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CANADA

HEALTH JOURNAL

A Monthly Review and Record of

SANITARY PROGRESS

——EDITED BY——

EDWARD PLAYTER, M.D.

Public Health and National Strength and Wealth.

For Contents see next page.

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CANADA HEALTH JOURNAL.

A Monthly Record of Sanitary Progress.

VOL. XII. APRIL, 1890. No. 4.

A COMMON CAUSE OF LUNG DISEASE AND ITS REMOVAL—THE NOSE AS A FILTER—NASAL CATARRH.

THE following lines are extracts from a valuable paper in the New York Medical Journal of 1st March, last, by Dr. C. H. Stowell, of Washington, D. C. They fittingly follow the article given in the March number relating to dust.

Among the diseases people believe must be endured, acute colds stand in the foremost rank. It is understood that no ill effects follow their neglect, and no remedies give relief from their discomfort. It is equally true that the older materia medica brings to us but little hope of success outside of well-known household remedies. But now that the structures and functions of the nasal passages are so well known, and the therapeutics of some of the newer drugs so clearly demonstrated, there is no excuse for such neglect. To neglect a cold is to give an invitation to both annoying and serious affections, while to ask for relief is to obtain it.

It is only necessary to recall the exposed situation of the mucous lining of the upper air passages to fully appreciate the constantly recurring danger of exciting inflammatory changes. Let this membrane once become the seat of such changes, and it becomes more and more susceptible to exciting causes, until the most trivial exposures are sufficient to arouse old troubles. Resolution after each fresh attack is less and less complete, until finally there is developed a chronic catarrh. As colds increase in frequency, so are they likely to increase in gravity. The inflammatory process extends farther down the continuous mucous lining of the air passages, until the larynx, the trachea, the bronchi, and even the deep lung structures may become involved.

So eminent an author as Bosworth says: "The question is often put to the physician whether a catarrh will lead to the eventual development of lung disorders; and it seems to me that the answer should be, it may and it often does." He also states that this may occur not simply as a result of the extension of the inflammatory process, as indicated above, but that the presence of the catarrhal inflammation is a prominent factor in inducing some of the graver affections of the lungs.

But there are other reasons why acute inflammations of the nasal passages should receive prompt attention. Viewed as a prophylactic, the nose has at least three important functions to preform: To warm, to moisten, and to filter the inspired air. Many experiments have been made to prove the first of these functions. Aschenbrandt, of Würzburg, and Greville have shown that if the inspired air enters one nostril at from 46·4° to 53·6° F., it will pass out of the opposite side of the nose, without having entered the lungs, at the temperature of 86° F. Although these figures must represent the fullest capacity of the warming power of the nose, yet all writers agree that to warm the air is no mean part of the physiology of the nasal mucous membrane. Kayser corroborated the results of Aschenbrandt, and showed, in addition, that when cold air is inspired there is a marked increase in the blood supply to the turbinated bodies, thus greatly increasing their heating power.

A study of the oral cavity shows that its straight and large opening affords but little opportunity for the inspired air to come in close contact with its warm lining—certainly but very little as compared

with the smaller and tortuous passages above. Recent observations of Bloch show that in oral breathing the air is warmed very little, if any. It is evident that if air of a low temperature be brought in contact with the lower respiratory passages, inflammatory processes may be induced—indeed, would be likely to be induced.

Physiologists state that at least a pint of serum is poured out by the venous sinuses of the nose each twenty-four hours. The inspired air, passing over the nasal mucous membrane, takes up this moisture and enters the bronchi in a state of saturation; therefore it will not take any moisture from the mucous lining of the bronchi. But the dry throat, following so soon after oral respiration, proves that in the mouth there is no provision for supplying sufficient moisture. The membranes soon become dry, and the air passes to the lungs, taking moisture from the bronchial mucous membrane. Deprived of its normal watery constituents, the normal mucous of the bronchi becomes thick and a source of irritation.

As a filtering agent, the nose not only protects the parts below from the irritating qualities of particles of matter, as found in dust and smoke, but to those who believe in the mischievous power of germs it must also act as a germ-filter. The tortuous structures over which the air must pass on its way through the nose makes it altogether probable that all parts of the current of inspired air come in immediate contact with the nasal mucous membrane. It must follow that vast numbers of germs will adhere to this membrane. These germs may be those ever present in all inspired air, or those that may give rise to the gravest forms of disease.

But what is the nature of this nasal membrane? A highly vascular structure, crowded with mucous glands and held to the parts beneath by connective tissue.

To understand the full force of this answer, it is necessary to recall the observations of Metschnikoff on the power of certain amœboid cells of the body. In his address before the Alumni of Bellevue Hospital, reviewing the work of Metschnikoff and others, Osler shows how it is altogether probable that there are certain cells in the body—as the white blood-corpuscles, mucous corpuscles, both free and fixed connective-tissue cells—that have the power of taking within them, by means of their amœboid movements, certain germs. They have the power, also, of destroying or digesting these germs.

In the nasal passages are just those conditions necessary for one of the best battle-grounds so vividly described by Osler and others. On one hand it is the narrow entrance, the gateway, to a great field beyond. The air enters, loaded with the necessary and also with the useless and injurious. On the other hand, notice how Nature has provided for the defence of this point of attack: a tortuous passage, so that the current of air can not pass below without first touching its warm and moist lining. In this lining are the ever-watchful defenders of Metschnikoff, congregated here "to utterly destroy the army of invading germs." Here, then, is continuously waged one of the great battles of modern biology.

Dr. Roughten, of London, has called attention to this "screening action" of the nose. He believes that it greatly diminishes the prevalence of phthisis. Viewed in this light, we are justified in accepting the new nomenclature, and hereafter speak of the nose as the "modern Pasteur filter." But this germ-filter can be easily converted into a germ-producer. A layer of dry or thick mucous forms a complete barrier between the friendly phagocytes and the invading enemy.

From what has been said, the following conclusions can be drawn: 1. The nose should be kept clean. 2. All obstructions to nasal respiration should be removed. 3. Mouth-breathers invite diseases of the throat and lungs. 4. Mouth-breathers are more likely to have certain of the diseases caused by the entrance of germs in the body.

If the nose plays so important a part, how can it be kept in a healthy condition?

By promptly treating acute attacks. If the patient can be seen in the early stage, he should have at once a hot foot-bath and a bowl of hot lemonade. He should then be placed in bed and covered with blankets until copious perspiration is produced.

Dr. Stowell then goes on and gives the modern treatment of colds, which we cannot give in this JOURNAL, but which every physician in general practice would do well to read and consider.

The point we desire to impress upon our readers is the absolute necessity for keeping the nasal passages in a healthy condition and to use them as the only passage way for the entrance of air into the lungs, keeping the lips habitually closed.

ON DISINFECTION—FROM TWO VALUABLE PAPERS.

THE destruction of disease germs by disinfection is something with which both health officers and the intelligent public should be familiar. The following are extracts from two valuable papers which have recently appeared: one from J. S. Cameron, M. D., Medical Officer of Leeds and the other from Dr. Cyrus Edson, chief inspector of the health department of New York city.

USE AND ABUSE OF DISINFECTANTS.

Dr. Cameron said (Sanitary Rec. Feb. '90): I say I am strongly of opinion that a large amount of ratepayers' money is wasted in applying disinfectants in such a manner that they are of no earthly use. To pour, for instance, a few tablespoonsful of carbolic acid into a drain, with the idea of disinfecting the sewer, is to my mind a pure waste of material. Carbolic acid, as I have already hinted, is an efficient disinfectant, but its action is probably due to the property it has of limiting the activity and productive power of minute organisms, some of which we know are the cause of putrefaction, and others we believe essential factors in infection. It may also act, and probably it often does act, on organic matter in such a manner as to render it less prone to changes which would make it a cause or conveyer of infection.

