, 133

Bloor St. East, Secretaries, Committee for Local Arrangements.

Child Welfare Exhibition, Montreal, October, 1912. The objects are: I. To present evidence of all the various activities—educational, religious, charitable, philanthropic, and medical making for the improvement of conditions of child life, so that their existence and special work may be advertised, their inter-relationship may be recognized and the public be further stimulated to support and advance their endeavors; II. To show the deficiencies in public and private organizations and to suggest remedies for the same, drawn from the experience of other communities, in this way supplementing and extending the work already being accomplished; III. To correlate the endeavors of many existing associations, developing thereby a body of concerted opinion sufficiently strong and influential to bring about the needed improvements in the surroundings and upbringing of the city child. It is proposed that the Exhibition shall have the following departments: 1. The Health of the Child; 2. The Home of the Child; 3. The Education of the Child; 4. The Moral and Religious Life of the Child; 5. The Recreation of the Child; 6. City Environment and the Child; 7. The Law and the Child; 8. The Social Life of the Child; 9. The Care of the Abnormal Child; 10. Philanthropy and the Child. The Executive Secretaries are: W. H. Atherton, Ph.D., 62 Beaver

Hall Hill; Tel., Up 1380; and Rev. J. O. Maurice, L.L.L., 35 Ontario, East; Tel., East 925.

Saskatchewan Medical Association, Moose Jaw, September 3rd, 4th and 5th., President S. W. Radcliffe, M.D.; Secretary-Treasurer, Arthur Wilson, M.D.

Union of Canadian Municipalities, Windsor, Ont., City Hall, twelfth annual convention, August 27th, 28th and 29th. W. D. Lighthall, Hon. Secretary-Treasurer. Some of the subjects which will receive special attention at the Convention are: The Price of Cement; Distribution of the Cost of Subways and other Railway Crossings; Water Powers in General and Georgian Bay Canal Water Powers; Uniform Municipal Statistics; Electric Franchises; Health and Mortality; Sewer System; Filtration of Drinking Water; Commission Government.

Western Canada Irrigation Association. Sixth annual convention Kelowna, Okanagan Valley, B.C., August 13, 14, 15 and 16, 1912. Secretary, Norman S. Rankin, P.O. Box 1317, Calgary, *Forestry Association, Canadian*. Convention will be held in Victoria, B.C., Sept. 4th-6th. Secretary, James Lawler, Canadian Building, Ottawa.

Royal Architectural Institute of Canada. Annual Assembly will be held at Ottawa, in the Public Library, on 7th October, 1912. Hon. Secretary, Alcide Chausse, 5 Beaver Hall Square, Montreal, Que.

INTERNATIONAL

First International Eugenics Congress.

The business sessions of the First International Eugenics Congress opened on the 25th of last month in London, England, with a speech by the president, Major Leonard Darwin, the fourth son of the late Charles Darwin. Four hundred delegates from twelve countries and a thousand students filled the hall.

The paper by Dr. Raymond Pearl, of the Maine experiment station on "The Inheritance of Fecundity," and that by Dr. D. F. Weeks, of the New Jersey State College, on "The Inheritance of Epilepsy," provoked lively discussion. Professor Giuffrida Ruggeri, of the University of Naples, in the course of an address afterwards, declared that thanks to recent researches in the United States it is now certain that the races of man act in exactly the same way as the races of animals. The report of the Eugenics section of the American Breeders' Association embodied in a lecture delivered by Bleecker Van Wagenen on the 26th was a feature of the Congress.

The Congress was formally opened at a banquet and reception at which speeches

were made by Arthur J. Balfour, the Lord Mayor, and Major Darwin. Mr. Balfour said that the study of eugenics was one of the most pressing necessities of the age. He based his belief in the future progress of mankind on the application of scientific methods to practical life.

