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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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VOL. XII.

DECEMBER, 1890.

No. 12.

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CONTENTS:

Some of the Dangers of Athletics and Gymnastics.....	211
Notes from Medical Officers' Reports.....	213
The hegira to Berlin.....	216
The Sanitary situation in Toronto.....	218
Miscellaneous Notes and Extracts	220
On the Causes and Prevention of Tubercular Consumption in mankind and the domestic animals.....	222
Editorial Notes.....	227
Notes on New Books and Current Literature.....	230



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CANADA HEALTH JOURNAL.

A Monthly Record of Sanitary Progress.

VOL. XII.

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SOME OF THE DANGERS OF ATHLETICS AND GYMNASTICS.

IN this age when Athletics and Gymnastics give rise to somewhat of a "craze" it will be well to have more regard for some of the dangers which often accompany and follow the practice of them. Moreover, warning notes may extend to the dangers of over physical exertion of any kind—lifting, running and over strain in any form. We will not more than mention those sudden injuries, such as strains, dislocations and fractures of limbs, that occur during the active games, and Dr. Cathcart in a paper published by the Edinburgh Health Society, gives quite a long list of these which came to his knowledge, but allude rather to the more lasting and more serious injuries of the vital organs. It may be noted however that Dr. Hammond, of Washington, has collected seventy cases of sudden death during the last ten years of men, each from running after a street car.

Dr. Morgan, in a book called "University Oars," relates that, being confident that the bad results of excessive exercise in rowing frequently were never heard of, he took the names of 294 men who had rowed in the inter-university race in a given time, and wrote letters to them asking them to give accounts of themselves as to whether they had suffered from any disease that could be attributed to rowing. He got replies relating to seventeen of them, some written by themselves and some by their friends or relatives, and gives many extracts from their letters, for which we have not space here; but all believed they had suffered from too much rowing. One wrote thus: "I am unfortunately an illustration of the evils which may be induced by overexercise. I am forty-one years of age and

quite obsolete from an hypertrophied heart, which has gone on to dilatation and its consequences." Of another, a brother wrote that "he had seriously injured his health by overexertion in rowing and running; being an enthusiast in everything he undertook he *imagined nothing could hurt him*, but soon after leaving the university he fell into bad health and died 18 years after. He attributed his sufferings to over exertion. Four died young of consumption, believed to have been brought on by early overexertion. A seventh was injured by rowing and was found sometime after dead in his bed. Another writes: "I have for the last three years suffered much from having overexerted myself, and have only just begun to go up hill again."

Others give long accounts of their sufferings caused by overexertion.

It is not by any means in rowing only that young men over exert themselves. It is not uncommon in the gymnasium: The Pittsburgh Dispatch of a recent date gives the following: "Of the thirty-two all-round athletes in a New York club of five years ago, three are dead of consumption, five, have to wear trusses, four or five are lop-shouldered, and three have catarrh and partial deafness. As far as general health and longevity go, the dry-goods clerk outdoes the athlete." Quite recently a young man fainted from this cause in the gymnasium of the Y. M. C. Association at Washington. It is well known that a large proportion of the cases of heart disease are caused by overexertion of one form or another. Dr. Fothergill, an eminent London physician, says: "The importance of mechanical strain in the production of diseases in the circulatory organs

(of which the heart is the central force) is scarcely yet sufficiently appreciated." In an interesting paper on Strain in its Relation to the Circulatory Organs, in connection with heart disease, by Dr. Fothergill, that which is of the greatest importance, is that relating to the change in the valves at the junction of the great arterial trunk with the heart and the causes of that change. "Every increase in arterial tension will close these valves with greater force, and this tends to cause valvular disease of the heart. The arteries run along close to the muscles, sometimes within the muscle, or under it, or between it and a bone, or over or under a tendon. When an athlete is straining every muscle in the gymnasium, those muscles are in a state of contraction, in which condition they are hard and press on different arteries and obstruct the circulation. The heart, continuing to pump away with increased vigor, distends the arteries, and of course there is an augmented recoil; the heart first becomes hypertrophied, and then follows valvular disease of the heart. All have seen how the veins stand out on the wrists of men in the gymnasium when they are trying to perform some difficult feat which requires great muscular force. It is because the circulation is obstructed. A person who is suffering from a mitral disease of the heart frequently causes an atheromatous condition (a fatty degeneration from a chronic inflammation) of the pulmonary artery and its branches." Thus we have an inflammatory condition of the valves and atheroma of the arteries at the same time, which is seen frequently. The casual association between atheroma and strain has been shown by Dr. Clifford Allbut and Dr. Moxon. The latter says (1) that what is called atheroma of arteries is a subinflammation of various degrees, of which the lower degrees end in fatty degeneration of the coats, along with the inflammatory products, and (2) that the determining cause of the occurrence of this change is mechanical strain.

It is well known that women are much less the subjects of valvular disease of the heart than men are.

Violent exercises are not at all necessary for health, and are better not to be indulged in by any one; unless it be by a would be professional athlete who does not intend to use his brain, or has not much of this finer structure to use.

A few absolutely sound, vigorous individuals may indulge in great physical feats without appreciable injury; but as Dr. Tompkins, resident physician of the celebrated Hammond Sanatorium at Washington, said the other day in a lecture delivered before the Y. M. C. Association there, Every one who wishes to indulge in athletics should be thoroughly examined by a physician and pronounced perfectly sound beforehand, and even then there should be a competent instructor who should tell him what to begin with, just how long he should exercise, and not let him overtax his strength in any way.

Lifting heavy weights is not the best way to get strong, and yet a great many young men think that in order to increase the size of the muscles and be considered stronger than any one else they must lift some weight far too heavy for them. Mr. Sims, a noted instructor of Washington, in what he calls "dumb-bell body exercise," which gives thorough exercise to every muscle in the body, never uses a dumb-bell that weighs more than two pounds. He says that the Indian clubs that are swung should weigh only four or five pounds, instead of twenty-five and thirty, that he has seen in other gymnasiums.

The fullest amount of brain work and of muscular exertion can not be carried on simultaneously without injury to whoever is bold enough to try the experiment; only a certain amount of nervous energy being available in the system. "There is a reserve fund of nervous energy for explosive purposes," says Dr. Tompkins, "and when this is once exhausted it is rarely got back. This may be expended either chiefly in muscle work or chiefly in brain work, or in a proportionate combination of both, but not in the fullest possible amount of both at the same time. Therefore, when extra brain work is called for,

we should not expect from our bodies the full amount of muscular exertion that they are capable of." "I remember well," he continues, "when I was a student at the University of Virginia, that those students who did more hard study than any of the others found that a brisk walk of about two miles a day gave them plenty of exercise to keep them in health, but did not fatigue them so much as to prevent them from studying, and those others who took leading parts in base-ball, boat-rowing, foot-ball, and all kinds of athletics, were,

with a few exceptions, not the hard students, but rather the reverse."

Great mental work and great physical work too it is plain cannot be carried on by any one for a length of time. The vigorous Gladstone has only indulged in the quiet exercise of chopping.

The greater danger of all is probably for men who lead sedentary lives to start out suddenly in the summer on their vacations to climb mountains, row boats, run or walk long distances. They are frequently worse off after their vacation than before.

NOTES FROM MEDICAL OFFICERS' REPORTS.

SOME months ago we noted the sanitary progress made in Brantford (Ont.) under the energetic medical officer, Dr. Griffin; the sweeping out of the privy pits and replacing them with earth closets, and the improvement in the milk supply.

In Guelph, Dr. Keating had during the year all the rooms in the different schools throughout the city thoroughly disinfected every other week for two months, at a time when a large number of cases of diphtheria was reported amongst the children of the city.

In London Dr. Hutchinson reported that: "In a group of six dwellings, five families used well water, which, upon examination, was found to be wholly unfit for domestic purposes. These five families—fifteen persons in all—contracted typhoid fever, while the families living in the centre of the group used the city water, and remained entirely free from the disease. Seventy per cent. of all the wells examined in the city during the year were more or less contaminated.

In Brockville, Dr. Vaux, M. O. (who has been recently appointed one of the members of the Provincial Board of Health) reports that: "In a population of 8,900 we have had a *death rate* of 109, or only about 12 in the 1,000" (which is not very plain). The Dr. also refers to many *surface drains* being choked up and the tiles exposed and completely filled with

the most offensive matter; to which nuisance "one death from diphtheria can be directly traced." Brockville has done a good deal of sanitary work, but very much more remains to be done.