It is not merely with one or two varieties of germs that we have to deal as causes of disease; like the evil spirits in the New Testament narrative, their name is "Legion." Different kinds of organic matter afford suitable soils for different kinds of these minute vegetables to grow upon, and the growth of a crop of one kind of bacterium in a certain given putrescible substance may limit, or entirely prevent, the development of a kindred germ —just as the fairy rings in the meadows are due to circles of fungi which have, by absorbing its needed nourishment quite destroyed the growing grass. The spores of the commoner bacteria, such as the bacterium termo, are probably very widely, if not quite universally, distributed in the atmosphere near the ground, and the use of disinfectants, or as they are more properly called in this connection, antiseptics, in regard to these bacteria, is not to destroy all these germs, which would be practically impossible, even if it were desirable, but to prevent their action on a particular organic material, or to intercept and destroy them on their way to the material to be perserved. The preservation of tinned meat, for instance, proceeds on the assumption (1) that putrefactive bacteria are present in the meat, and (2) that they may be conveyed to it by the air. To prevent those in the meat from becoming active, heat is employed to destroy them; and to prevent those in the atmosphere from reaching the food, the tin is sealed while still hot.

Putrefactive bacteria, however, are not disease germs; they may even be looked upon as some of Nature's scavengers. But, like them, bacteria, which we absolutely know to be the cause of disease (such as, for instance, the bacterium called the bacillus anthracis), can be also destroyed in this way. We know that the bacillus anthracis is

the cause of the disease known in the East as "malignant pustule," in Bradford as "wool-sorters' disease," and generally when it occurs in the lower animals as "splenic fever." This is not a matter of conjecture or theory, but of absolute, logical, and scientific proof. We know also about this bacterium that the bacillus itself—that is to say, the full-grown bacterium—(which is a very giant amongst microbes, and which, when it attains its full stature, may even measure as much as $\frac{1}{500}$ of an inch in length) is compartively easily destroyed. It is the spore of the bacterium which it is most difficult to kill.

We know that carbolic acid will, if present in a sufficient quantity, prevent the development of the putrefactive bacteria in an organic fluid, and we infer that the microbes of infective diseases will have their activities also lessened by the presence of this chemical. But the carbolic acid, to be effectual, must be present in such a quantity as to cause death to these germs. It must also be present in such a condition that it can reach them....

Now, if the poison, say of typhoid fever, be contained in a semi-albuminous motion, and strong carbolic acid be pored into the vessel containing the same, is it not extremly likely that some of the disease germs in the motion will be protected from the action of the acid by the coating of hardened material formed outside them—by the very disinfectant which is intended to destroy them? And yet I have frequently seen nurses in attendance upon patients with this disease who have considered that by pouring strong carbolic acid over the motions of the patient they were disinfecting these evacuations.

Now it seems to me that this mode of using carbolic acid is little better than sheer waste. What should be done is (1) to use the carbolic acid sufficiently diluted to enable it to penetrate the semi-albuminous constituents onto which it is poured, without so rapidly coagulating them as to protect the poison germs they contain; then (2) the motion itself should be subdivided in order to bring as much of it as possible under the action of the disinfectant. This must, of course, be done beneath the surface of the disinfecting solution, which may need to be increased in quantity for the purpose.

I am accustomed, therefore, to advise that a solution of carbolic acid of about 5 per cent. in strength be previously prepared. This may be conveniently done by taking 8 oz. of crude carbolic acid, placing it in a jar provided with a lid, and which will hold one gallon, and then pouring about a pint of boiling water upon the acid, shaking the mixture well, and afterwards diluting it with cold or tepid water to the extent of one gallon This solution, which contains 5 per cent. of the crude, or about 4 per cent. of pure carbolic acid, should be kept covered, and used as occasion requires. The strength of the crude carbolic acid used should be ascertained by analysis, and should be about 90 per cent. Should it contain so little as 38 per cent. of pure acid, as do some specimens sold, the proportion used to make the solution must, of course, be increased accordingly. About a pint of the solution should be placed in the bed-pan, the patient's hips having been previously anointed with a little oil, and the motion should be received into the solution of disinfectant. By this means the risk to the nurse of contracting the disease from her patient is very much lessened; for the motion, as soon as it quits the patient, enters the disinfecting fluid, where for the time being it can do no further harm. It should not, however, be immediately transferred to the water-closet, but should be first broken down small, and then set aside in a covered vessel, with the disinfectant about it, to give the latter time to destroy the germs it contains. Three hours is probably sufficient for this purpose, if the carbolic acid has not been further diluted by liquid accompanying the motion, if there has been much liquid it is desirable to add a further quantity of carbolic acid solution, made for this purpose double the strength of that already described. I feel so much confidence in the use of this well-known disinfectant that I hesitate considerably about

recommending others whose powers and potency are less known. This objection does not apply to the use of perchloride of mercury, the best of all our soluble disinfectants ; but there are certain difficulties about the use of this powerful poison which make one hesitate to put it into the hands of any but the sanitary inspectors themselves. It might so easily be used for criminal purposes, and has moreover an inconvenient action upon metals, so that in the meantime I feel shy about recommending its general adoption ; carbolic acid is also a powerful poison, but owing to its strong smell and burning taste it is not so likely to be used for criminal purposes.

It must not, however, be forgotten that even in the disease which I have chosen as typical, viz., typhoid fever, the poison may have been communicated by the patient to his immediate surroundings. The bed linen, for instance, may have been stained, the bed itself may have been saturated with discharges; carpets and bed hangings may become defiled, and excrementitious matters may have been allowed to cake on disused utensils. I emphasize these possibilities somewhat, because one so often hears the remark, pregnant with mischief, that typhoid fever is not infectious. The possibilities of infection, however, are probably very much greater than is generally supposed. There may be no great risk, there is probably none, in sitting down by the bed-side of a carefully nursed patient suffering from this disease in an airy sick-room, or in the well ventilated ward of a properly constructed hospital. But the case is altogether otherwise where an untrained nurse has allowed the sheets, and possibly the blankets of the patient, to become soiled, and where the fever poison has been "cultivated" in the warm bed, and diffused therefrom throughout the atmosphere of the apartment. It is better, therefore, that linen which has been stained should be immersed in a solution of carbolic acid, prepared in the manner already described. The bed, if much stained, should be destroyed.

To sum up briefly, I should advise you (1) to use a disinfectant only where you have some reasonable ground to believe that with it you will reach the germs of disease to be disinfected ; (2) so to use your disinfectant that it shall kill, not scotch, the snake. For this purpose, wherever it is practicable, remove the articles to be disinfected, and subject them to a heat of 220° (Fahr.) in an apparatus for the purpose. Do not be content with an outside temperature of this amount, but be certain that the exposure to heat has been for such a length of time, and under such efficient conditions that the heat shall have penetrated to the centre of the largest of the articles so treated. Remember (3) that disinfection and cleansing are two processes, and that both are necessary ; and, lastly, when in doubt, apply to your medical officer of health, and follow his advice.

VALUE OF SULPHUR FUMES.

Dr. Edson said, in Therapeutic Gazette (from N. Y. Med. Rec.): In the year from October 1, 1887, to October 1, 1888, there occured in New York three hundred and twenty-one cases of small-pox. These cases occurred in two hundred and twenty-seven houses. Eighty-two of these cases were contracted from exposure to some of the two hundred and thirty-nine original cases, nearly all of which were in their turn traced to direct exposure to other cases, either out of the city or in it. Nine cases could not be traced to their cause. They were probably due to contagion from some mild, unrecognized case, that travelled about spreading the disease. Not one single case of the disease was developed from the clothing or from the rooms in which these cases were, and from which they were removed to the hospital for small-pox. No other precaution was taken in the case of the rooms and clothing than that of fumigation by sulphur fumes—three pounds of sulphur to each one thousand cubic feet of air-space for at least two hours. This, however, was done in a most conscientious and careful manner, immediately after removal of each case.

Again, in the year from October 1, 1888, to October 1, 1889, seven cases of small-pox

occurred in five houses. All were traced to their cause, which was found to be direct exposure to a previous case. Not a single case occurred from infection left in the room or clothing by any of these cases.

Occupancy of rooms that have contained small-pox patients was always permitted as soon as they had been fumigated.

In this connection the effect of fumigation by sulphurious acid upon vaccine virus is interesting. On October 2, 1889, ten quill slips, charged with vaccine virus, taken from a lot charged equally from the same animal, were exposed in a room 76 × 15 × 8, to the fumes of one pound of sulphur for two hours. Each slip was then used to vaccinate a child that had never before developed vaccinia. All failed to effect any result. Ten other points from the same lot were effective upon all but one child of ten other primary cases. This child evidently had considerable resistance against vaccinia, as it only took after the third trial.

The same comparison of primary cases with secondary cases, in cases of small-pox, was made of scarlet fever, diphtheria, and measles.

