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# CANADA HEALTH JOURNAL,

A MONTHLY MAGAZINE OF  
PREVENTIVE MEDICINE,

—EDITED BY—

EDWARD FLAYTER, M.D.

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*Public Health and National Strength and Wealth.*

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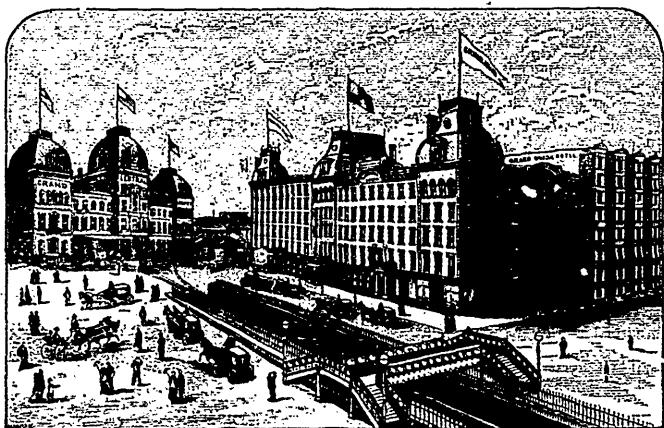
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# THE CANADA HEALTH JOURNAL.

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MARCH, 1887.

No. 3.

## THE PROGRESS OF SANITATION DURING THE REIGN OF QUEEN VICTORIA—THE LIFE SAVING RESULTS.

THE following are interesting extracts from an address by Captain Douglass Galton, C.B., D.C.L., F.R.S., in opening the last annual meeting of the One Hundred and Thirty-Third Session of the Society of Arts, London, Eng., Nov 17, 1886:—from the *Sanitarian*.

In opening the meeting of the One Hundred and Thirty-Third Session, it appeared to me that, as we are entering upon the jubilee year of the Queen's reign, it might be interesting to take stock, as it were, of the progress which has been made by the nation in some one of the branches of usefulness to which the proceedings of this Society have contributed; and it occurred to me that the most fitting subject to select would be that of the progress which has been made in sanitation during her Majesty's reign. . . . .

The first decennial census of the population of England and Wales had been taken in 1801, in which year the population of England was 8,892,536. At the Queen's accession it had risen to 15,268,056, but it was only then that civil registration of births, marriages, and deaths, including the registration of the diseases which were the causes of death first came into operation.

The Queen's accession to the throne took place on the 20th of June, 1837, and the registration came into operation on the following 1st of July, and thus

the jubilee year of the Queen's reign is the jubilee year of registration of disease.

To the sanitarian the principal value of registration has been that it furnished a basis of accurately observed facts which has enabled the medical man to substitute numerical expressions for vague conjecture, and by affording the necessary data for ascertaining the prevalence and intensity of epidemics, has led to an examination of the existing causes of the diseases.

This knowledge was the first step toward their prevention. Registration of the causes of death forms the basis upon which all scientific sanitary investigation necessarily rests; therefore the year of the Queen's accession forms the commencement of intelligent sanitary progress in this country. . . . .

The year 1838 was the first complete year of registration. The first report of the Registrar-General brought forward the sanitary condition of different parts of the country, and of different classes of the population. Disease was as prevalent among the laboring population in rural villages as it was in the most crowded and filthy districts in towns, and, on the motion of the Bishop of London, the House of Lords, in August, 1839, presented an address to the Queen, begging her to direct an inquiry into this prevalence of disease.

From this period may be said to date that great social and sanitary movement which has tended so largely to ameliorate the moral as well as the physical condition of the people of this island, and which forms one of the most prominent features of the Queen's reign.

The Poor-law commissioners were directed to report upon the condition of the laboring classes: and the direct evidence of much preventible disease, which the record of disease and death furnished from all parts of the country, formed the basis on which the commission founded their recommendations...

The general conclusions at which the Poor-law commissioners arrived in their report on the condition of the working classes were that disease originating in or propagated by means of decomposing refuse and other filth, and damp, close, and overcrowded dwellings, prevailed generally among the working classes in all parts of the kingdom; and that while these disasters could be abated by improved sanitary conditions, they were not removed by high wages and abundant food, if sanitary conditions were absent. They also pointed out that owing to the defective water-supply cleanly habits were impossible.