Harriston's medical officer, Dr. Henry, reports that: "In a general way the sanitary condition of the town is fairly good; but I am of the opinion that if more dry earth closets were in use and the inhabitants attended regularly and strictly to cleaning their wells, we would not be troubled very much with contagious and infectious diseases. No general system of vaccination has been adopted here for the last four years." Can not *somebody* stir up the dry bones of this little town, near the centre of Ontario?

From Meaford, Dr. Snelgrove, referring to privy pits, states that: "Believing such to be sources of contamination of the water supply the Board caused notices to be printed and distributed to the property owners, or their agents, on whose property such objectionable closets existed, to have the same cleaned out, disinfected and the pits filled up with earth, and water-tight boxes substituted for the pits. The aforesaid boxes being designed to receive the excreta and also to serve as a receptacle for the ashes resulting from the consumption of wood or coal in the stoves. The ashes serve to absorb the liquid portion of the excrement and act as a deodorizer." A good procedure if the

boxes were emptied once or twice a week. and the *wood* ashes excluded, the alkalinity of which is objectionable, and they should never be so used. Coal ash is a fair deodorizer and is sometimes substituted for dry earth.

In Trenton, Dr. McLellan reports, what should be adjudged in a court as a case of multiple manslaughter: "A domestic servant in a town twenty miles distant had contracted diphtheria, and the children of the household to avoid the contagion were sent to visit here until it was thought safe for them to return. Some days after the visitors had left the host's child, and subsequently the whole family, were stricken with diphtheria, with a fatal result to all except the mother and youngest child." What utter ignorance or careless indifference! and in this age, and province, in these people "20 miles distant." Possibly there had been none to tell them better.

Walkerton's medical officer, Dr. Stalker, reports 10 cases of typhoid with one fatality and adds: "I believe the origin of the cases of typhoid was traceable in most, if not all, of the cases to impure drinking water. Wells or springs in a town like Walkerton cannot be depended upon to provide pure water." He urges the importance of and the necessity for a plentiful public supply of pure water for the town.

Windsor had last year "a year of grace so far as contagious disease is concerned. All told there were eight cases of scarlet fever and five cases of diphtheria, and only one death from scarlet fever. No such immunity from these diseases had occurred for a quarter of a century," so the able medical officer, Dr. Coventry, reports. "The plan of systematically cleaning up the town during the month of May was repeated with very satisfactory results."

In the township of Wainfleet. Dr. Hopkins, M. O., reports an outbreak of diphtheria, in which two of a family died, and another of scarlet fever, both of which were stamped out by the prompt action of the board with no spread of the disease

in either case. The Dr. says: The people do not object to have their dwellings placarded as they used to; they look upon it now as necessary and for the public good, and are awaking to the fact that the board of health is a useful institution.

During the summer a young man from a village in Wainfleet working in Buffalo was seized there with small-pox. "Before leaving for the pest house he packed up all his clothes in his trunks. After he died word was sent to his friends here to come and get them. By chance it came to be known to the Board that a party had gone for the clothing. By prompt action on the part of the Board the clothes were intercepted and kept out of the country."

From Woolwich township Dr. Passmore reports thus: "I have during the past summer visited all the slaughter houses, meat markets, creameries, cheese and glue factories, and also the schools in the township, having first issued the usual notice that I would do so. Things generally were in fair condition as regards the thirteen school houses, sanitary matters had received more attention this year than last."

In Wellesley, Dr. Morton concludes his report in these encouraging words: "I must not omit to remark on the remarkably beneficial effect on the public health, resulting from the extensive draining operations that have been going on with an accelerated progress during the past few years."

In Caledon township, the prevalence of typhoid fever last year had "not been equalled for years," Dr. Algie reports. His report is especially instructive. The fever was generally prevalent, but in no part of the township was the spread of the disease so rapid and severe as in the north-west corner. "There is not in the county a more intelligent, cleanly and respectable people; their land being high and dry, the dwellings good and well situated, their barn-yards clean and dry, and previous to this time the people themselves very healthy. Nor as far as could be ascertained was the disease imported but occurred sporadically in the first case. Disinfectants were used freely, . . . the sick rooms well

ventilated, and members of the family isolated as far as possible. In spite of all this, however, one after another were stricken down with the disease and it went from house to house; there being 18 cases within a radius of two miles. With Dr. McKinnon he examined cellars, privies, barnyards and made strict inquiries about the wells, all of which, with one exception, had been recently cleaned." Finally he made a general examination of well water. The season had been dry. Many samples were bad, a few good. "In the north-west corner, however, all samples were bad, containing large percentages of organic matter. In the instances where the water was good only one case occurred in each house, while on the other hand where the water was bad one after another of the family were taken down. It was not that the disease became more contagious, but that the inmates of each house were rendered more susceptible from the use of the impure drinking water."

Dr. Alpie reports another case as criminal as that above noted in Trenton. He says: "The number of cases of scarlet fever have been few, but several cases of a severe type occurred in one family in the following manner: A child was seized with scarlet fever a few miles from Alton village and I was called to see it. There having been no cases in the neighborhood for over a year I made enquiries and found that a lady from Toronto was visiting there with her child, who she said had recently been suffering with scarlatina, but that the attending physician had told her that after a month there would be no danger of carrying the disease." If this woman's story was correct "this attending physician" was very careless or wanting in knowledge.

Dr. E. Prouse of Colchester township makes a useful suggestion to the Provincial Board of Health, as follows: "If the Provincial Board could arrange so that medical health officers could speak in each school section on the most important subjects pertaining to that particular locality a large amount of practical information could be given which would have a good

effect on the sanitary condition of the different townships."

A further hint: Dr. Prouse reports: "In this township the farmers have as a rule built their barns too near their dwellings. As the ground is level there is no natural drainage and the soil is more apt to become saturated, giving off miasma which at a distance would have no effect. If farmers could be informed of the importance of this and act accordingly, it would save them a great deal of sickness in the future.

Still another good suggestion; Mr. Robert Knox, secretary of the Local Board of Health of Clarke township, reports: "Our Board is of the opinion that much good would be done through the distribution by the assessor or in some other way of a circular containing such practical suggestions as could be cheaply and easily carried out by themselves, in regard to the regular cleaning out of wells, cisterns, cellars and yards, the early removal of manure heaps, the cleaning out, disinfecting and deodorizing of privies, etc.

Here is a point (and hint too) on river pollution. Mr. Smith, Secretary of the Downie Board reports: "We are of the opinion that it is a grave mistake to have cheese factories erected on the banks of our streams and creeks, thus polluting them and thereby creating a nuisance. Last year complaints were lodged with the Board as to the contamination of the river Avon from some source, believed to arise from the sewerage of the city of Stratford being emptied into it, thereby endangering the public health and rendering it unfit to drink by cattle or other animals.

Still another good suggestion from the townships. Dr. Hamilton of Elma reports: "In conclusion, I hope the Government, in their wisdom, will see fit to revise that portion of the Act allowing the Town and Township Councils to appoint their own members a board of health, which, in my mind, should be composed of men thoroughly independent of the suffrages of the people. The Boards of the present day too often perform their duties in a worse than perfunctory way; and to

give an example, the Board of this township, of which I am medical health officer, has not met, that I know of, this year, and I have no doubt the farce is carried on in other townships in a similar manner.

In Elma there had been in former years "a great deal of diphtheria." Dr. Hamilton reports that: "During the last few years under the new drainage law, a very large area of the township has been thoroughly drained and put in a state of cultivation, and I have noticed a great diminution of diphtheria as a consequence, more especially is this the case where the saw-mills have been torn down and the mounds of saw-dust removed.

The township has several villages included in its area, all unincorporated. One of these contains about 400 inhabitants, and had two slaughter-houses in full operation until we had a few cases of typhoid (previously referred to) when I wrote to the Central Board asking for their removal. One of these has since been taken to the country, and the other which was not in close proximity to any residence and well kept allowed to remain.