Dr. C. B. Davenport, trustee of the Eugenics Record Office, Cold Spring Harbor, N.Y., read a paper on "Marriage and Eugenics." This consists of a study and report as to the best practicable means of cutting off the defective germ plasm in the human population. Dr. G. Smith, of the University of Minnesota, read a paper on "Eugenics and the New Social Consciousness." All of the papers were followed by brief discussions.

During the progress of the Congress an exhibition consisting of charts, pedigrees, photographs and specimens, illustrated heredity, especially in man. Relics of Charles Darwin, Sir Francis Galton, Gregor Mendel, and portraits of notable workers were shown.

The hope was expressed that this Congress would result in the establishment of a small international permanent body as

a medium of communication between the different nations.

Advance Notices, Alphabetical.

American Public Health Association Congress Washington, D.C., September 18th, 19th and 20th, 1912—particulars later.

Baths and School Baths, International Conference on People's. Scheveningen (The Hague), last week in August. General Secretary, A. M. Douwes Dekker, The Hague.

Chambers of Commerce and Industrial and Commercial Associations, Fifth International Congress of the. Boston, Mass., September 24-28.

Chemistry, Congress on Applied. Washington D.C., September 6-13. Secretary, Bernard C. Hesse, M.D., 25 Broad St., New York.

Congress of Hygiene and Demography, Fifteenth, Washington, D.C., September 23rd to 28th, inclusive, 1912. Dr. Joseph W. Schereschowsky, Director, Dr. John S. Fulton, Secretary General.

Farm Women, First International Congress of Lethbridge, Alberta, October 21-25. Secretary-Treasurer, Eleanor L. Burns, Lethbridge, Alberta.

Geological Congress.—Twelfth Annual Meeting to be held in Canada during the summer of 1913. Secretary, W. S. Lecky, Victoria Memorial Museum, Ottawa.

Industrial Accident, Third International Congress on. Dusseldorf from 6th to 10th August, 1912. Professor Linliger, Elizabeth St., Elizabeth, Str. 63 Dusseldorf, General Secretary.

International Association of Medical Museums and International Congress of Medicine, Conjoint Meeting, London, England. August 6th to 12th, inclusive, 1913, under the patronage of His Most

Gracious Majesty George V., and Presidency of Sir Thomas Barlow. Dr. N. P. Harringham, Hon. General Secretary; Dr. Thursfield and Dr. Woodwork, of St. Bartholomew's Hospital, and Dr. Kettle, of the Cancer Research Hospital, Local Secretaries.

International Congress of School Hygiene, Buffalo, N.Y., August 25th to 30th, 1913; the fourth but the first held on the American continent.

Labor Legislation, Association for. Zurich, Switzerland, September 10-12. Secretary, Stephen Bauer, Basel, Switzerland.

League of American Municipalities. The next convention of this league will be held in Buffalo, N.Y., and in 1913 it will likely be held in Winnipeg.

Sanitary Congress of American Countries, Fifteenth, Santiago, Chili, November, 1912. Dr. De Rio, President.

Nurses, International Council of. Cologne, beginning of August.

Prison Congress, Quinquennial, London, Eng-1915. Secretary, F. Simon Van der Aa, Groningen, Holland.

Relief, Committee on Public and Private. London, Eng., 1915. Secretary, Charles S. Loch, Charity Organization Society, London, Eng.

Roads Congress.—The Third International Roads Congress will be held in London, England, in June, 1913. Secretary, W. Rees Jeffreys, Queen Anne's Chambers, Broadway, Westminster, London, S.W.

Surgeons of North America, Clinical Congress of. Third Congress, Chicago, November 11 to 16. Franklin H. Martin, General Secretary.

Unemployment, International Association for Fight Against. Ghent, Belgium, 1913. American Corresponding Officer, John B. Andrews, 1 Madison Avenue, New York.

UNITED STATES

Dr. J. Anna Norris, of the University of Chicago, was elected last month by the Board of Regents as Director of Health and Physical Training for Women at the University of Minnesota.