In illustration of the loss caused to the nation by these preventible diseases, they mentioned that out of 43,000 widows and 112,000 destitute orphans relieved from the poor-rate, the greater number had lost their husbands or fathers from preventible diseases; and that the youthful population of either sex brought up in crowded unwholesome dwellings, and under the adverse circumstances described, were deficient in physical strength and moral conduct, and grew up improvident, reckless and intemperate, caring for nothing but sensual gratification.....

The commissioners then went on to

state the conditions required for improving the sanitary condition of the laboring classes.....The conclusions of the commissioners, and the general interest awakened in the subject led to various sanitary investigations, both by royal commissions and committees of the Houses of Parliament.....

The near approach of the cholera epidemic in 1848 led Parliament to the conclusion that: "Further and more effectual provision ought to be made for improving the sanitary condition of towns and populous places in England and Wales, and it is expedient that the supply of water to such towns and places, and the sewerage, drainage, cleansing, and paving thereof, should, as far as practicable, be placed under one and the same local management and control, subject to general supervision."

An Act was passed creating a General Board of Health. The main feature of this Act was that when the Registrar-General's returns showed that the number of deaths on an average of the preceding seven years exceeded 23 per 1,000, the General Board of Health were empowered to send an inspector to make a public inquiry as to the sewerage, drainage, water supply, burial grounds, number and sanitary condition of inhabitants, and local sanitary acts in force; also as to natural drainage areas, the existing local boundaries, and whether others might be advantageously adopted. The General Board were empowered to issue provisional orders, creating a system of local administration by means of local boards of health, consisting partly of municipal authorities, and partly of elected members. These local boards were empowered to appoint necessary officers, including medical officers of health, surveyors, and inspectors of nuisances.

The public sewers were vested in the local board, and they were to maintain, cleanse, and regulate the use of sewers. All houses re-built were required to be provided with drains approved by the surveyor, and before any new house was commenced the levels of the cellars or lowest floors, and the position and character of the drains and cesspools, was to be approved by the surveyor. The occupation of cellars as dwellings was prohibited. Water-closets or privies and ash-pits were to be provided to all houses and workshops. The local Board was also required to manage, repair, and clean the streets, and to provide for removal of refuse. They were to abate nuisances, regulate slaughter-houses, register and make by-laws to regulate common lodging-houses. The local authorities were empowered to provide public recreation grounds—to provide a water-supply, except where a water company would supply on reasonable terms. They were also to provide mortuaries; to obtain power to close burial-grounds which they considered to be unhealthy, and to open new ones. The local boards were empowered to make by-laws and impose penalties, subject to confirmation by the Secretary of State, and to levy rates, to mortgage the rates, and to borrow from the Public Works Loan Commission. The act also provides for sewers, wells, pumps, etc., to be made where desired by the inhabitants in parishes containing less than 2000 persons. The metropolis was exempted from the operation of this act.

The General Board of Health came into existence in 1848, just before the outbreak of cholera in the county, and it took measures at once to check the disease, and proclaimed the principles upon which the preventive and other measures for meeting the epidemic

ought to be conducted. Among these measures probably the one which had the greatest effect in promoting subsequently a general feeling of the necessity for sanitary improvements, and which awoke in the nation the needs of moral improvement, was that requiring house-to-house visitation, and the cleansing of the houses and streets, and obtaining an adequate water-supply. This brought into notice the neglected condition of the various localities which the local authorities complacently ignored.

These house to house visitations prominently exposed the moral and material degradation, and the tendency to crime, engendered by the physical evils concentrated in these wretched dwellings.

It will not be out of place here to remark that Lord Shaftsbury was one of the first members of the General Board of Health and that to his untiring efforts, both in Parliament and out of it, much of the improved social condition of the people during the Queen's reign is undoubtedly due.

Further acts for regulating the public health were passed in 1858, 1861, and subsequent years; and all their provisions were embodied in a general Act in 1875, (*i.e.*, during the premiership of D'Israeli, who had made the public health question a part of his "platform" during the election campaign of 1874). From the operation of this Act the metropolis was exempted.....