An important suggestion: In this township Elma are nearly a dozen cheese factories; at several of these, hogs are kept during the warm summer months, causing a great nuisance and I have seen a few cases of typhoid on such premises, or in close proximity thereto. "Such nuisances must in my mind, says Dr. Hamilton,

have a deleterious effect on the cheese manufactured on such premises, and I think the authorities should give the matter their serious consideration, inasmuch as cheese is an important article of food, much of which we export to other countries.

Dr. Sproule, M. P., Medical Officer for Euphrasia, reports a severe case of diphtheria, in a school teacher, under his own care. He had the house and premises disinfected, and the well cleaned out before any more of the water was used. The infection was clearly from drinking foul water contaminated by the drainage of the stable manure which was located within a short distance of the well, and on higher ground with the surface drainage always flowing towards the well." I analyzed the water Dr. Sproule continues "and found it contained a large percentage of organic matter evidently from the manure heap. I ordered the school to be cleaned out, whitewashed, and disinfected before being used again, and I am pleased to say no other cases occurred except one in a neighboring family that I was notified of the day of my second visit." This family submitted to the same quarantine regulations and the disease did not spread. The Dr. regrets "that some medical men completely ignore the law" in respect to notification of infections cases. He also suggests the advisability of having health sheets published and distributed.

(To be Continued.)

THE HEGIRA TO BERLIN.

PROBABLY the world has never presented another such precipitate flight of physicians and their patients to any hygeian goal as that which has been just recently and is now taking place to Berlin. The medical world has learned to believe that any work of Dr. Koch is genuine and likely to be serviceable, and that it may be received without the usual "grain of salt." Far be it from us to cast a doubt on his efforts now. We do, however, regard the rush in the pro-

fession to Berlin as precipitate in the fullest sense of the word, and premature; while, and which will be of greater consequence, a large proportion of the tuberculous sufferers will be doomed to disappointment. Koch's remedy is of course in no sense, a prophylactic, but only a therapeutic agent, and we do not propose to discuss it at any length. He himself claims as yet but comparatively little for it as a cure for consumption and of the permanency of such cure; while it is only

in the early stages that much, if any, benefit can be hoped for. It is claimed by leading medical journals that if we compare the best results which Dr. Koch claims with the returns of any of our large chest hospitals and other institutions for the treatment of consumption, we shall find that a very large proportion of cases in the first stage are there relieved of all symptoms in about the same period of time; that the cases of limited excavation are improved and often remain quiescent for months and sometimes for years before the disease again becomes active, but that the cases of advanced disease fail to respond to all forms of treatment alike. Much of the success of hospital treatment depends upon hygienic remedies,—efficient nursing, regularity of life, and freedom from all sources of irritation. Dr. Koch expressly warns us that these conditions are just as essential in the successful application of his remedy. Koch repeatedly insists on the facts: 1. That he cannot kill the bacillus that is the cause of the disease. 2. That he cannot remove the bacillus without removing with it the tissues in which it grows. 3. That he can remove these tissues only when they are in suitable situations.

Furthermore, some of von Bergmann's cases are said to have already relapsed. It is also stated that in a case of lupus under the care of Dr. Levy, which was shown as an example of complete cure, the disease recurred with great intensity a fortnight after the discontinuance of the injections.

Finally, at a meeting of the Berlin Society of Public Hygiene on November 24th, Dr. Köhler summed up as to the discovery by saying that the remedy is unquestionably of considerable importance as an aid to diagnosis, but that, as regards curative efficacy, the medical profession must suspend its judgment till more definite information, both as to the details of the treatment and its results, is forthcoming. While a correspondent of a leading medical journal writes: "Nobody reading carefully Koch's own words would for a moment be wild enough to lend him the thought that he has found yet the means of curing consumption."

Of the many communications from

Berlin to the last issue of the *British Medical Journal* (Nov. 29) which we have just received, one writes: "Berlin at the present moment must be the place in all Europe where tubercle bacilli most do congregate. Hotels, lodging houses, and hospitals, public and private, are full of patients in every stage of phthisis, and suffering from every form of tuberculous affection, who have come to the German capital as to a Pool of Bethesda." Another that, "Thousands of sufferers will quickly and eagerly clamour for relief or cure; is it too much to say that thousands will be doomed to disappointment and to death?" Another, "It is now known that some cases of death have actually occurred apparently as the result of the treatment." Again, one more says: "Koch indeed seems—for the present, at least—to have withdrawn from the clinical field into his laboratory, where he remains somewhat like Achilles in his tent. He is thoroughly disgusted with the appearance of a vulgar "boom" which the whole thing has assumed, and he is particularly annoyed at having been driven by circumstances, very much against his will, to bring his results, unfinished as they are, prematurely before the scientific world. He has now firmly made up his mind to remain silent till such time as his investigations are completed." It must be remembered that he was urged against his will to read his paper at the late International Congress in Berlin.

In conclusion we would say, the leading medical journals enjoin caution. The *New York Medical Journal*, of Dec. 6, concludes an article thus: "It still remains to be seen whether Koch's treatment of tubercular disease rests on a wonderful discovery or on a delusion; but, whatever may turn out to be the case, it will undoubtedly lead to processes that will eventually develop our mastery over disease most notably." And further: "It is impossible to disregard or disbelieve Robert Koch, save after careful and prolonged investigation. So great is his name—so great his genius. We most earnestly hope that in this matter the medical profession will wait patiently and calmly for more facts."

THE SANITARY SITUATION IN TORONTO.

THE public health in Toronto is regarded as being rather bad. There have been reported 770 cases of enteric or typhoid fever with more than 80 deaths during the ten months ending with October last. It must be remembered, too, that this disease usually selects as its victims men and women in the prime of life. According to the daily papers, causes of disease prevail on every hand:—privy pits, foul lanes and yards, decomposing pavements, defective drains and plumbing, with doubtless the universal want, there as well as every where, of good ventilation of dwellings, shops, schools, &c., and, perhaps worst of all, a water supply far from being above suspicion.

The Queen city is now without a medical officer. Valuable time has been lost in the method adopted for obtaining one. Little or nothing—nothing at all special—is being done to improve the public health. Meantime the city is acquiring an unenviable reputation.

It was regarded as a wise act to ask for a special committee of the medical profession of the city to assist the authorities in the selection of a suitable medical officer; but it was thought that this committee were desired simply to confer with and advise the authorities in this selection, not to be thus constituted an examining body. It should not have been expected that any thoroughly competent, experienced, first-class medical man of proper spirit and dignity, who had worked hard to make himself master of his profession, and knowing that he had become master of it so far as present knowledge permits (for a first-class sanitarian should be first of all a first-class physician) and then too had attained the mastership of that science and art which would fit him for the position of medical and sanitary head of Toronto, would submit to the course marked out by the city authorities:—answer an advertisement among the “wanted,” apply for the (at present rather undesirable) position, and “go up,” with perhaps his University degree, and more, in his pocket, to be “passed” or “rejected,” and by—whom?

His fellow practitioners! First-class practitioners of course, but *who* constituted them examiners of their peers, and in a branch of the profession in which they probably do not lay claim to be specialists or experts? The wonder is, that a few physicians in good standing did submit to the “course,” and as rumor gives it, submit themselves to rejection.

A leading local “Daily” suggests that the city authorities begin again. This we too would respectfully advise. Make the position more attractive to a first-class physician and sanitarian: first by providing a fairly remunerative salary upon which he could subsist without penury or want; and second by some sort of assurance that he would not be obstructed but rather aided in his efforts towards sanitary progress.

A medical officer for Toronto, or for any municipality, we contend, should be decidedly of an aggressive character in relation to causes of disease, and he should receive every encouragement in removing the causes which he proposes to attack. Besides, we may add, he should be a thoroughly alive, energetic, vigilant and, above all, a practical man.

Further, we would also suggest that a commission be appointed to enquire into and endeavor to learn what special exciting cause or causes have given rise to the recent great increase in the number of cases of typhoid fever. An able commission duly considering the environments and conditions of all possible cases which have occurred within the last few months would probably be able to learn of some special cause common to all of them, which would assist greatly in the application of preventive measures.

Without some such investigation, the cause can only be conjectured or guessed at. There may be a plurality concerned in it. But the privy pits, bad as they are, are not so numerous now in the city as they have been; nor is it likely the drainage and plumbing are worse. Good wooden pavements are better than the deep mix-

tures of mud and all sorts of organic refuse of past years; and probably the lanes and yards are not worse now than they were years ago.