First, scarlet fever. From January 1, 1888, to October 1, 1889, six hundred and twenty-six cases occurred in four hundred and fifty-three houses, and one hundred and thirty-five secondary cases occurred in eighty-seven houses.

Of the one hundred and thirty-five secondary cases, one hundred and six occurred within five weeks of the beginning of the primary cases, to the direct contagion of which they were presumably due. This leaves but twenty-nine cases out of a total of six hundred and twenty-six, that were possibly due to contagion left in rooms and apartments after disinfection by means of sulphur dioxide after termination of each case.

During the same period (January 1, 1889, to October 1, 1889) five hundred and fifteen cases of diphtheria occurred in three hundred and eighty-two houses, and one hundred and fourteen secondary cases occured in eighty of these houses. Seventy-nine of the secondary cases occurred within four weeks of the beginning of the primary cases, to the direct contagion of which they were, therefore, presumably due. This leaves only thirty-five cases, out of a total of five hundred and fifteen, that were possibly due to contagion of diphtheria left in rooms and apartments after disinfection by means of sulphur dioxide after the termination of each case.

In case of measles, five hundred and fifty-seven cases occured in three hundred and sixty-one houses, and one hundred and sixty-three secondary cases occurred in ninety-five of these houses. One hundred and sixty-three secondary cases occurred in ninety-five of these houses. One hundred and twenty-two of the secondary cases occurred within five weeks of the beginning of the primary cases, to the direct contagion of which they were, therefore, presumably due. This leaves only forty-one cases, out of a total of five hundred and fifty-seven, that were possibly due to contagion of measles left on the premises after disinfection by means of sulphur dioxide performed after the termination of each case.

These figures are interesting when carefully considered, and they show the relative efficiency of sulphur dioxide in the case of each of the diseases. The gas is most destructive to the contagion of small-pox, and next, to that of scarlatina.

In the case of measles we have an explanation of the comparatively large number of secondary cases. The disease is a mild one, speaking comparatively, and many cases are not properly isolated in the homes of the poor; consequently rooms and materials are infected outside of the apartment in which the patient belongs and which the disinfector fumigates. Moreover, during the past two years there have been so many cases of contagious diseases that measles have frequently not received the attention of inspectors and disinfectors that should have been given to it, scarlet fever and diphtheria taking most of the time of the men.

The contagion of diphtheria would, from these statistics, seem to resist the action of sulphur dioxide most, and to be the most

difficult to destroy. This is due to the manner of its infection. The other three diseases infect a room mainly by means of the medium of the air, the contagion being exhaled or given off from the body and deposited evenly over the surfaces exposed to the infected air. In diphtheria, membranes and secretions are also infected, and the contagion is (in a measure) protected by being surrounded by a protecting medium into which sulphur dioxide cannot easily penetrate.

In nature's method of infection the infected air is carried by draughts and air-currents into cracks and corners accessible only to a gas liberated under much the same conditions as the contagion.

CONCLUSIONS.—It would seem that the proper and most practical method of disinfection of dwellings, after the occurrence in them of exanthemata and of diphtheria, is by means of sulphur dioxide, and that all clothing, bedding, etc., used in direct contract with the patient, should be removed to a disinfecting station, properly equipped, and there subjected to heat of sufficient intensity to destroy all contagious matter.

In the discussion of this paper by the American Public Health Association the method of fumigation was criticised, it being alleged that not sufficient moisture was present with the sulphur dioxide to insure the best results. A very important point in this connection was brought out. The use of alcohol to ignite the sulphur, as described in the paper, adds materially to the moisture in the air of the infected rooms. The amount of alcohol used is about four ounces to each charge, say six pounds. This amount of alcohol will develop fifty quarts of steam, approximately.

THE PROPOSED DOMINION HEALTH DEPARTMENT—THE DISCUSSION IN THE HOUSE AND WHAT IT MEANS—THE INTEREST OF THE "PRESS" IN THE WORK.

A CARREFUL analysis and filtering of the speeches in the late discussion on the public health question in the Parliament of Canada brings into clear view some well defined wants in connection with the public health, which are indispensible to the welfare of the Dominion, as we believe every intelligent, thoughtful man will concede. Because these are still wants,—deficiencies not fulfilled, many thousands of our fellow creatures are dying amongst us every year, many hundreds of the best men and women, in the prime of life, who otherwise would not die. Why then should there be such unnecessary delay in filling such wants?

It is within the power of the "Press" of the Dominion to aid greatly in this behalf. While we do not persume to define the duty of the press, we respectfully ask editors and publishers of papers throughout Canada to consider this most important question—to carefully read the report of the discussion in the House, as given in our March issue, or the following brief synopsis of it, and ask themselves wherein their duty lies in regard to the subject.

One of the leading papers of the Dominion, the "British Whig," established over half a century ago, in the issue of the 6th March last, said: "Let a healthy public agitation follow on the lines suggested by the CANADA HEALTH JOURNAL. Let us hope that Dr. Roome's motion before the House of Commons, on this subject, will be comprehensive and meet every requirement of the situation." Now we contend that Dr. Roome's motion and address, with those of Drs. Platt and Sproule, were sufficiently comprehensive and, if the suggestions therein be carried out, will meet every requirement.

The First Minister, who has been the leading man in the Dominion for a quarter

of a century or more, Sir John A. Macdonald, after the addresses were delivered, said: "I again say that I think we owe a debt of gratitude to my hon. friend (Dr. Roome) for bringing up this subject, and I think *every member, no matter on which side of the House he may be,* will agree with me that it has been well and impressively placed before the House, and in SUCH A MANNER THAT WE CANNOT IGNORE IT.

Dr. Roome went at great length into statistics, showing in a very clear and able manner, the actual money value by which the wealth of the Dominion would be increased if the average death-rate of the Dominion, as it is clearly shown by statistics collected during the last few years to be, could be reduced about 20 p.c., or to about that of great London. He proved that by such a reduction, by the reduced costs of sickness, as from medical attendance, &c., by the saving of time now lost in sickness, together with the money value of about 20,000 lives saved, as per costs of immigration, this country would *save about thirty millions of dollars every year,* And this we contend with a very moderate and fair estimate, and without the least exageration. Dr. Platt said he was prepared to verify the figures Dr. Roome had given. He (Dr. Platt,) having gone over the same "statistics without Dr. Roome's knowledge or consent." Dr. Sproule said: "Our sanitary legislation is yet in its infancy. . . We believe that at least a quarter of the deaths which take place in the country might be prevented if we attended to this matter on a larger scale. . . If we could prevent one death out of every four which takes place now, it means, as my hon. friend said, a saving of 20,000 lives to the state every year. If we could, how much better would it be for the state than the imporation of 20,000 immigrants? . . . I think we could save more money than any one has any idea of, more suffering than perhaps one-fourth of the medical men in this country could save, more lives every year than we are bringing in by immigration, and more wealth than would pay a very large share of our national debt." Surely enough, "we cannot ignore" this question.

Now in reference to the means of preventing this great annual loss to the Dominion. The chief obstacle in the way of a Federal Department of Health has been that, some eighteen years ago, statutory powers in regard to health were given to the provinces. No one has had any desire to take from the provinces these powers—the powers to enact laws for the municipalities to work upon and to see that these laws are properly carried out —to enforce drainage and sewerage, provision for suitable water supplies, scavenging, isolation, vaccination, &c. But without a proper education, the masses of the people cannot be forced by statutes to attend to these health laws any more than they can be so forced to abstain from alcoholic beverages. And the best educator, or the stimulus which will best induce a seeking for proper knowledge, is to publish freely, at least every month, throughout the Dominion, and even the world, somewhat as is done weekly in England, the localities in which the death-rate is high and also in which there are prevailing epidemics or endemic infectious diseases,—in short, the general condition of the public health—where it is good, where bad. Heretofore it has seemed impossible to get legislators or ministers to understand what sanitarians mean, chiefly, by the education of the public.