#### GENERAL RESULTS OF THE SANITARY LEGISLATION.

The main principle which guided public administration, both before and during the earlier years of the Queen's reign, may be said to have been that of non-interference, and of allowing free competition to prevail; although no doubt, some efforts had been previously

made to regulate the labor of females and children in Factory Acts.

The practical application of the knowledge derived from the Registrar-General's statistics led to further investigations in particular cases by such men as Dr. Simon, Dr. Buchanan, Sir Robert Rawlinson, and others, and gradually caused a re-action from what may be called the *laissez faire* system, to the spread of opinion in the direction of control over individual action in the interest of the community generally; and the result was the enactment of the successive laws for regulating the sanitary condition of the people.

This large amount of legislation is practically little more than the interpretation required by the increase of population, and by the complicated exigencies of modern life, of the common law maxims, *Prohibitur ne quis faciat in suo quod nocere possit alieno*; and *sic utere tuo ut alienum non lædas*,—that is to say, no man shall do anything by which his neighbor may be injuriously affected, and each person must so use his property and his rights as not to harm any one else.

This common law doctrine had become practically obsolete, because there was no machinery in existence to enforce it; and the present generation inherited a legacy of misery among the poor classes owing to the absence of regulation in the building of houses as the towns increased in size, absence of water-supply and drainage, and other matters which I have mentioned.

The death-rate of 1838-42 for England and Wales was 22.07 per 1000; that of 1880-84 was 19.62 per 1000; and the death from zymotic disease, which averaged 4.52 per 1000 in the decade 1841-50, were reduced to 2.71 per 1000 in the years 1880-84. It is, however, curious to note that the improvement in urban districts does not appear to have kept pace with that in rural districts, for it appears that while the deaths from zymotic disease in certain urban districts have declined from 5.89

per 1000 in the decade 1851-60 to 5.12 per 1000 in the decade 1871-80, the deaths from zymotic disease in rural districts in the same interval have declined from 1.77 to 1.67 per 1000.

In order to form an estimate of the saving of life due to sanitary measures, we may assume that sanitation remained in abeyance, and calculate what the death-rate, according to Dr. Farr's formula, would have been in consequence of increased density of population, and compare that with the actual death-rate; upon this assumption we find that the sanitary improvements only began to tell after the cholera epidemic of 1848-49. In the decade 1841-50, indeed, it appears that the death-rate was actually larger than that due to the increased density of population. But in the following decade the sanitary improvements began to produce their effect, and this effect has been gradually increased. In the decade 1850-60 the annual average saving of lives in England and Wales from sanitary improvements was 7789; in the decade 1860-70 it rose to 10,481; in the decade 1870-80 it was 48,443; and in the five years 1880-84, the average annual number of lives saved by sanitary improvements have been 102,240.....

The changes which have taken place in the last fifty years in every branch of life, social, political and commercial, will make the reign of Queen Victoria ever stand out as an important historical epoch. If time had permitted, I should have liked to dwell on the economic and social considerations involved in the saving of life which has thus been effected in every branch of the population, and in every part of the Queen's empire. It implies the diminution of disease with its consequent pain and misery, and a raised physical condition of the people. It has carried with it a higher social standard and improved morality, and has diffused a large measure of happiness throughout the nation.

## THE PUBLIC, OR THE STATE, AND THE MEDICAL PROFESSION.

THERE has been a good deal given in recent numbers of the *JOURNAL* bearing upon the subject of this heading, but it is a subject of such importance that it merits a great deal of discussion; and especially so because as prevention is unquestionably better than cure, and the medical profession constitutes the most competent body for the prevention of disease, the relations between the public and the profession are not of the best, nor even "better" sort. A complete change would prove to be a great public benefit. Why not in some way secure, lay hold of, this public benefit? Forty years ago Dr. John Forbes, a physician of eminence, in an address in London, said, "Redoubled attention should be directed to hygiene, public and private, with a view of preventing diseases on a large scale, and individually in our sphere of practice. Here the surest and most glorious triumphs of medicine are to be achieved."