Moreover, the best authorities believe that atmospheric air is rarely, if ever, a direct vehicle of the typhoid infection. True, the infection when in the atmosphere of the dwelling may settle on the food or drink and so reach the digestive canal. The disease is not directly infectious from a diseased person to a well one. The typhoid bacillus, like that of cholera (but unlike that of tuberculosis,) must, it appears, after leaving the body of one suffering from the disease, pass through another phase of its existence, outside the body, before it can infect another. This phase may be passed in a short space of time, however, and any uncleanness about the bed or clothing may furnish a suitable soil for it, as has been proved.

Water, on the other hand, is pretty generally known to be the great distributing vehicle of the typhoid bacillus, or infection, as it is of cholera; milk coming next as a disseminator.

The water in Toronto is, we believe, the chief cause of the greater prevalence of this disease there. Much well water, which there cannot be pure, is still used; while that from the lake has many chances to receive a small addition of the typhoid-poisoned element. Water is susceptible to sudden change. What to-day may prove by analysis to be pure, may contain the typhoid poison to-morrow. This glass of it may be safe, and the next drawn from the tap may be deadly. The tendency of all waters, with the present methods of sewage disposal, is to become worse and worse year by year. In Toronto bay this is especially the case. Typhoid bacilli or their tenacious spores must be ever lurking there in abundance, and probably multiplying as in a culture fluid. A very small leaking into the public water supply pipe, of the foul water of this basin, might prove enough to poison almost the entire population of the city.

It is a marvel that with all its striking improvements and progress, Toronto has

not long ago built an intercepting trunk sewer to remove the enormous foulness of its once beautiful bay. Until this is built the public health there must suffer, and heavily. Whatever the cost, with debentures throwing it onward for future generations to help to pay, the burden would be very light compared with the weight of that now borne from the sickness and deaths to which the want of it gives rise.

Then the garbage disposal: there is difficulty here. A crematory has been talked about. So far all crematories have proved unsatisfactory for large quantities of mixed garbage. Would it not be possible to make arrangements with agriculturalists in the township of York to have all the organic refuse of the city used as manure, especially if there were a good system for disinfecting all suspected or dangerous parts of it?

It need hardly be said that, with an intercepting sewer and a purified water front, a perfect system of refuse disposal, the closure of all wells in the more thickly populated parts of the city, and after certain improvements in the water supply system, with an active, vigilant medical head, and a good system of inspection with qualified inspectors, the public health of the city would be so greatly improved as to "pay" handsomely for the outlay thereby incurred. No investment pays better than that for sanitary improvements.

Regarding the Sanitary organization: The board or executive should be removed as far as possible from "Ward" influences and should have greater powers in controlling or enforcing the expenditure of money for health purposes. A number of interested citizens, including physicians, not members of the council, should be on the board. A standing consulting committee of the Medical Society or Medical Profession of the city for occasionally consulting with the board, as we have years ago suggested, would sometimes prove of great advantage. This committee or some other organized body should examine all applicants for the position of sanitary inspector, and none but competent men possessed of special knowledge and fitness should be employed in this capacity.

In conclusion : we see no reason why the local health board, (as well as the local boards of all other municipalities) should not be somewhat of an *educational* body as well as a coercive organization. The masses of the people yet require a great deal of educating in order that they may see the value of sanitary improvements and of voting money therefor. The frequent and free distribution of sheets and pamphlets containing a copy of the chief points in the health regulations and other instructive matter, showing the necessity for attending to health laws and comply-

ing with the sanitary regulations, would cost but very little and yet would do a vast amount of good. The public as a rule will not vote money for health purposes, nor buy extra fuel even for ventilating their houses in winter, unless they can see clearly that it is likely to prove of direct advantage to them. Much more might be done than has heretofore been done by local boards in instructing the people in this way, and so getting their sanction for spending money more liberally with the object of preventing disease.

MISCELLANEOUS NOTES AND EXTRACTS.

SPLENDID RESULTS OF THE SANITARY SYSTEM IN ITALY.

About two years ago there was organized in Italy the most complete sanitary system probably in the world, to which attention has been drawn on several occasions in this JOURNAL. In 1888 there were recorded there, it appears from a statement recently published, a total of 442,122 cases of the seven principal diseases—small-pox, measles, scarlet fever, diphtheria, typhoid fever, typhus fever and puerperal fever ; while in 1889 from the same diseases there were only 290,107 cases, or nearly 150,000 less than in 1888. This means, with the usual or average mortality from these diseases, a saving of about 12,000 lives, besides the enormous amount of sickness indicated ; a pretty good showing for the first year. The following is a tabulated statement of the number of cases of each of the two years :

	1888.	1889.
Small-pox	63,632 cases.	39,004 cases
Measles	220,953 "	130,961 "
Scarlet Fever	44,419 "	30,192 "
Diphtheria	41,742 "	28,399 "
Typhoid Fever	59,526 "	54,865 "
Typhus Fever	2,831 "	2,206 "
Puerperal Fever	9,019 "	7,480 "
Total	442,122	293,107

REST, ESPECIALLY FOR MOTHERS.

Many times we have drawn attention to the subject of rest, and to the necessity of

it in this ever active age. Rest—entire freedom from everything that worries or disturbs, is an essential of health and life. Thousands of mothers, of ever busy, cooking, knitting, mending mothers, suffer incalculably and die every year from want of rest. As an exchange aptly puts it: Good mother, overseer of a province, rest a little. Have a chair by the stove, and when you peep into the oven; sit while you look, yea even a moment after. You will work all the faster for the change of posture. While mending, have your chair in the coziest corner, where good light will come in, if possible, over your left shoulder. Drop your hands occasionally and let your eyes rest, by looking at something interesting out of doors ; thus many a holy thought will enter the chamber of your mind and abide with you. Don't rule all the time. Drop the reins of government for only a little while and be a child with your children. Rest and gather restful things about you. Every working woman should have a cot and an easy chair in her working room ; if this is every room in the house, then every room should have these resting appurtenances. We have personally urged upon hundreds of mothers their great need of rest, more than anything else, to take every possible opportunity to sit or lie down for a few moments even. Rest more than "good mothers" and leave not your little ones motherless.

THOUGHTS AND OBSERVATIONS AT SO
CALLED "HEALTH RESORTS."

The following apt remarks are by Joseph William Stickler, M. D., of Hot Springs, N. C. : Many invalids may be found on mountain-tops and in the valleys who ought to go home and remain there. The great majority of invalids who are now in their own homes should stay there. Money can not buy or friends provide home comforts in hotels or boarding-houses. Big fees or little do not prevent "drummers" coming and going at various and unseasonable hours, and slamming doors, all of which is not conducive of sleep or helpful to persons who go from home to secure undisturbed slumber. Patients who can not sit upon the piazza at home without risk after sundown may sometimes be seen knee-deep in a trout-stream, or perched upon a log or cold rock looking for deer, immediately after reaching the "health resort." This is not the best and quickest road to health. Dancing in a hot and crowded parlor or ball-room till 11 or 12 o'clock in the evening, with an occasional walk or flirtation on the piazza for the sake of getting "cooled off," does not appear to be a satisfactory method of treatment for phthisical patients, or persons whose throat and lungs are weak. The man or woman who goes to the mountains for fresh air as a remedial agent and sits all day in a hotel may as well go home on the first "limited express," unless the individual is satisfied with minimum benefit. The invalid who stays at a health resort just long enough to get rid of troublesome symptoms, and then goes back to business or home duties and responsibilities, very often goes home to die.

Damp sheets and a strong draught do not, as a rule, tend to re-establish a normal condition of body and promote health.

People who occupy rooms over foul-smelling water-closets and on the side of the hotel where the sun never shines do not seem to get well so quickly as those who live on the sunny side and away from cesspool infection. Residence in a fine hotel in a malarial district does not cure malarial disease.

This JOURNAL would advise invalids, as a rule, to stay at home or go to a first class reliable sanitarium, such as that at Battle Creek, Mich., or Danville, N. Y., advertised in this JOURNAL.

PREMATURE BURIAL.