Dr. Platt placed the subject very concisely, in the following words, in his speech: "The objection. . . . which has heretofore proved fatal to similiar motions, has been the difficulty of dividing the responsibility and work between the Provincial and the Federal Legislatures. . . But so far as mortuary and vital statistics, the foundation of all sanitary work, are concerned, there can be no doubt that the Dominion Government have it in their power, as it is, in fact, their duty, to provide the means for the collection of such statistics. Indeed that has been recognized by this Parliament, and a Department of Statistics has been organized, and for several years a considerable sum of money

has been expended for the collection of what is termed mortuary statistics. . . I believe it to be the duty of the Government to establish on a firm basis a Department for the collection of *such statistics as sanitarians wish to use;* mortuary statistics of themselves are not sufficient, we want vital statistics—reports of births and marriages, of epidemics and of the ravages of preventable diseases throughout the country, and then we will have a *foundation upon which the Provincial authorities may act.* . . I have no doubt whatever that this Government has full authority to institute measures to educate the people on this subject. There is nothing to prevent the Dominion Government spending a large sum in the distribution of weekly or monthly bulletins and reports relating to epidemic diseases throughout the country; providing for the establishment of a hygienic institute and bacteriological laboratory for the investigation and prevention of these diseases: and the distribution of literature teaching the people the various methods by which these diseases may be prevented. And in this way they can do a very large amount of work which is now attempted to be done by the Provincial authorities, and *thus perform at one centre what otherwise will have to be done by each province.* So far as coercion and enforcement of different measures are concerned, I grant this rests with municipalities, acting under the Provincial Legislature. That portion of the work can be safely left to them, but that is no reason why this Parliament and this Government, acting in concert with the Local Legislatures, cannot very largely increase the efficiency of the regulations now existing in this country."

Dr. Roome said he "would be pleased to know that each had a board and that their laws were strictly enforced. I am satisfied that the board in Ontario is doing a great deal of good, and would do *very much more if the people were educated on health matters* and the causes of disease. *But disease knows no provincial or municipal lines.* Therefore, health teaching must necessarily fall upon the Federal Government. I believe it is just as essential to have a Federal he .d or Department of health as it is to have a Department of Agriculture. ....Each Province now has a Minister of Agriculture or a similar office; still they do not interfere with our Federal Minister of Agriculture. Each has its particular functions to perform....The Hon. Minister of Agriculture has had established, since he has occupied his office, a Central Experimental Farm with several branch farms. The object of these is to make investigations, so as to instruct the farmers as to the best and most improved system of farming; the most reliable seeds to sow, &c. And, Sir, while doing this, is it not just as desirable that there should be a department where useful knowledge could be gathered, useful experiments made, and the knowledge so gained disseminated amongst the people, as to the best mode of preventing disease. Prof. Saunders had informed the Committee on Agriculture that he had imported a variety of wheat from Russia, which he had been experimenting on, and that he believed it was equal in quality to any which we had, and would ripen ten or twelve days earlier. If such proves to be the case, it will be worth millions of dollars to Canada, Now, Sir, if we had a similar place where experiments could be made as to the cause and origin of disease, and especially that dreaded disease, tuberculosis, ... and if it were found to be intercommunicable between man and the domestic animals, without a doubt it would be the duty of this Parliament to take steps to eradicate the disease... By so doing they would confer a greater boon on the people of Canada, than the introduction of any kind of grain or fruit into this country. There should be then an efficient laboratory for the invesigation of the causes and origin of diseases. Such a laboratory could collect cases from one end of the Dominion to the other, and yet *could be carried on at a very little more cost than a laboratory for one Province would cost.*

Dr. Sproule said: "We have no statistics or reports showing where *diseases* are

most prevalent, so that something might be done to stamp out any disease as soon as it makes its appearance..... In conjunction with the Provincial boards, I think we should have a National Health Institution, which would direct hygienic investigations. This Government assumes part of that sanitary work, to-day, in the collection of mortuary statistics, but we believe that this work should be extended ... ..and embody not only mortuary statistics, but reports in connection with zymotic *diseases* which are so destructive, not only in towns and cities, but in rural localities as well. The Federal Government now have too a Department for the purpose of analysing adulterated food, for the purpose of preventing disease. Therefore, at present, this Government is attending to two branches of this important work, although not to such an extent as we believe they ought to."

General Laurie, in seconding Dr. Room's motion, dwelt largely on the diseases of animals and their probable communicability to man, and of the desirability of having the proposed health department in connection with the department of Agriculture. He said: "Without statistics it is impossible for us to obtain information as to what our people die from, and as to what steps should be taken to keep them alive; and concluded his address as follows: "We have spent a great deal of money on the Experimental Farm, and we have spent it wisely and judiciously, but the necessity now is to spend some money on experimental stations in order to endeavor to ascertain the causes and to avert the diseases which afflict us.

We have it all here then "in a nut shell." What is required is a system for the collection of vital or health statistics from all parts of the Dominion—regular returns of births, marriages, deaths and prevailing diseases; efficient means for thoroughly and accurately investigating the causes and source of any special outbreak of disease or of excessive death-rate; and the publication and free distribution in all parts of the Dominion—to health officers and boards, physicians, local papers, etc., of a monthly (or weekly or fortnightly) bulletin, containing, besides a summing up or synopsis of the condition of the public health, certain "literature teaching the people the various methods by which the prevailing diseases might be prevented." It only remains for a convention, as proposed by the first minister, to consider the best means for the collection of these statistics and reports of disease. As this JOURNAL has repeatedly pointed out, they may be called differently in the different provinces; that is in accordance with differences in municipal regulations in different provinces, such, for example as prevail in Ontario and Quebec. We have long believed the Ontario system to be a good one, and if the inspector, Mr. Crewe, were at full liberty to have a few delinquents fined for neglect to register, the returns would soon become as perfect as we can expect to get them. In Quebec for the most part the registration through the clergy of births, marriages and deaths, is very accurate. New Brunswick has had a Registration Act in force now about two years, much like the Ontario Act. We believe these three are now the only provinces which have provisions for the registration of any health statistics or which have a Provincial Board of Health. It is probable that an interprovincial and federal convention would result in the organization of a board in every province, as there should be, as well as a Federal or Central Department. We are in accord with General Laurie in believing that a health department, with say a deputy or commissioner as head, would be best connected with the Department of Agriculture, which now looks after the health of the domestic animals. Man, physically, after all is but a production of the earth—an agricultural product.

A YOUNG man is suing the city of Philadelphia for $50,000, because he was sent to a small-pox hospital, when he had only the measles. He had subsequently caught the small-pox in the hospital and barely escaped with life.

THE SUMMER OUTING—DANGER SIGNALS.

AS the season is again not far off when many persons, especially in cities and towns, leave their homes for a few weeks and seek change and recreation, rest and renewed vigor, in some rural location, we would again point out some dangers. Fathers and mothers often much need the annual rest and recreation and the children, change and health. Thousands are now contemplating where they shall spend the approaching hot season: while thousands of others, even in small towns and rural homes, who have not yet made it a practice to seek a change or a summer holiday, should do so, and see how much better they would be.

Many are now asking: "whither shall we go?" Some families will go to the sea-side or some little town near one of our many ,beautiful inland lakes, or perhaps to a farm house, and board; others will rent a cottage at one or other of these places; while some will "camp out." All these ways of spending the holidays have their dangers. Narrow minded croakers, too conceited to take kindly to advice, write and talk about "sanitary cranks" turning people upside down and making them unhappy by frequent warnings and timely cries of danger ahead; but we simply desire to place our readers on their guard, that they may exercise due care, and not to alarm them. We have known parents take their family to a so-called "health resort" and afterwards find that they had rushed "into the jaws of death;" diphtheria striking down their loved ones, they return home—"All that was left of them"—depressed with grief, instead of bringing back with them improved health and renewed vigor. Scarlet fever, too, and typhoid fever, sometimes lurk in "health resorts," and even farm houses, and new-comers, perhaps not vigorous and well fortified, fall ready victims. Grown men and women have found typhoid fever in unexpected places, perhaps in the water supply or a cess-pool, whence it would not infect more vigorous or indigenous persons; and busy curious little children have found scarlet fever and death in old houses amid rags or old clothes which had not been disturbed for years.

Last year the Connecticut State Board of Health issued a circular bearing upon this subject. It states that there are places "which have gained popularity as summer resorts, and which, by reason of overcrowding and negligence of sanitary laws, are dangerous to all who frequent them." And again: "The much vaunted salubrity of the country farm-house, which was so far beyond criticism a few years ago, has now, under the illuminating exposure of modern sanitary science, lost much of the charming halo of the goddess Hygeia which formerly surrounded it." The frequent proximity of hen-roosts, cow-yards, ill kept stables and worse pig-styes, the cesspools and privy vaults, with the probable consequent contamination of the well, renders many of them places to be specially avoided. The prevalence of typhoid fever in the autumn is partly due to the exposure which summer tourists have incurred by a careless indifference to the sanitary condition of the places in which they have sojourned.