The medical director of Dartmouth College, who has during the past five years been making bacteriological examinations of the air of the college halls and recitation rooms has adopted the plan of disinfecting with formaldehyde any room showing more than thirty-five colonies of any kind of bacteria to a dish. The result has been quite striking, the cases of epidemic colds, influenza and bronchitis among the students having been reduced about one-half.

The Health Commissioner of Norfolk, Virginia, has a plan for registering wash-

er women of the city. A double file system is kept of the laundresses' names and addresses. One is arranged in alphabetical order while the other is arranged by streets. This checking system minimizes the possibility of loss and the spreading of disease.

The new officers of the Iowa State Board of Health for the ensuing year are: Dr. Albert Debey, of Orange City, president; Dr. T. U. McMannus, of Waterloo, chairman of the Committee of Medical Examiners; Dr. G. H. Sumner was re-elected secretary, and Prof. C. M. Kenney was elected treasurer.

Because of the bubonic plague situation, the appropriation of Congress for prevention of epidemic by the Public Health Service has increased from one

hundred thousand to five hundred thousand dollars in the sundry civil bill, last month.

The Minnesota State Board of Health has secured a press agent and is undertaking a campaign of education. The innovation is a sensible one that will appeal to most people as likely to produce excellent results.

Advance Notices, Alphabetical.

American Association for the Advancement of Science, Cleveland, Ohio, December 30, 1912, to January 4, 1913.

American Hospital Association, Detroit, September 24-27, inclusive, 1912.

American Institute of Architects, Washington, D.C., during December, 1912.

Charities, National Conference of Catholic Washington, D.C., September 22-26. Secretary, Rev. Dr. William J. Kerby, Catholic University, Washington, D.C.

Infant Mortality, American Association for Study and Prevention of. Cleveland, Ohio, Oct. 2-5. Executive Secretary, Gertrude B. Knipp, Medical and Chirurgical Faculty Building, 1211 Cathedral St., Baltimore, Md.

Municipal Improvement, American Society on. Dallas, Texas, November 12-16. Secretary, A. Prescott Folwell, 50 Union Square, New York.

National Dental Association, Washington, D.C., September 10-13, inclusive, 1912.

Pellagra, National Association for the Study of. Columbia, S.C., October 3-4. Information may be secured from Dr. J. W. Babcock, Columbia, S.C.

Red Cross, American, Washington, D.C. December. Secretary, Charles L. Magee, Washington, D.C.

THE EMPIRE AND THE WORLD ABROAD

Sir James Barr Before the British Medical Association.

Sir James Barr, the president of the British Medical Association, in his annual address to that body in Liverpool, Eng., last month, was plainspoken in his denunciation of the doctrine of bringing into the world of a lot of children regardless of the fitness of the parents. Sir James expressed regret that physicians had often joined forces with self-constituted moralists in denouncing the falling birth-rate and calling for quantity in the matter of children regardless of quality.

Physical degenerates, he said, ought not to be allowed to add to the race. He knew that such a view would bring him into conflict with some Christian churches which preached the doctrine of a high birth-rate regardless of consequences, boldly declaring that it is better to be born an imbecile than not to be born at all. They forgot the saying of Jesus that it were well a certain man had never been born.

Sir James refused to act a part in the made morality of the church. There must, he said, be a higher racial morality based on utility and the greatest happiness, not merely of the individual, but of the race. If everybody considered his moral responsibility to the race there might in a few generations be produced a pure, moral and highly intellectual race.

Notes of Empire and World Abroad.

Sir Patrick Manson, M.D., F.R.S., will retire from the post of Medical Adviser to the Colonial Office on August 15. It has been found necessary to divide the duties hitherto discharged by Sir Patrick Manson, and the Secretary of the Colonies has appointed Sir J. Rose Bradford, M.D., F.R.S., to be Senior Medical Adviser, and Mr. C. W. Daniels, M.B., M.R.C.P., to be Junior Medical Adviser, to the Colonial Office in London. These appointments will take effect from the date of Sir Patrick Manson's retirement. The Secretary of State has also appointed Mr. W. T. Prout, M.B., late Principal Medical Officer, Sierra Leone, to be Medical Adviser to the Colonial Office in Liverpool, and the King has been pleased to give directions for the appointment of Sir Patrick Manson to be a Knight Grand Cross of the Order of St. Michael and St. George in recognition of his eminent services in connection with the investigation of the cause and cure of tropical disease.