Of all deaths one can conceive of probably, not one excites such horror as that from having been buried a live in a coffin. It can hardly be doubted that there have been such deaths, although it is the opinions of many, of most physicians especially, that such very rarely indeed if ever have occurred. The New York Medical Times quotes the following from the "Times and Register": The Rev. John A. Mulcahy, of Waterbury, Conn., who is travelling abroad, in a recent letter home, says of the people of Munich, that they have a great fear of being buried alive, and for that reason, when a person dies the body is placed in a receiving vault, where it is kept for four days, and, under the method now used, a sponge is placed in one of the dead persons hands, which is connected by a copper wire with a battery and alarm signal; the hand is fastened tightly around the sponge, and at the least sign of returning animation the alarm is sounded, and the sentries, some of whom are always on duty, respond at once. In the last fifty years there have been thirty-four persons resuscitated by means of precautions of this kind. This is an appalling statement, says the Medical Times, and quite opposed to the reports of similar observations elsewhere. We remember reading about a chamber attached to a Leipsic cemetery, in which bodies were similarly laid out for several days before burial, being so connected as to ring a bell on the slightest movement. But it was added that the signal had not once been given during a period of a hundred years. It would seem that either this story or Mr. Mulcahy's must be untrue, and we fervently hope it is the latter. In view of the terrible nature of such a death, it would be comparatively a small matter to make some such provision as above described in connection with all burial places.

ON THE CAUSES AND PREVENTION OF TUBERCULAR CONSUMPTION IN MANKIND AND THE DOMESTIC ANIMALS.—*Concluded.*

ON THE POSSIBILITY OF CURING THE DISEASE AND THE PERIOD OF ITS INCUBATION.

The period of incubation—the time which elapses between the reception of the contagion into the body and the first manifestation of symptoms of tuberculosis—has not been well defined. Tubercles have been found in the lungs of animals in from ten to twenty days after inoculation. The interval or period is usually regarded as from a week or two to some months.

While a cure of this disease even in the form of pulmonary consumption, in the early stage, in the case of the human organism has not been an uncommon occurrence, tuberculosis in the domestic animals always, it is said, terminates fatally. How far Koch's recently discovered remedy will improve the prospects of a cure of the disease in mankind or the lower animals time alone can tell. Notwithstanding all the excitement and hope to which this new discovery has given rise, medical journals claim that in the large well equipped hospitals and such special institutions for the cure of consumption, a very large proportion of the cases in the early stage (in which stage alone Dr. Koch claims that his remedy will cure) are relieved of all the symptoms in about the same length of time that is claimed for Koch's remedy—in from four to six weeks. Most of the success of the treatment in these institutions is universally admitted to depend upon what are commonly called hygienic remedies—abundance of pure fresh air, suitable food, freedom from all sources of irritation, and good nursing. Moreover, Dr. Koch is careful to expressly warn us that in the application of his remedy these conditions are just as essential.

While then we have reason to hope that in the future consumption may be more frequently cured than in the past, PREVENTION should ever be the great chief aim of all. Koch even now admits that if this disease is to be eradicated, individuals and governments must do more than ever to have the general rules and regulations pertaining to health which have been discovered and made known by sanitarians, well attended to,—practically applied and enforced.

Prevention, therefore, both in the case of man and the domestic animals, offers vastly better and more profitable results than all efforts at cure, at the best. It is simpler and more practical, and is consequently of the FIRST importance.

EARLY SYMPTOMS OF THE DISEASE.

IN THE HUMAN BODY, even as in the lower animals, the earliest symptoms of tuberculosis may be and sometimes are overlooked. Indeed, the early inroads of the bacillus may not for some time in some individuals give rise to any appreciable symptoms. In some cases of consumption, for example, considerable progress may have been made by the parasite in the lungs before cough is noticeable. It is probable, however, that in all cases there may have been noticed by a close observer, at least a want of good vigorous health, with lassitude, weakness and less disposition to exertion, and probably some failure of the appetite and loss of bodily weight. Such symptoms manifested in any one at all hereditarily predisposed to the disease should receive the most prompt, skilful and careful attention. The disease once at all suspected even, I would observe here, not a day should be lost in applying remedies : which must even now as we have seen be chiefly of a hygienic or preventive character.

The symptoms which soon commonly follow these earliest indications of failing health in cases of pulmonary consumption, or when the bacilli have once taken root and multiplied to any considerable extent, are familiar to all, and no practical end would be served by even naming them here.

IN cows, when the disease commences locally and remains for weeks or months very slowly progressing, as it most commonly does, no symptoms at all may be manifested to a casual observer, in fact it is quite possible the animal may appear to be in a singularly fine condition, and also give abundance of milk, for some months.

According to Fleming, the first perceptible signs are general dullness and indifference, and less activity and energy; with heightened sensibility of the skin, especially over the withers, back and loins, manifested by marked shrinking of the animal if these parts be pinched. There is exaggerated sexual desire. They rarely breed, however, though they may now fatten or yield as much milk as if quite well. The milk soon becomes more watery, of a bluish tint, and less rich in nitrogenous matters, fat and sugar, but containing a larger proportion of alkaline salts. There is a dry, deep, though feeble cough, especially on exertion of the animal or on sudden change of temperature of the atmosphere, or on compression of the wind-pipe. There is not generally expectoration or nasal discharge, though at a later period exertion causes a flow of glairy mucus streaked with thick flakes. The walls of the chest become more sensitive on percussion, or thumping, and there is a duller sound. By placing the ear on the chest one may often hear, instead of the smooth respiratory murmur of air passing in and out the lungs, as in health, a harsh, rasping or loud blowing sound, especially in some parts of the chest. The heart's action is at times quicker and stronger; the skin, particularly toward the base of the horns and ears, is hot and dry; intermittent bleeding from the nose may take place; lameness too, and enlargement of the glands about the neck and elsewhere. These symptoms may continue, with little change, for months.

Ultimately, however, in all cases, if the malady has the opportunity of developing further (*i.e.*, where the animal has not been killed in a well-nourished condition at the commencement of the disease), the emaciation becomes very marked, the milk previously abundant, though poor in quality, becomes still poorer, and also diminished in quantity. All the symptoms become intensified, and what is called the second stage of the disease is reached, and finally the third stage. "There is evident emaciation, and the animals are heavy, apathetic, and sluggish in their movements; while the countenance is without animation and dull, and the eyes are retracted in their orbits. The skin is harsh and dry, and adheres closely to the ribs, and the hair covering it is lustreless and staring and frequently damp. Exertion produces abundant perspiration and labored respiration, and so much lassitude and distress that the animal seeks to relieve itself by carrying the head close toward the ground." The appetite is poor and digestion weak, with diarrhoea, perhaps alternated with constipation. The cough becomes worse, and the breathing more frequent and difficult, and great emaciation and finally death follow.

PREVENTION OF TUBERCULOSIS.

This is the ultimate aim of this pamphlet,—the *prevention* of tuberculosis, more especially of that most common form of it termed consumption.

I feel that I can hardly say too much on this point—that prevention is still of by far the first importance. I would ever strongly urge this, and endeavor to impress it strongly upon the reader. While physicians are seeking out cures, as well as prophylactics, let all others give their thoughts only to the prevention of the disease.

The principles of the methods of preventing the development and spread of consumption may be inferred from what has been already written herein of its causes. The aim must be to remove or destroy the causes:—to destroy the bacilli, the infective agent, by disinfection, with the one hand, while with the other, as some of the bacilli or their spores will long continue to escape the destruction of the best methods of disinfection, we must as far as possible fortify and invigorate the body of all susceptible creatures among the lower animals as well as mankind, that thereby they shall not furnish a suitable soil for the bacilli—that they shall not be predisposed to the tubercular infection—but be able to repel any of these organisms that may in any way obtain access to the body.

By thus invigorating the body we fortify it not only against the inroads of tuber-

colosis, but against attacks of other diseases, both infectious and non-infectious. Domestic animals, fortified with proper hygienic management, are less liable to become the victims of pleuro-pneumonia, for example, or of foot and mouth disease.

FIRST OF ALL, an ABUNDANT supply of PURE air must be provided, without which no one of the more highly organized animals can be healthy and vigorous. With this view, the soil upon which mankind and the domestic animals live must be clean and dry;—well drained, and all waste, decomposing substances,—manures, house refuse, &c., thoroughly mingled with it and in proper proportions, and not left in masses to ferment and decay on the surface.

THE BACK YARD, as well as the front yard, of all dwellings should be kept perfectly free from all refuse, slops and the like, and if it give growth to a good crop of grass, shrubs and flowers, so much the better.