Most of these hygienic defects would be obvious; but parents should before trusting their "loved ones" in any strange house "pry into" even the underground part of it:—see that its foundation and cellar are thoroughly dry, clean and well ventilated. In dark, underground places with decaying organic matter, diphtheria lives and thrives best. Look well to the water and milk supply. Boiled water is always absolutely safe. It may soon be cooled and aerated again, if so desired. We have known children to be made ill by the milk of a cow fed on stable and kitchen garbage. Boiled milk, too, is always safe and probably more digestible than raw milk. The most careful enquiry is sometimes necessary in order to make sure that there be no infection lurking in or about the dwelling from previous cases of disease, not properly disinfected. Avoid a crowded place. It cannot be healthy. "Camping out" is a good way to spend a a few weeks in hot weather, when a good dry locality can be found convenient, well removed from any malarious spots. But, be cautious too here about the "beautiful spring water." It may contain the malarial poison. Boiled, it is safe, and it may be cooled in a hole dug in the ground. Don't take many food luxuries with you or buy them when holidaying in warm weather. Most people get too much of these at home. Good bread and milk, eggs and fruit form the best diet, and children should not be indulged in much if anything besides.

SHALL WE EAT TUBERCULOUS MEAT?

This is the question asked by the British Medical Journal of 29th March, last, in an editorial on this vital subject. The Journal thus says: In the history of law as in that of medicine there are, what may be called, in German fashion, "epoch-making" events. In the case of the now famous tuberculous meat trial at Glasgow we have an epoch-making event in the combined faculties, and report of the proceedings at trial on the petitions, at the instance of the Glasgow Local Authority, against Hugh Couper and Charles Moir before Sheriff Berry, will afford authority and precedent on which to decide future cases. The evidence contained in the report is interesting from the fact, that on the one side, that of the prosecution, we have ranged most of the authorities on tuberculosis in Scotland, whilst on the other there are, with one or two exceptions, no witnesses who can be considered to have a right to speak from a scientific standpoint. . . . The report of the evidence is *verbatim*, and there is in the pages before us a record of a most interesting character. We have the evidence of medical officers of health, of distinguished veterinarians, and of other scientific men all of whom hold with the French Congress that the flesh from tuberculous animals might be the cause of tuberculosis if ingested by the human subject. On the other hand we have for the defence such evidence as the following "that the principal cause is hereditity"; "that another cause is inhalation of the specific germ"; that "this germ is the pabulum of the tuberculosis;" "that it is the pabulum along with the tuberculosis," and much more such trash, and the Journal continues: The above quotations will be read with no little astonishment, but they are taken from pp. 311 and 312 of the report. There may undoubtedly be differences of opinion as to the necessity for condemning the carcasses of animals in which tuberculosis is comparatively localised; but such evidence as the above certainly does not argue well for the strength of the defence that they should have relied upon evidence of such a character. It is but fair to say that this is scarcely an average specimen of the witnesses for the defence, but anyone who takes the trouble—a trouble which will be well repaid—to go through the evidence, the speeches of counsel, and the summing-up of Sheriff Berry, must feel convinced that in this instance, at any rate, the verdict for the prosecution was the only one that could have been given. It is exceedingly fortunate that this should have been the case, for so much attention was drawn to the reports at the time, and so much depended upon the judgment, that it would have been little short of a national calamity had it gone out as the legal decision on a public health question, that flesh from tuberculous animals, when taken into the alimentary canal of the human subject, is to be looked upon as innocuous.

THE CHOLERA AGAIN.

Russia has adopted the following preventive measures:—1. General measures to improve the sanitary condition of the Transcaucasian region. 2. The medical departments of all governments lying along the Russo-Persian frontier are ordered (*a*) to take all steps necessary for the prompt detection and isolation of cholera cases: and (*b*) at once to report by telegram every such case to the Imperial Medical Department. 3. The Caucasian population are to be made acquainted with prophylactic measures against cholera by means of special pamphlets, instructions, etc., written in Russian, Armenian, Georgian, and other languages used in the region. 4. All products transported from cholera districts are to be subjected to a ten-days' quarantine, and a thorough disinfection. 5. All travellers arriving from the cholera localities are to be detained for a ten-days' observation, and their luggage disinfected. 6. The Russian cordon stationed along the Persian frontier is to be increased in strength. The Lancet says: "The only disquieting occurrence is the intelligence that it has made headway along the Turkish trade routes to Europe. Should the port towns become infected, it is certain that no Russian or Turkish means of prevention such as have been adopted on former occasions would be likely to stay the diffusion of the cholera poison if the local circumstances favored its epidemicity. Our clear duty is, while maintaining all necessary watchfulness as to the march of cholera on the eastern confines of Europe, to continue that line of sanitary work which we have now maintained for so many years and which has already saved more lives in this country than cholera ever destroyed among us." Experience has shown that in the most violent and extensive outbreaks of the disease, its virulence is invariably confined to circumscribed localities. Even in the districts

most severely attacked, the great bulk of the mortality always occurs within a limited space, while the disease seldom lasts long at any one point, but attacks a number of points in succession. The parts of any city where cases are the most numerous are always less salubrious than those in which the disease prevails in a less degree. The epidemic generally prevails most in sections densely inhabited and abounding in poverty and filth, and vice. As the Doctor puts it:—Cities, localities and individuals who endeavor to guard, if possible, against its approach by instituting timely measures for its prevention, are always those who experience, during a visitation of this pestilence, the successful results of such prudential enforcement of sanitary appliances, in a checking of the progress of cholera, in shortening its duration and in mitigating its severity.

MISSION OF EDUCATED WOMEN.

Mrs. M. F. Armstrong, in the Popular Science Monthly for March, replies to Mr. Grant Allen's article in a previous number of the Monthly, "Plain Words on the Woman Question;" (part of which was given in this JOURNAL of December) as follows: Generous recognition is at once given of the beauty of the possible home, and of the power and importance of the woman who creates it; but that this is woman's only field is emphatically denied. There are now open to her many channels through which she can influence the race, and the question is raised as to whether the advantage in this respect is altogether on the side of the married woman. Two or three of the older women in the group, who have had long and varied experience as teachers, ask if it is not probable that among the many children who have come into their hands there are not some, at least, who owe more to their school environment than to the home life. They claim that they, as teachers, should be credited with the influence which, in the nature of things, is inseparable from the responsibility which is put upon them. "To us" they say, "and not to the already overburdened wife and mother, is given the power to lead and direct the youth of the race. Would you have us, with that in view, aim for anything less than the best? The education of English and American children is, in the main, in the hands of women, and this not because of an anomalous social condition, but because of their peculiar fitness for the work. On Mr. Allen's own showing, these women should remain unmarried, and, if this involves a sacrifice on their part, it is left for him to show us that such sacrifice is ignoble, or in any sense threatening to the public welfare."

THE LONDON LANCET ON THE BATH.

Nothing in human affairs has a reputation so fixed that it may not be called in question by some one in a moment of originality. This has happened repeatedly in the case of the daily bath. Some critics, for example, suggest that the bather, in consequence of his very cleanliness, lives too fast, is functionally too active, and that delayed and more gradual excretion would better accord with health. Others appear to think that by daily ablution the skin loses a part, or all, of the protection against weather, derived from its own effete products. Yet the bath not only continues to hold its own, but its popularity increases year by year. As regards amenity, both personal and relative, to one's neighbors, there can be no doubt that this is usually much assisted by a habit of regular bathing. Other advantages are not lacking. Among these are when cold water is used, the invigorating exercise of the nervous and circulating systems, the resistance to weather changes, and the tonicity of skin engendered by immersion. Further, it is undeniable that the non-removal of effete matters from the body imposes a most unwholesome check upon waste excretion in deeper tissues. It is said that some savage races maintain a robust life in spite of personal uncleanliness; but these tribes, it must be remembered, are exceptionally favored in regard to fresh air and exercise. It is probable, also, that even they do not thrive as they should, and would under purer conditions. For civilized men of sedentary habits, the advantage of possessing a clean and freely active skin is a virtual necessity of healthy existence.

A THEOLOGICAL DIAGNOSIS:—Said Talmage, my brother your trouble is not with the heart, it is a gastric disorder or a rebellion of the liver. You need a physician more than you do a clergyman. It is not sin that blots out your hope of heaven, but bile. It not only yellows your eyeball and furs your tongue, and makes your head ache, but swoops upon your soul in dejections and forebodings.