Eleven years ago in October last (Oct. 12th '75), the Editor of this *JOURNAL*, in a paper upon this same subject, read before the York County Medical Association, said, "The physician is associated in the minds of the people, as he is in reality, with disease rather than with health. Does he wish to be so associated? Would it not be far more pleasant, more agreeable, more profitable, (or it could be made so) to be regarded as associated with, defenders of, Hygiea—the 'sweet smiling goddess of Health'? The science of medicine appears to have been built up, so to speak, on the wrong side of disease. Physicians occupy the position of an army standing indifferently or idly in the rear, only commencing to act when the country has

been invaded and the enemy is in the midst of the citizens, active in destruction, rather than that of an army at the 'front,' ever vigilant and ready to act on the first advance of the enemy. Is this, gentlemen, an honorable position for the members of our noble profession?" Again, compared with the field of prevention, "Does not the field of cure fall into comparative insignificance? Nature maintains her supremacy in the healing art. She will yield but little to us in this. Her power to heal is vastly greater than ours." Sir William Jenner has said, "No one acquainted with the present state of the science and art of medicine will for a moment question that to prevent disease is its first and most important aim."

The method of practising medicine in China, or what is said to be the method, every body has heard about. But much nearer home, in a country where science is perhaps more progressive than in any other country—in Germany, the practice of medicine has been greatly changed during recent years. There, the idea, as expressed by Stein, that "The function of the physician is an official and public one, and that, consequently, the members of the medical profession should act under a common guidance, and constitute an independent though integral part of the organization of the state," has long been acted upon in all social legislation. There, the profession have already acquired, in association with the local authorities, the control not only of all public health matters for the prevention of disease, but of every organization for the relief of distress and the prevention of crime.

It will be a good and profitable thing



for those countries who follow the example of Prussia, and better still for those which carry the principle still further.

Why should not the Government of a country provide direct means for protecting the people from disease, especially from all forms of epidemics, as well as from foreign foes or from domestic or internal crime? True, a large proportion of the cases of disease, are the result, more or less direct, of the indiscreet acts of the individuals themselves. But even here, the indiscretions commonly arise through ignorance; and in this age of free and compulsory education, the state should have so educated the individuals that they would have known better than to commit such indiscreet acts. Again, in those cases of disease caused by the acts of the individuals themselves, not in ignorance but contrary to knowledge possessed by them, it were better for the state to have prevented if possible the origin of such cases, because, often from these very cases others spring up in other individuals in spite of all knowledge and precautions.

With a small, well organized medical force guarding the borders of the

country and a system of medical police in every municipality, the former for preventing the entrance of any foreign epidemic and the latter for suppressing the spread of the first outbreak of any infectious disease, a great saving in sickness and "doctoring," and human life would be thereby effected. And if the medical police were prepared to go much further and use every known and available means for removing the causes of all other forms of disease and educating the people in the laws of health, and prepared to employ prompt means for curing all cases of disease when developed, a still greater saving in life sickness and "doctoring" would be the result. Those members of communities who were possessed of the necessary means and who desired to do so, could choose and engage, by the year, their own special physician.

A change in the present method of practising medicine is, we believe, in the interests of both the profession and the public, most desirable, and we shall strive in this behalf with the hope that the time is not far distant when there shall be much greater indications of a general desire and demand for a change.

#### THE PATENT MEDICINE EVIL—ITS EXTENT AND A FEW OF ITS MANY DANGERS.

THE time is not far distant when stringent measures will have to be employed to check the sale and use of "patent" medicines. Advertised and villainously puffed and misrepresented as they are, they do an incalculable amount of harm, as every physician well knows. As an exchange says, "the great middle class buys most of them."

Statistics show that there are about 5,000 proprietary articles of home man-

ufacture on the United States market; 500 of these are of commercial importance, and fifty are run each as an independent business. The patent medicine trade of those States is about \$22,000,000 annually; of this, \$10,000,000 are annually expended in advertisements, and the net profit amounts to \$5,000,000. We do not know the extent of the manufacture of and trade in such nostrums in Canada, but it is proportionately large. Although there are

large quantities manufactured in this country, the principal part of the patent medicines consumed here are prepared in the United States. It is believed that they are more largely used, proportionately, in the United States and Canada than in any other country. In Germany their use is greatly restricted. The gross profits on the mixtures are enormous, but a large proportion of these are spent in advertising; otherwise they would not sell. The costs of material, labour and all other expenses of production are estimated at less than one fourth of the selling price.