UNDER GROUND CELLARS, under dwellings, as commonly constructed, should be entirely abolished, even prohibited by law. All cellars should be kept as scrupulously clean, dry, well lighted and ventilated as any other apartment.

THE VENTILATION of all rooms or apartments, especially bed rooms, must be provided for by some special means, if the occupants are to retain even fair health and vigor. The most practical, simple, and a tolerably effectual, way to ventilate an ordinary room during cold weather is to provide an opening, in size about 3 or 4 by 6 or 7 inches, between the room and a warmed chimney or stove pipe flue. This effects but little the draft or fire, and will draw off continually the breathed, foul air from the room. The opening should be provided with a sliding door, and the colder the weather and the hotter the fire, the smaller may be the opening. Enough cold fresh air will usually come in through cracks and crevices about windows and doors, but if not, from the walls being very tight, a window should be slightly opened, as by sliding up the lower sash an inch or two and closing the opening below by a well fitting strip of wood, when the fresh air will enter between the sashes and be directed toward the ceiling, preventing drafts. In warm weather, windows and doors should be kept freely open.

FLUSHING living rooms, nurseries, school rooms, &c., at least once a day is an excellent practice. When the room is warm, even in very cold weather, some make a practice of opening all doors and windows for a few minutes once or twice a day. If a wind be blowing, one minute may be long enough to have all the air forced out by a flow of fresh pure air coming in. The occupants should withdraw from the room for the time, or move about in it and not sit in the drafts. When the walls and furniture are all warm, the incoming air becomes warm almost at once when the room is again closed, and no inconvenience is felt. Schools may be flushed at noon time and after four, and nurseries when the children are out of the room, as at their meals or play.

This constant changing of the air—warm breathed air for fresh cold air—incur some extra outlay for fuel, for warming the cold air; but it must be remembered, pure air is the first essential of life. And it is vastly better to pay a little extra for fuel than to pay the costs of sickness. Householders should always count on this as on any other necessary of life, allow for it in the estimates indeed and make it the first item—a little extra fuel for ventilation—for change of air.

THE WATER AND MILK supply must be closely looked after. See that the spring, well, or other water supply is absolutely safe from any sort of contamination—that the washings from filth of any kind cannot possibly get into it. Examine the supply from time to time. See that the milk supply is pure and that the cows from which it is taken are free from any trace of disease.

PROPERLY NOURISHED PEOPLE or animals but rarely contract disease of any kind. Hence the food should be not only abundantly nutritious, but plain, pure,

and of easy digestion. Rich compound dishes, however nourishing, cause too great a tax on the digestive powers in the efforts to extract the nourishment from them. Plenty of good bread (not fresh), milk and fruits for children, and for older persons, some flesh meat too if desired, and "vegetables." A strong protest must be entered against the common practice of frying meats and other foods, and also against all forms of new bread, and the frequent indulgence in pastry—pies and the like, and all highly seasoned dishes.

TEA, COFFEE AND ALCOHOLIC beverages, I need hardly say, must be indulged in only in the strictest moderation.

OUT DOOR AIR AND SUNLIGHT are the great invigorators of life, and should be supplied in abundance. A large proportion of men and even boys get these, perhaps freely enough, but the women, the young girls and little children, often suffer—fail at first perhaps imperceptibly, in vigor, and acquire disease from sheer want of the invigorating influence of sunshine and out of door air. Husbands and parents should bear this well in mind:—See that the wives, mothers and children get more OUT-DOOR exercise.

THE SKIN must be kept in good condition by the bath and friction. I have known men who would have their horses and even their bovines curried and well groomed who would sadly neglect their own skin. Personal cleanliness, remember, is, too, a part of godliness, as well as an essential of health and vigor.

THE CLOTHING must be sufficient to prevent chilliness or a feeling of coldness, but on the other hand not such as to create the least sensible perspiration. What out, as a rule, rather keep warm by exercise. Keep heavy overcoats, mufflers, and such for only the coldest weather, or for driving in.

SLEEP in abundance is indispensable to vigorous health. Young, growing people often do not get enough sleep and rest.

IN COWS and other bovines, the great, the chief predisposing cause of tuberculosis is doubtless a want in each case of a vigorous, hardy constitution. This want of vigor is mainly caused by too much and too careful "housing up" from the fresh pure air and sunlight. Cow-byres which are sometimes ventilated tolerably, are not light enough. All stables should be WELL LIGHTED as well as freely ventilated. Cows as well as human beings need to be out a great deal, stirring about in the fresh air and sunshine instead of being tied in stalls.

Another great cause of want of robustness in cows, as I have mentioned, is that of breeding with the view of early maturity for beef and for giving an abundant supply of milk, instead of breeding, too, at the same time, in a measure, for a full respiratory capacity and for full vigorous health.

IN BREEDING FOR ROBUSTNESS it may be now possible to produce a vigorous race of cows without materially lessening the development of early maturity and the yield of milk, but if it be not possible, it will be vastly more profitable in the long run to have less beef and milk, to have these only at a higher price, than to have it so diseased as it threatens to be. But if tuberculosis is to be successfully combated, even with the aid of Kock's remedy, cows will have to be bred more with the view of building up a hardy race which will resist the inroads of the bacillus tuberculosis. The inroads of other infectious and epidemic diseases will then be likewise resisted.

Having produced in both mankind and the domestic animals, healthy, robust constitutions, far more than half the battle has been won. As Prof. McFadyean (of the Royal Vet. Col. Edin'g.) has recently said: "A subject, whether a man or one of the lower species, of a tuberculosis character, is to be regarded as a sort of hot-house for the propagation of the tubercle bacillus." Outside of the warm temperature of an animal body it is probable the bacilli never develop and multiply, but,—and this mainly or wholly by means of their spores, simply conserve their vitality

and ability to develop in suitable soil. Destroy the soil or prevent the formation of it, and it will be easy to conquer the infective bacilli.

DESTRUCTION OF THE BACILLI on every hand and in every possible practical way, while yet given attention to the other hygienic measures above noted for invigorating the bodies of all receptive beings, must be constantly practiced.

The sputa or spittle of all consumptives or of those suspected of having the disease, should be invariably received into vessels containing a solution of corrosive sublimate,—one part of the salt to 1,000 of water, or other strong disinfectant, or into bits of rag which should be at once carefully and effectually burned. The bowel discharges too should be treated in like manner.

Such persons or patients should be isolated as much as possible :—they should sleep alone and the room or rooms they occupy should be very simply furnished, without carpet and with as few hangings, curtains, rugs and upholstered furniture as possible, and all the articles should be exposed, and freely and frequently, to air and sunlight : while the floors, walls and ceilings of the rooms should be well cleaned once a week. The clothing of all such should be washed separately, and well scalded with boiling water. Their eating utensils should be washed alone and be well scalded directly after use.

After the death of a patient from consumption the most thorough disinfection possible of the room or rooms occupied by the same is essential to safety. All cracks in floors and walls should be well cleaned and exposed to strong sulphur fumes or hot corrosive sublimate solution, or both.

Mothers suspected of having consumption should not nurse their offspring. All household "pets" of the lower animal type should be kept away from exposure to the disease ; and when any of these show symptoms of it or are at all suspected, they should be at once destroyed.

In the case of domestic animals the management must be somewhat as above indicated ; but we can go much further with these. They should be frequently and carefully inspected, as to their health. Dairy cattle, and hens supplying eggs, more especially need looking after. All tuberculous ones should be destroyed at once and the carcasses burned or buried deeply. Suspected animals, if not immediately slaughtered, should be most carefully isolated until their condition is better known. All but the most healthy and robust should be excluded from breeding. Stables or sheds in which any such diseased animals have been kept, or have occupied, must be most thoroughly cleansed and disinfected, or better, when possible, as when they are small or not costly, destroyed entirely. Partitions between stalls, floors, mangers, &c., may often be removed and burned, as these are usually more difficult of thorough disinfection than the rooms of houses.

A general and thorough system of careful and critical supervision and inspection, under municipal control, but non-political, should be organized to see that all flesh meat offered for sale is sound and entirely free from suspicion, and that all dairy cows which supply milk, butter and cheese, are in perfect health.

It is a wise precaution, adopted by some families, to boil all milk before it is consumed, and to *thoroughly* cook the meat.