NEW BRUNSWICK Prov. Board of Health's Third Annual Report, for the year 1889, is a very creditable volume, and its early issue so soon after the close of the year, much enhances its value. It gives the vital statistics of the Province, the names of the members of the Local Board in each of the twenty-five districts into which the province is divided, and a brief report from each one of these boards, besides Rules and Regulations of the Board, with amendments to the Public Health Act. It also gives its readers a full report on "Pollution of Water Supplies," by the Special Committee of the American Public Health Association, as presented at the Milwaukee Meeting, Nov. 20th, 1888, as given in this JOURNAL, January, '89

During the early part of the year 1889, the report says: our ordinary infectious diseases were quite prevalent throughout the whole Province. However the rate of mortality from these sources was not high. Of 181 cases of diphtheria reported to the Provincial Board, but eighteen, or about one in ten were fatal; and of 474 cases of Scarlatina but 28 or about one in seventeen were fatal.

The account of the following instances as given in the Report will prove of interest and profit: In January, 1889, a child four years of age, in the family of S —m, was attacked with diphtheria. The remaining children were sent from home at once, and none of them then contracted the disease. After the recovery of the child the family removed to Fredericton Junction, a distance of eleven miles. The other children did not return home for one month afterward. In the meantime thorough cleansing and famigation of their effects had been carried out by the family but without any special instructions in reference to it. Within the first ten days after the return of the other children, two of them were attacked with diphtheria. After their recovery the house was thoroughly cleansed, famigated, whitewashed and papered. In November a child twelve years of age was attacked with the same disease. Just before being attacked some winter bedding which had been in use during the attack of the previous winter, was put on the child's bed; undoubtedly the source of the disease in this instance. The nature of the disease was not recognized for some time, and the whole family, consisting of the father, mother, four children and nurse were infected. The child first attacked died of the disease. The nurse and one child were attacked five days after the first illness, the mother one week later, the father and another child five days later. The bedding from which this first child evidently contracted the disease had been washed after being in use during the first attack of disease in the winter and had been stored away about nine months. From this family the diease spread to two other families, in one of which five persons had the disease. The medium of infection was the man who visited the house for the purpose of supplying the house with groceries, etc. Some of the members of his own family were first attacked and from them the second family contracted the disease.

Another: During the month of April, 1889, Diphtheria spread from Fredericton Junction to McAdam Junction. A music teacher at the former place, who boarded in a house where the children had been attacked with diphtheria, had a sore throat It was of a very slight nature and but little importance was attached to it. In a few days she resumed her ordinary work. A daughter of Mr. B., of McAdam Junction, went to take her usual music lesson at Fredericton Junction, and about a week after her return was attacked with diphtheria. The house was quarantined and with other precautions the disease did not spread from this family.

We purpose giving more extracts from this report including the reports from the Local Boards, in our next number.

THE ST. LAWRENCE quarantine service report for 1889, by the Superintendent, Frederic Montizambert, M.D., F.R.C., D.C L., &c., is a pamphlet containing much of interest to Sanitarians. The doctor complains of ship surgeons relative to vaccination on board ship. He says: In the case of one of the mail steamers I came up on, her surgeon took and signed the oath to the truth of his written statement that each of the passengers on board had signs of having "been vaccinated within seven years, or of having had the small pox within that period." After leaving Rimouski I made a personal examination of the steerage passengers, working in the steerage all day as the vessel continued her way up the river, and found and vaccinated 198 persons not protected as the law requires;

a large proportion of these being adults who made no pretence of having been re-vaccinated since their infancy; and seven were children, who had never been vaccinated at all. On several other mail steamers a similar condition of affairs was found to exist in varying numbers. Eight hundred and eighty persons in all were thus vaccinated, between Rimouski and Grosse Isle. The doctor refers to the difficulty of examining and vaccinating a number of passengers suffering from sea-sickness, with all its attendant disturbance of mind and body, during the first few days of the voyage; and when postponed until later, the vaccination cannot be depended upon to prevent the development of small pox contracted before embarkation. "To secure the protection for Canada sought for by these vaccination regulations, every proposed passenger should be examined, and protection in accordance with them established or ensured, prior to admission to the vessel or before she leaves the calm waters of the port of departure." This would certainly be a great improvement, if carried out.

Dr. Montizambert asks for an electric search-light and a deep water wharf, both doubtless much needed. Vessels have to be boarded off Grosse Isle on arrival by night as well as by day. On dark and stormy nights this is often a matter of difficulty, not to say danger. Such a light would greatly facilitate the prompt recognition and the boarding of vessels at night. It would also lessen the risk of injury by collision, as, for instance, occurred between the "steamer 'Challenger' and a Norwegian barque I was endeavouring to board in the gale of the 1st of June last."

"The great deficiency of the quarantine station of Grosse Isle is that of a deep water wharf. A wharf to which infected vessels could be brought to land their passengers and effects for disinfection; and on which could be placed the steel cylinders for the prompt and approved disinfection of the effects by superheated steam, the elevated tanks for drenching with the mercuric chloride solution, and the steam fans, furnaces, etc., for changing the atmosphere in the holds and steerages and replacing it by one charged with sulphur dioxyde." Such a wharf would cost about $120,000. This sum would not go far in paying the costs of an epidemic, should one spring up through want of it. It would be but the *ounce* of prevention.

THE ONTARIO Provincial Report relating to Births, Marriages and Deaths in the province in 1888, by the Inspector, Mr. H. S. Crewe, has recently been issued. The best possible seems to have been done to compile a useful and interesting report from the imperfect material which is "returned," and reaches the Inspector. It is very difficult to make much out of statistics which are incomplete. There was an increase over the previous year, 1887, of 1,460 registrations; yet, as the report states, the increase was not equal in proportion to the increase in population in the province.

From consumption 2,521 deaths were registered, a larger number than from any other disease; although in the report this disease is classed as second in fatality, and inflammation of the lungs, bronchitis and other lung diseases are classed together as first. Yet from all these only 2,537 deaths were recorded. As from "old age" 2,365 deaths were registered; from "nervous diseases," including diseases of the brain and infantile convulsions, 2,275; and from general debility, 2,271. Heart disease came next, counting up to 1,567 deaths. From diphtheria, 1.088 deaths were registered, 252 less than in 1887; while in 1887 there were 66 less than in 1886. The number of deaths registered from diarrhœal diseases (934) had increased; while from the different kinds of fevers grouped together the mortality had increased to so large an extent that they appear for the first time in the ten highest causes of death. "Typhoid fever continues to be the most fatal of the fevers, although there was a slight decrease in the number who died," or were registered. In the following counties more than the average mortality from typhoid was returned, viz., Brant, Essex, Lambton and Oxford. In the cities of Stranford, Brampton and Ottawa it was quite prevalent. In the towns of Woodstock, Picton, Windsor and Owen Sound, the death-rate from all kinds of fevers was unusually high, viz., 1.8, 1.3, 1.0 and .9 respectively, while the average for all the towns was only .56 per 1,000. More deaths are reported from fevers at ages between 20 and 30 years than at any other period in life. The rural districts present a low death-rate from fevers, in comparison with that of the cities and towns." But it must be borne in mind that the registrations from the rural districts are much more imperfect than from the towns. And so do imperfect statistics mislead.

IN A YEAR from the early part of next month the decennial census will be taken in the Dominion. It is very desirable indeed, not only inthe interests of the Canadian people but of scientific medicine in this country, that a correct record be then obtained by the enumerators of the exact number of births, marriages and deaths which had taken place during the previous year—May 1890 to May 1891. Accuracy in this regard as relating to births and deaths is almost entirely in the hands of the Medical profession of the Dominion. We therefore trust, we would indeed entreat, that every practitioner in the profession in Canada will assist in this work by keeping an accurate record of all births and deaths which shall, during that period, come *under their observation.* Blank books have been sent out by the department of Agriculture here for this purpose. If a record be kept of every such event coming *under the observation* of every medical practitioner, with name, date and locality, any duplicates can be easily found and eliminated afterward in the make up of tables and reports.