A writer in the *American Pharmacist* of recent date states that statistics "clearly show that the process of manufacture and the ingredients employed are, to the patent medicine manufacturer, of but secondary importance as compared with that all-important article, printer's ink." I once, he said, "asked a young friend, who was employed in the laboratory (?) of a certain patent medicine firm, how their preparation was made, and he replied: 'Well, I'll tell you confidentially, we do not have any regular working formula, but are always careful to get in plenty of Aqua Pura.' [The water probably not always very pure.] I firmly believe that this is a fair example of the careless method pursued by the majority of the large number of similar concerns whose products are flooding the market, and I earnestly call upon you, as editor of a journal devoted to the interests of pharmacists, to urgently request your many subscribers to stick to their colors, as members of a scientific profession, and unite in discouraging the sale of these nostrums by declining; as far as possible, to handle any preparation the constituents of which are unknown to them." . . . . . It has been said, I think, that the

man who is his own lawyer has a fool for a client. Will not the same principle hold good in medicine? Has not he who "doctors" himself a fool for a patient? We have before now drawn attention to the dangers of people doctoring themselves. There are two especially difficult points in the science and practise of medicine. These are, first (perhaps the most difficult of all), the correct diagnosing of the disease—the finding out the special nature of it, of the particular pathological condition; and, second, the selection of the remedy or remedies. Now, one who is ill and takes a preparatory or patent medicine as a remedy, has, as a rule, decided for himself or herself upon these two important points, which often baffle the skill of the most able and experienced physician. Symptoms are very deceiving, and no two people are exactly alike; what would be a remedy for one would be poison for another. From taking medicine in this way, however good the medicine in itself may be, serious consequences may arise, and doubtless often do arise, which are never recognized as having such a cause. Herein is one of the evils of the common use of these nostrums. . . . .

Another serious evil is the loss of time arising through such improper medication. A man feels unwell, and sees in some advertisement of a preparatory medicine symptoms enumerated apparently precisely like those experienced by himself, perhaps of "indigestion" or "liver complaint," or "general debility," and in which a sure cure is promised. The medicine is taken "according to directions," and after weeks of disappointment the unfortunate sufferer applies to a physician and is found to be suffering from incipient consumption, with large deposits of tubercles in the lungs, almost, if not

quite, through want of proper remedies at a much earlier period beyond the reach of all or any remedy. Such cases are not uncommon.

Again, a large proportion of these "cure alls," such as "bitters" and "tonics," contain alcohol, usually in an agreeable form, and the habitual use of them soon creates a desire for alcoholic stimulants. In this way they unquestionably lead to the habitual use of such stimulants and promote intemperance.

Mothers, in a villainous advertisement, are appealed to to soothe their infants with some "soothing syrup," which, probably containing a powerful

narcotic, acts as a poison upon the tender nervous system of the little ones and produces, insidiously, evil effects from which they may never fully recover. In vile appeals to "young men" or "young women," or "females," in all sorts of periodicals, even "religious" papers, evil thoughts are suggested, and evil practices, which result in incalculable harm.

We submit that it is not right that these temptations to the evils above referred to should be constantly placed before a credulous public, and that there should be legislative action for controlling and suppressing the "patent medicine" trade.

### STOP YOUR COUGHING.

**T**HIS is the season when coughs are prevalent. Coughing is largely a habit. The irritation it produces helps much to keep up the habit. This may be largely overcome, as we have urged in this journal on a number of occasions, by mental effort. Dr. Rumbold, in the *Maryland Medical Journal*, says, "Stop your coughing! You cough fully twice as often as you need to do." If patients would resist the tendency to cough, and endure the sensation that seems to cause it, they would soon notice that they may greatly reduce the number of coughs, and when they do cough, they would then be enabled to raise sufficient secretion from the throat to relieve it of the sensation that is largely the cause of the cough.