Boiling or roasting in the ordinary way is not sufficient to destroy the germs in the centre of a large piece of meat, and the bacilli will not be destroyed unless the heat is sufficient to change the color of the juices. A temperature of 185° F is sufficient to destroy the virulence of tuberculous milk, and this temperature will not change its taste, as in the case of boiling it.

With careful and thorough attention to all the above preventive measures, universally practised, tuberculosis in all its forms would soon become a disease of the past, and hundreds of thousands of lives would thereby be saved.

EDITORIAL NOTES.

THE INSTRUCTION OF THE PUBLIC in the ways of preventing disease and the preservation of health is, we still and ever maintain, the great chief sanitary want of the age. For over sixteen years we have devoted most of our time to this work of instruction and to urging its supreme importance upon the intelligent minority and upon those in authority over us. Gradually yet slowly—often most discouragingly slow—light has been let in and a few are seeing the value of all sanitary work, and especially of liberal public instruction in its behalf. We are much gratified that many of our contemporaries, leading daily and weekly local papers, are now showing a marked tendency to aid in the spread of this “New Gospel,” as it has been termed, although it is as old at least as the most ancient of history.

NEW SUGGESTIONS and wise, in the way of sanitary instruction, are now being made by a number of the medical officers of local health boards, as we have noted elsewhere in this number. These physicians suggest that their respective municipalities have health sheets or leaflets printed and freely distributed amongst the people. This way of arousing the apathetic rate-payers would be a most excellent one, and the small cost would be amply repaid, doubtless many fold. In many municipalities, however, the cost would come up as an obstacle—an obstacle insurmountable doubtless in many, probably in the majority of cases, with the, as yet, dim light on the question and the very general want of this very instruction. This, probably, might not be the case in these more advanced municipalities where the suggestions have been made, but it would be we fear in the great majority of them throughout the Dominion.

A BETTER WAY, on the whole, probably, for the entire public, would be for the Federal Government to make provision for the free distribution in every municipality of practical instruction in all sanitary subjects. This would be much less costly, too, on the whole, than for each locality to do it for their special community. Besides, all municipalities need it, and, it must be observed, those *need it most* which would be least disposed to incur the cost of it. Moreover, the township of Euphrasia might carry out the wise suggestion of Dr. Sproule, M.P., the

medical officer of the township board, and have health leaflets or pamphlets distributed there with great benefit to the people of Euphrasia, but the fact must not be overlooked that from the adjoining township, if the people were not instructed in like manner, infections of disease, through the want of this same instruction, might at any time be conveyed to their neighbours in Euphrasia, just in the manner of the case reported by Dr. McLellan, noted on another page: wherein the infection causing a number of fatal cases of diphtheria was conveyed directly, presumably from ignorance, by children living “twenty miles away.” So ALL must endeavour to work in harmony for each others and the general good. Whether we will or not, or whether disposed to or not, we must of necessity—for our own self-preservation—be in a measure our neighbour’s keeper.

THE SUGGESTIONS of these medical officers, as above noted, for the sanitary instruction of the people, affords evidence of the desirability of having carried out at least one of the suggestions in our last issue relative to the work for a Federal Sub-department of Health—that of the free distribution of a Health Bulletin, monthly or oftener. Such Bulletin, giving the mortuary statistics of the various localities, together with the localities in which epidemics were prevailing as well as specially instructive matter on disease prevention, would act as a powerful educator and also a powerful stimulant to municipalities to crush out, keep down and prevent all forms of epidemics.

PUBLIC BATHS such as are now in successful operation in the city of Vienna are proposed for New York. The object of the plan is to supply baths which can be kept clean and free from contagion. The great objections to the use of public baths such as are usually constructed is the want of frequent or constant change of water and the possibility of infection. In Vienna, in order to obviate this, shower baths only are used, the water being allowed to flow off into the sewer as fast as it is used. Hence the immense tanks are not required and the baths may be more easily constructed in central parts of cities.

OTTAWA is proposing to provide public baths. Here is a suggestion. In New York it is calculated that a building on an ordinary city lot

may be so arranged as to accommodate a thousand bathers daily. Each bath will be in a separate compartment, with towel and soap for each. The baths may be divided into two classes—those absolutely free, and those for which a charge of five cents is made for some little additional attendance. The city authorities will be asked to furnish the water free of cost in one or more experimental bath-houses that will soon be established in a populous region of the city.

A "FORECAST IN REGARD TO CHOLERA" is given in the last issue of the New York Medical Journal (Dec. 6). Dr J. H. Rauch is reported as having said, at the recent annual meeting of the Illinois State Board of Health, of which he is the ever active able secretary, that a conference with the health officials of Great Britain and Germany had given him the impression that they agreed in thinking that there was great danger of the spread of cholera next year; and as having added that, after a careful review of the situation, he felt that this country also was in great danger of its introduction, though by extreme vigilance at the maritime ports this might be prevented. Some weeks ago we suggested that it was not then too soon to make preparations for it next summer—at least to think out plans and get money voted for the expenses of cleaning up and providing the indispensable preventives—pure air, water and food.

IT IS NOT EASY to get pure water now even in this new country. A Peterborough paper referring to ice, says: "It has been assumed that because a certain amount of sewage is drained into Little Lake, that the ice must be unhealthy, but as a matter of fact there has been no indication of wide spread disease or even of a single case from this cause." Now this is just.

WHERE A VAST DEAL of trouble comes in and how disease is spread. Sewage, which every body knows is poison, is turned into some "Little Lake" and so it is allowed to go on until disease and death come to vindicate the laws of health and of the Almighty:—"The soul that sinneth it shall die." And it may be not until some "high in authority" are so punished that the sewage will be cut off from mingling with the water supply in the "Little Lake," or it may be a river.

AS DR. COVENTRY of Windsor said at the last meeting of the Society of Health Officers held at Owen Sound, even the Queen city of Ontario, Toronto, by continuing to pour its

sewage into the adjoining bay "will come to rival Montreal in its high mortality." Hamilton, he said, "is a little better off and Ottawa still more fortunate, although the people on the river below it may be drinking its sewage." So the unrighteousness goes on.

... "The World from its perfection fell
Into all filth and foul iniquity."

SELF SUSTAINING SANITATION (a very suggestive, pleasing expression this should be to tax payers, especially to those who vote so begrudgingly or not at all in favor of sanitary expenditure) Dr. Coventry says, we may here note *en passant*, lies in sewage-farming. This has been proved and it is to be hoped the method of sewage disposal thus indicated may soon become general in Canada. It was a good suggestion of Dr. Coventry's to have a special committee of the Health Officers Association appointed to consider this subject.

IN VIEW of the fact that not less probably than twelve thousand human beings die every year in Canada from consumption, the public should appreciate the generosity of Mr. Mulock, M.P. for N. York, in defraying the expenses of Prof. Ramsay Wright of Toronto University for a trip to Berlin with the hope that he may obtain such knowledge of the Koch remedy as shall aid in reducing this fearful mortality. Prof. Wright, though not a physician, which is to be regretted, stands very high as a biologist, and we trust his trip will not be in any way disappointing, not alone on account of the public health, but because we should feel very sorry if such a well meant and liberal gift should not prove most fruitful of good. The University graduates are proud of Vice-Chancellor Mullock, who by the way is a thoroughly staunch University man, as well as a thoroughly staunch Canadian, and we are sure all the medical graduates will wish for the best results of the trip largely on his account.

MR. F. C. IRELAND, of Toronto, of the Ireland National Food Co., writes that he does not agree with Dr. Drysdale's view, as given in our last issue, "That the human race from the most remote ages used flesh food." Mr. Ireland thinks there is no authority for believing that flesh was eaten by man until after the flood.

FROM WOODSTOCK (the Board of Health of which we note receives a goodly number of copies of this JOURNAL) a recent report states that one hundred and fifty privy vaults inside the dry earth limit have been cleaned out and filled up. About 600 dry earth closets are now in use. The water in 250 wells has been tested and in many cases found unfit for use. Two informations have been laid before the

P.M. for the infraction of the health act, a conviction being obtained in one case. Special attention has been paid to the quality of milk during the year, which was found to be of a higher grade than usual, none coming below government minimum. The Board has recommended the enlargement of the sewage system. Why can not every municipality in the Dominion show such good work? Chiefly, we reply, because of want of intelligent interest among the people, want of instruction as to the value and methods of such progress.