IN 1837, when the Registration Act of England first came into force, opposed as it was by the clergy and the uneducated masses, the Royal College of Physicians and Surgeons issued a circular pledging themselves, and asking all their members to do the same, to give in every instance that might fall under their care the authentic name of any fatal disease. In his annual report of 1887 to the Local Government Board the Registrar General refers to the immediate benefit to medical knowledge derived from this action. The medical practitioners of this country could have no better precedent or example than this to follow during the coming year in relation to this important matter. We earnestly hope every one of them will in future years be able to look back with satisfaction in having thus aided in obtaining for this one year an accurate and a full record of all births and deaths in the Dominion.

PAYMENT in money for work of this kind would in any case be quite impossible. We have been very sorry to meet with men in our most noble profession speak against doing this kind of little duty without "pay." There are but very few such. Alas! that there should be one. Any professional man, especially one belonging to the most benevolent of all professions, should be high above such a mercenary view of the little requirements and acts which all men should be only pleased to confer upon society for promoting the well-being of the great brotherhood of man. True, medical men being human require bread and butter, but such little acts for the public will eventually grow up and yield material fruit, and in the end "pay," if this must be an underlying aim.

INTEREST in the future progress of this great country should induce ever man of even moderate intelligence to make every reasonable exertion to have a perfect record obtained of every birth in Canada for this one year. It would form a basis of great value for future estimates in regard to increase of population, &c So with a record of deaths. It is of the utmost importance that we now obtain for one year a record of the exact number of deaths which take place during that year in all the various localities of the Dominion. It likewise would form a valuable basis for making estimates relating to future progress, not only in health proceedings but in other respects. Almost every body can aid in this work, but it rests mostly with the medical profession. Before another issue of this JOURNAL reaches its readers the record should be commenced in order that it may be given with the utmost accuracy to the census collectors or enumerators at the end of the year, the 4th of May, 1891.

THE RELATIONS of the public—individuals and communities—to the medical profession is a subject of much importance, effecting very directly, as it does, the welfare of the people, and should receive more thought and consideration than it does. From the first issue of this JOURNAL it has ever endeavored to make these relations such as would be advantageous alike to the profession and the public. A great saving in both health and money would be effected if the advice of educated physicians were more frequently sought after and followed by both families and municipalities. In each of many localities, especially in the cities, there is an organized medical society, which could give most valuable advice to the respective municipalities of which they form a part, relative to

all matters pertaining to the public health. But municipal authorities appear often to be of the opinion that they know as much about these matters as, if not more than, the physicians do. They act in accordance with this opinion often to the great loss of the people.

IN NEW YORK the Academy of Medicine has been of great service to the city. Two or three years ago, upon the request of a member of the Health Department, Dr. J. D. Bryant, a "conference committee" of the Academy was appointed for "conferring with the Health Department on all matters of health relating to the general public when requested." Not long ago (Dec. 5, 1889) Dr. Bryant said (N. Y. Med. Jr.): The support which this committee gave to the Health Department during the time of the threatened importations of cholera and small-pox can not be fully appreciated except by those immediately cognizant of its aid and the imminence of the danger. To crown its usefulness in the interest of the public at this time. His Honor, Mayor Hewitt, referred to this committee the question of the necessary steps to be taken to afford protection to the city from imported disease. The committee's report and recommendations formed not only the stimulus, but the basis that caused sufficient appropriations to be made to meet the exigencies of future similar demands.

IF IN MONTREAL, TORONTO, Hamilton, London, Ottawa, Kingston and other cities, similar action were taken it could not fail to be followed by great public benefit. As "in the multitude of councillors there is wisdom," so in association with a "Conference Committee" of this kind not only would the Health Board of any one of these cities receive valuable advice, but the Medical officer, aid in the performance of his often onerous duties, while he would feel that the responsibilities of his high office would be in a measure shared by his fellow physicians. It is somewhat strange that more cities do not take advantage of medical knowledge by requesting indivinal medical men to act upon the health board. Physicians are ever as ready as any other class of persons to give their services in this way. Ottawa has during the last year or two taken a retrograde step. While formerly it gave a place on the board of health to medical skill, it now appears that the city council think they know enough about preventive medicine, and except the medical officer, there is physician connected with the board.

THE PUBLIC do not yet place so high a value on medical skill exercised in the line of preventing disease as they will in due time. In the meantime this want of appreciation will cost this same public many, many lives and an incalculable amount of sickness with its attendant evils. It is the same with individuals as with communities. After sickness has come, and not before it, the physician is called in; too late for the ounce of prevention, while the pound of cure may fail.

AT ALBANY last month, at the annual meeting of the New York Medical Society, the president, Dr. Lewis, said: Our present relations to our patients are not ideal. The public requirements are not only unlimited, but in some instances are positively unreasonabley. We are constantly called upon by patients who have trangressed every known law of health, and then expect us to give them a dose of medicine that will repair the damage. They will attend a supper at which all imaginable preparations of indigestible food and drink are mingled, and expect us to cure an aching head or acute dyspepsia the next morning. Others will transgiess every known law of hereditary disease, and expect the doctor to conduct a tuberculous child, for example, into a healthy manhood."

ON THE INTEGRITY of the profession Dr. Lewis said: "Doctors are frequently asked to do a wrong. or aid in doing it, but few physicians yield to such solicitations" He ventured to say that "no other 80,000 men of any one class could be found in America among whom so few scandals affecting their intergrity occur. It is commonly remarked that we are not business men. I am glad of it. Whenever we see a physician who has the business faculty unduly cultivated and excercised, we find one whose profeseional opinions are not always safe or reliable."

ON EDUCATING the public in health subjects the Sanitary Record (of Lond. Eng.) says: From time to time it has been forcibly pointed out by writers on hygiene that the future of sanitary progress depends to a great extent upon the goodwill and co-operation of the people at large. Striking at the root of the matter, not a few reformers base their hopes

upon "the education of the masses as the real groundwork of national health." By transgression against the laws that govern life in civilized communities man creates in a great measure the scourges for his own back. The vast amoun of injury caused by preventible disease is hardly likely to be materially affected until the people work hand-in-hand with the authorities for its removal. Otherwise, medical men may theorise and Parliaments legislate in vain.

THE LANCET summarizes some of the results given in the fifty-first annual report of the Registrar-General of Great Britain. In this volume the vital statistics of 1888 are reviewed and dealt with in detail. The death-rate was in that year as low as 17·8 in a 1,000, being the lowest death-rate recorded, the next lowest being 18·8. the year immediately preceding. The Registrar-General now reports for 1889 that the death-rate of that year was a fraction higher, being 17 9 in a 1,000. For the nine years 1881 to 1889 the death-rate was lower than the rate recorded in any year prior to 1881. The mean annual death-rate in those nine years was 18·9 in a 1,000, being no less than 2·5 below the mean rate in any preceding decennium. The Registrar-General points out that 600,000 more persons were alive in England and Wales at the end of last year than there would have been if the rate of mortality in the nine years 1881 to 1889 had equaled that which prevailed in the ten years 1871 to 1880.

ON THE "Causation and Restriction of Infantile Mortality," Dr. Vaughn (of the Michigan State Board of Heath) says: 1. One-fourth of the children born in the United States die before they reach the end of the fifth year of life. 2. Derangements of digestion cause more than fifty per cent. of these deaths which may be prevented by proper attention to the food. 3. Infectious diseases are serious in their effects upon infants, and may be restricted by isolating the sick and disinfecting clothing and rooms. 4. About three-eights of the total deaths from pneumonia occur among those under five years of age. Proper clothing and lessened exposure to extremes of temperature will do much to protect against this disease.

THE "FRENCH," the British Medical Journal (of Feb. 22) says," are a long way ahead of us [the English] in many ways." They "are eminently scientific" and "at the same time eminently practical." The Report of the first Congress on Tuberculosis held in Paris in the summer of 1889 has just been issued (G. Masson, Paris), and the Journal says, "the best phases of the French scientific method wil be found mirrored in it." The recommendations of the Congress to the French Government were such that, as the Journal adds, "if the outcome of such a meeting had been nothing more than the framing of such a series of regulations as those now known as the French tuberculosis regulations, the sitting would not have been in vain. The French Government, unlike some other governments, it will be remembered, as we stated at that time, acted *at once* on the recommendations of the Congress.