According to present routine in the London medical schools a great deal of each student's time is taken up by formal lectures dealing for the most part with a purely academic view of medicine and surgery. But after all, the object of medical education is to train would-be medicos to be good practical doctors rather than philosophers. Consequently

there is a growing feeling at the leading hospitals that more definitely practical instruction should take the place of some of the regular courses of lectures. Thus at Guy's an innovation of this kind has lately been under consideration, it being not unlikely that at this school certain of the purely theoretical lectures will be permanently replaced by "clinical" demonstrations—that is, by teaching illustrated by actual cases of illness or accident.

Lord Mersey and the Bishop of Stepney have published their report of an investigation as to the system prevailing in London in regard to the admission of out-patients to hospitals. It does not appear, they say, that there is any appreciable abuse of hospitals by really well-to-do people. But there is probably good reason for the feeling on the part of the general practitioners that many patients who could without hardship afford the small charge made by them for ordinary ailments are treated at the hospitals, while there is much stronger evidence that the out-patient departments are used on a large scale by the class of patients able to make provision for ordinary ailments by means of provident dispensaries or clubs. There is want of proportion between the distribution of out-patient accommodation and the distribution of population. South London being the worst off in this respect, while generally the outlying districts suffer and the centre is over-supplied.

N. R. W. Nielsen, formerly Minister for Lands, who represented the New South Wales Government at the Chicago Irrigation Congress, and afterwards conducted an investigation into the irrigation methods of the United States, has issued a report, in which he says that the eastern coast of Australia can be made quite as productive as any similar area in any part of the United States or Canada. He recommends the Government to undertake extensive irrigation works, declaring that the cost of these would be amply repaid. Mr. Nielsen also recommends the organization of a general scheme of immigration

from the United States and Canada, the New South Wales Government undertaking to pay a proportion of the fares of those persons possessing a certain amount of capital. Another scheme proposed by Mr. Nielsen is the establishment of a permanent commercial commissioner's office on the west coast of America for the promotion of trade with Australia, for which he declares there is an almost unlimited scope.

A serious attempt to investigate what may be called the hygiene of sport is about to be made in Berlin. To carry out the objects in view a sport laboratory is to be established and placed under the charge of the Charlottenburg municipal authorities. The idea had its origin in a department of the hygiene exhibition held recently at Dresden, in which everything that could throw light on the influence of sports and gymnastic exercises on the human organism was brought together. Special attention was paid to bodily measurements arising under different conditions and from different muscular exercises, and particular observation was directed to the good and harmful effects of the several sports and gymnastics on the human body and its members. One of the chief objects of the new laboratory will be the observation of all that possibly affects school children in respect of food and physical exercises.

Advance Notices, Alphabetical.

Chambers of Commerce of the British Empire, Toronto, Ontario, in 1915.

Royal Sanitary Institute, Congress and Exhibition, York, England, July 29th to August 3rd, 1912. President, Most Rev. His Grace the Lord Archbishop of York; E. White Wallis, Secretary, 90 Buckingham Palace Rd., London, England.

The Royal Sanitary Institute, Henry Saxon Snell Prize.—This prize, consisting of 50 guineas and the silver medal of the Royal Sanitary Institute is offered, 1912, for an essay on "Suggestions for Improvements in the Ventilating, Lighting, Heating and Water Supply Appliances for an Operating Room and Its Accessory Rooms of 400 Beds" (No Students). For conditions of the competition applications should be made to the Secretary of the Secretary of the Royal Sanitary Institute, 90 Buckingham Road, London, S. W., England.