A MAN died suddenly in Streetsville, Ont., recently and a post mortem examination showed that the immediate cause of death was the rupture of a blood vessel at the base of the brain, induced by a severe fit of coughing. Some individuals make dangerous efforts to remove irritation in the throat by persistent coughing when an effort should rather be made to suppress the cough and the irritation would usually soon disappear.

THIS JOURNAL is cordially with the Young Women's branch of the W. C. T. U. in their effort to suppress the use of tobacco; a dirty, vile, idle, and most unprofitable habit, and a great nuisance to a large proportion of the community who prefer not to soil themselves with the noxious weed.

THE MENTHOL PLASTERS recently prepared and introduced by Messrs. Davis and Lawrence of Montreal is highly spoken of. The Lancet says: "It is a good preparation. The specimen submitted for our inspection has an agreeable odor of peppermint and indicates its nature." Two cases are mentioned where it was used on the breast, and the action was quicker and more agreeable than the belladonna plaster used before. It is sold in rolls, 7 in. wide, at \$1 per yard.

NOTES ON NEW BOOKS AND CURRENT LITERATURE.

ACCIDENTS AND EMERGENCIES, is a manual of the treatment of injuries in the absence of a physician; by Chas. W. Dulles, M.D. &c., &c. (Philadelphia: P. Blakiston, Son & Co.) The third edition of this excellent little volume has now been issued, which proves that it has been appreciated. Whoever has seen how invaluable in the presence of accidents is the man or woman who with a cool head and steady hand has some knowledge of what is best to be done will not fail to put a just value on the possession of these qualifications; and to possess them one must acquire them before an emergency arises. This little book should be in every household and be studied.

COME FORTH, is a novel by Elizabeth Stuart Phelps and Herbert D. Ward (Boston: Houghton, Mifflin & Co.). It is a highly interesting story of the first century. The plot turns on a supposed romantic intrigue between Lazarus (who according to Gospel history was raised from the dead), a handsome, skilled, thriving master-builder and architect of Bethany and Jerusalem, and Zahara, the splendidly beautiful daughter of the princely Annas, the High Priest, who had employed Lazarus to have some architectural repairs made in the structure of the palace. Some will not quite like the manner in which Jesus, the friend and teacher of Lazarus, is brought in to the rescue of the amorous pair; although it is not suggested that as a man he knew of their clandestine, and to Lazarus, dangerous meetings, and it is not meant to be irrelevant. Domestic Jewish life is well pictured: The bustling well-to-do widow, Martha, affords some humour, and the gentle lovable Mary creates much interest. The love manifested by the two principal characters is—well, simply magnificent, almost tremendous, in its ardour, and could hardly end in but one way. Zahara had been taught to despise the Nazarene Prophet, but secretly visiting the tomb of Lazarus just as Jesus is about to raise him from the dead, she falls "Weeping at His feet,—weeping now, like any woman, the ice of anguish thawed." The scene of opening the tomb and the command to Lazarus, "Come forth," is well depicted.

SLIPS OF TONGUE AND PEN, by J. H. Long, M. A. (Prin. Col. Institute, &c.), Peterborough, is a very useful little book. (New York: D. Appleton & Co.) We find first, a long list of words that are erroneously used; for example, "Do not say, 'the truth of that is apparent.' [Use obvious or evident. Apparent or seeming is opposed to real; obvious or evident, to obscure]" Then follow several pages on grammatical points, and others under the following heads: general suggestions upon composition; words often confused, synonyms, opposites; words to prefer; objectionable words and phrases; and notes on punctuation. There are few writers or speakers who would not be benefitted by a little study of this book.

WEBSTER'S INTERNATIONAL DICTIONARY, just issued by G. & C. Merriam & Co., Springfield Mass., is before us. This is a Multum in Parvo on a prodigious scale. It is "A new book from cover to cover." We had observed many highly favorable expressions of opinion of this book by eminent scholars and educators and

were expecting a good deal. We have pleasure in stating that we have not only not been disappointed but the vast work far exceeds our expectations. Any one about to purchase a first class dictionary should by all means first see this or send to the publisher for specimen pages, descriptive circular, &c. In every respect it is a very great improvement on Webster's Unabridged, formerly issued by the same publishers. We have not space to write nearly all we should like to in praise of this vast structure of over two thousand pages, handsomely bound.

THE Memoirs of Talleyrand, the first installment of which is to appear in the January Century, will contain a sketch of the author's strange and lonely childhood, an account of his entry into Parisian society, his estimate of LaFayette, some account of the beginnings of the French Revolution, a striking passage concerning the Duke of Orleans, an account of Talleyrand's residence in England and America, and of a most interesting conversation between Talleyrand and Hamilton on the subject of Free Trade and Protection.

THE "Storage of Electricity," which is just now being considerably discussed in this country, will be explained in a fully illustrated article by Prof. Samuel Sheldon, of the Brooklyn Polytechnic Institute, in the January Popular Science Monthly.

THE DECEMBER ST. NICHOLAS has for a frontispiece Rembrandt's wonderful portrait of himself, referred to in Mrs. Dodge's account of Holland and its strange features. There are to be two of these papers, and it is the first which here appears under the name "The Land of Pluck," fully illustrated. New and old readers of "Hans Brinker" will welcome these sketches. Another important contribution is "The Story of the Golden Fleece," retold for American boys and girls by Andrew Lang, with illustrations—the introduction only. The number is an excellent one.

THE YOUTH'S COMPANION presents its two and a half million readers with a Double Christmas Number. Picture, story, poem and anecdote are all appropriate to the season. To be always good and on special occasions to be ever so much better, seems to be a characteristic of The Youth's Companion.

THE Physicians' Visiting List for 1891, published by P. Blakiston, Son & Co., of Philadelphia, now in its fortieth year of publication, is an elegant little volume. The leading medical journals are almost unanimous in recommending this as the very best Visiting List published. It is simple in arrangement, compact and complete.

THE ILLUSTRATED LONDON NEWS, Christmas number (American edition, World Building, New York), but just received as the JOURNAL, is about going to press, is a superb number. "Perfectly charming," "Just splendid," the ladies say of it. The illustrations are numerous, in great variety and very fine, some beautifully colored: with a large amount of the lighter Christmas reading matter, including a long Christmas story, "Only a Shadow."

FATHER CHRISTMAS, the Children's number of the Illustrated London News, is truly a charming number, for either young or old; with beautiful illustrations and pretty rhymes on every page. This is equal to the Illustrated News in size. With it is given a large four-page, handsomely colored picture, "Happy Days," worth the price of the number, 50c.

THE METHODIST MAGAZINE for 1891 will be enlarged by 100 pages to make room for a new department on "Popular Science." It will also have more and better illustrations than ever of Bible lands, on tourist travel in Eastern Europe—Hungary, Transylvania, etc. A strong feature will be a series of papers on "The Poets of Canada," by the Rev. M.R. Knight, of New Brunswick, himself one of our "sweet singers."

"ONWARD" is the progressive name of an eight-page, well illustrated weekly paper for young people issued at the low price of 60 cents a year, singly—over 50 copies 50 cents a year. It is edited by Rev. Dr. Withrow, whose management of the Methodist Magazine and Sunday School periodicals of the Methodist Church have been so successful. (Toronto: Rev. Wm. Briggs, Pub.)

THE COSMOPOLITAN for December is an exceptionally handsome number. The Frontispiece, "Away on the mountain wild and bare," is very touching. We find a highly interesting paper, with a dozen fine illustrations, on "The Passion Play at Oberammergau"; "Literary Boston," with fine portraits of Elizabeth Stuart Phelps, Louise Chandler Moulton, Rev. Dr. Edward Everett Hall, W. D. Howells and about a dozen others of the literati of that city; Field Marshall Von Moltke, with six of his portraits taken at different periods of his life between his 16th and 90th years; and a number of other good articles and lighter literature abundantly illustrated, with "current events" &c. (\$2.40 a year: New York, 5th Ave. and B'dway).

THE HOME MAKER is an excellent two-dollar domestic magazine (44 E. 14th St. New York,) with an article on the Higher Education of Women, one on Typical Homes, and another, illustrated "Among the Venezuelans."