A "FAMILY TYPHOID" outbreak in Philadelphia illustrates one of the peculiarities of this fever. A bath tub, with old-fashioned pan closet adjoining, had been leaking from time to time, for two years, and recently had dripped down into the kitchen, onto the range and sink below. A case of typhoid fever appeared in September in the youngest boy of the family, who was ill in bed two months. His mother was taken ill with typhoid fever, November 23rd; one sister, November 29; a second, December 4; a third, December 5; a fourth, December 6; and a fifth, December 8. The plumbing had been defective for a long time, but it did not make the family really ill until a case of typhoid fever was introduced into the house, and then after a sufficient time had elapsed the six others were taken in quick succession. It is presumed the first case was caused by the city water from which so many suffer there.

AN INTERESTING account has just been given by French journals (noted in Sant. Inspector) of a local epidemic of pulmonary consumption which appears to have been due to infection. In the centre of Paris an office gave employment to 22 clerks. The wooden floor was old and uneven. In 1878, a man who had been in the office twenty-four years, died of consumption after a sickness of three years, during all of which time, excepting the last six months, he had been at his desk in the office, coughing and spitting upon the floor. Since this time, of the 22 employes, 15 have died, one of cancer, and all the others of consumption. Before the death of the first, two other men who had been in the office six years, began to cough and spit upon the floor. They died in 1885.

DR. J. A. BEAUDRY, of Montreal, recently read an interesting paper on "The Farmers and Hygiene from a social point of view." He held that according to statistics carefully gathered by himself during the last ten years in the surrounding country districts the death rate was higher there than in our cities, though the farmer certainly ought to enjoy the best health and live the longest. This alarming phenomenon was due to the non-observance of the laws of health, and also to ignorance, prejudice and habit. The doctor referred doubtless chiefly to the province of Quebec, but in many respects his remarks are applicable to the Dominion.

THE FARMER in winter, Dr. Beaudry says, shuts himself up with his family in the kitchen. Ventilation he never dreams of, so that the family live for months in foul air, and experience shows that during the winter months deaths are more numerous among women and children in the country districts. Bathing is almost unknown among Canadian farmers. On Sunday morning the face and hands are given a thorough washing, but the rest of the body never feels water. Still another fatal mistake is made by the farmer in sending his best produce to the market, and keeping for his family what is least salable. There is imminent danger of an enfeebled state of the agricultural race, a weakness is already ascertained to he a fact in parts of Quebec.

THE NINETEENTH CENTURY contains an article by Henry Behrend, a Hebrew physician of London, relating to the Hebrew method of butchering and inspecting meat. It shows (1) the great advantage of rigid meat inspections as a means of preventing tuberculosis; (2) an alarming proportion of diseased animals; and (3) a equally alarming lack of altruism in the Hebrew race as regards other races.

"OF 13,116 beeves slaughtered for the Hebrew trade in London in six months, only 6,973 were deemed fit for Jewish use." "The average rejections for five years have been fourty per cent. But these rejections are often sold to the Gentiles for food." "In a large practice of over thirty years he has never met a case of consumption in a Jew, and other busy physicians make similar statements."

THE LANCET reports as occuring in England, during a period of five months, the following injuries from football: Thirteen deaths, fifteen fractured legs, four fractured arms, eleven fractured collar-bones, three injured spines, one injured nose, one injured knee, one injured ankle, and one injured cheek.

A PORTION of Paris is supplied by water from springs, and the rest by water from the Seine. The mortality from typhoid fever is four times greater in the latter than in the former districts.

PROF. NEUMANN, of Vienna, says that he has had under treatment eighty-four cases of syphilis acquired by such innocent means as glasses, towels, soap, pipes, or other utensils of a domestic sort, or the fashion of kissing.

MM. DOYEN and Lajoux analysed seven samples of water sent from Pont Faverger, where a typhoid fever epidemic had appeared. Five samples obtained from contaminated wells contained 25,000,000 bacteria to a quart of water; of these, 15,000,000 to 20,000,000 were typhoid bacilli.

WHAT is known as Pessimism, or asking "Is life worth living?" Time says, should properly be called a sort of liver complaint.

SWEAT BANDS of hats may contain twenty-eight per cent. of fatty acids, which in summer penetrate the forehead and corrode the skin. Rub with burnt magnesia frequently, so as to leave a small film on the band; wipe it off with a cloth before applying again.

LAWSON TAIT says.—To keep a young girl during her first efforts of sexual development, seated upright on a musical stool, with her back unsupported, drumming vigorously at a piano for several hours, can only be detrimental.

THE Conseil de Hygiene of Paris is about to take steps to suppress the use of old magazines and newspapers for wrapping foods The Austrian government has prohibited the use of such papers, and also of colored papers for wrapping articles intended to be eaten.

FLANNEL underclothing should not be taken off or even exchanged for very light flannel with the first warm weather. Some persons unwisely throw off or change their flannel quite too early, even in April and May. Colder weather will follow the first warm spell. Keep on the flannel.

FRESH EGGS form a valuable article of diet, not easily procured, becuase they soon become stale. Almost every body could keep a few hens. If well bred, they more than pay for their keep, if they get any chance at all; and the one keeping them can make it a pleasure to look after them, instead of a trouble. There are no better breeds than the Plymouth Rocks and Wyandots for either laying or for the table; indeed but very few are so good. They will lay very well in the winter if kept arm, and their flesh is abundant, tender and juicy. Any of our readers desiring fowls—eggs or birds would do well to communicate with Mr. T. W. Tapscott, of Brampton, Ont.

NOTES ON CURRENT LITERATURE

THE ILLUSTRATED NEWS OF THE WORLD (London News—Am. Edition), during the last month has contained a full page portrait of Prince Bismark, a fine double page portrait of Mr. Edison and another, full page, of general Von Caprive, the new Chancellor of the German Empire; also a double page illustration of "Eton College"; and another, "The Parade before the Prince of Wales in Berlin." We find too: "Reflections"; "Old Chums"; "Sunday Morning"; "Found;" and portraits of the Oxford and Cambridge crews, all full page, with the usual amount of highly interesting and instructive reading. "Armorel of Lyonesse," by Walter Beasant, is keeping well up in interest.

THE CENTURY for April is remarkable chiefly for the variety of its contents. Two of Mr. Cole's charming artistic engravings accompany a paper on Giovanni Bellini, in the series of Italian Old Masters. It is claimed that American wood-engraving has never before been put to such important use as in this series. Mr. Jefferson's Autobiography reaches the Rip Van Winkle stage of his career. Two timely articles are: "The Latest Siberian Tragedy," by Kennan, in which is given a new account of the outrage at Yakutsk; and "The Slave Trade in the Congo Basin," by E. J. Glave, one of Stanley's pioneer officers.

PROF. JOHN FISK will open the Popular Science Monthly for May with an account of the life of Edward L. Youmans, including the story of his association with Herbert Spencer. Three chapters by Herbert Spencer treating respectively of "Animal Ethics," "Sub-human Justice," and "Human Justice," will also be given. Sumptuary Laws and their Social Influence will be discussed by Dr. Wm. A. Hammond, showing the absurd failures of laws against fine dress, costly food, and smoking, in Rome France, Turkey and England, and against the selling and drinking of alcoholic liquors in some of the United States.

SIX YEARS IN CENTRAL AFRICA, a stirring narrative of personal adventure in the wilds of that great lone land, by one of Stanley's pioneer officers, begins in the April St. Nicholas. Of this delightful magazine the *Christian Recorder*, Phila., says: There is a vast educating power in St. Nicholas. Its scientific articles are reliable, its stories pure, and its engravings beautiful. *Baltimore American* says: One of its chief points is that in every issue there is some particularly instructive story which has been written for the purpose of kindling in the bright young minds, a love for something deeper and more substantial. *Book Notes* says: Never before has there been published so excellent a periodical for young people; and it is a positive fact it is just as good for old people (only there are none) as it is for young people; and *Critic* N. Y. says: St. Nicholas leads the van among the juvenile magazines on both sides of the Atlantic. The Century Co., 33 E. 17th Street, New York.

THE "ANNALS OF SURGERY" has now entered upon its sixth year of publication. Much praise is due both to the home and foreign editors for the high literary standard sustained. It is the only journal published in the English language devoted exclusively to science surgery and which does not seek popularity by giving minor surgery, but rather bringing the reader up to the highest literary and practical attainments, nor does it in the least degree cater to advertisers. The numbers are well illustrated with fine engravings and diagrams, elucidating the text. ($5 00 per year. Sample copies 50 cents. J. H. Chambers & Co., St. Louis, Mo.).