"I am satisfied," Dr. Rumbold continues, "from many years' observation, that the sensation that first induces the cough, arises from irritative inflammation located behind the soft palate, fully three and a half inches above the place of sensation in the throat. It is evident that even if a throat is healthy,

and an inflammation three and a half inches above it causes a persistent and frequent cough, this cough could not last many weeks without occasioning so much irritation in the throat that it also would become diseased, and it is also evident that the sensation in the larynx, caused by a distant irritation, cannot be relieved by frequent coughing nor will the cough relieve the irritation located up behind the soft palate, as it has not the least effect upon the irritated spot. This shows the great importance of controlling, to suppression if possible, a non-relieving cough. I have known patients cough, on an average, ten times every five minutes for two hours in the morning, making two hundred and forty spasmodic efforts to relieve the throat of tickling sensations. Now this is tiresome to a weak individual, and the relief of one-half of their efforts may be sufficient to prevent the throat from becoming inflamed and thus prevent the lungs from being implicated in the disease."

Clearly, the constant habit of forcing

air from the lungs over the delicate and already irritable larynx must increase the irritability. When a portion of the skin is irritated or inflamed we endeavor to keep all irritating influences from it, in order that it may best recover its natural condition. A forcible cough may be, compared to the wiping or scraping over of a tender surface with a rough towel.

A good method recommended to help one to control a cough, is to mark each cough on a card, preserve this card, and

endeavor to decrease the number of coughs each day. Patients have been known to decrease these efforts 75 per cent. "One patient coughed one thousand and eighty-five times on the first day's tallying, on the next day she coughed four hundred and fifty times, on the next only two hundred times. This may seem to some to be trifling work, but the result is always beneficial to the cough and to the strength of the patient.

### THE HOUSE SLOPS AND WHAT TO DO WITH THEM.

In every household in the country, or where there is no sewerage system, the kitchen, laundry and chamber slops are a great source of trouble. The soapy water from the wash-tubs, often amounting to barrelfuls, contains much animal matter thrown off from the skin, and when this is exposed to heat and allowed to decompose, it creates very offensive and noxious gases. Then there are the waste products of cooking, all equally capable of fermentation. Under no circumstances should these be thrown out upon the ground near the back door as heedless householders and domestics so often do. They will create a wet, mucky spot, which, under the sun's rays, will breed miasmata, while if the soakage gets into the well or cellar, much harm may follow.

It is not at all a difficult matter to get rid of all this without any danger to the health of the household, and at the same time to immensely increase the products of the garden. The well known engineer, Col. Waring, gives the following description of his own simple domestic "plant" at his country house:—

A kerosene barrel is sunk in the ground until its open top is level with the surface. A cemented waste pipe from the house enters it about ten inches below the top. At two opposite points about twelve inches below the top of the barrel, holes are made to receive common three-inch land drain tiles. Each of these side-drains extends out eight feet from the barrel. Connected with them by curve and junction pieces, four drains extend across the garden, a distance of about fifty feet, running in parallel lines six feet apart. The joints of these drain pipes are connected only by open collars, leaving room for the free percolation of water through them. The barrel itself is provided with a vertical wire-cloth screen, reaching from the top to the bottom, and separating the side of the barrel into which the household empties from that out of which the other drains lead. This holds back the coarser matters of the drainage. The barrel itself—that part of it lying below the level of the drains—forms a pool for subsidence, corresponding with the silt-basin in land drainage. This must be emptied from time to time as

occasion requires. The pipes are laid twelve inches, or less, below the surface of the ground. Mr. Warring now recommends that the pipes be laid within eight inches of the surface and nearer together, even to three feet apart. The liquid which enters them from the barrel is of a milky color, but seems to be free from any substance that can choke them up. The liquid leaking out through the joints is absorbed by the soil and adds greatly to its fertility, and, possibly, gives it in dry weather an appreciable amount of moisture at a point where plants can make use of it.

In a garden in which this plan has been adopted for eight or ten years, the pipes were recently taken up in order to see how far they might have been filled with the mud of subsidence, but after this long use, very little was found, and none to obstruct the working of the system, excepting where, in one or two places, the bad laying of the pipes caused some obstruction.

The two following illustrations of the value of house slops and excrement are given by Moules Earth Closet Company: Against a wall fifty-five feet in length and sixteen feet high a vine grows. A three-inch pipe runs parallel with this at a distance of six feet from it for the entire length; the slops flow through this pipe as before described. On this vine, year after year, had been grown four hundred well-ripened bunches of grapes, some of the bunches weighing three quarters of a pound. During a period of four years, for a certain purpose, the supply was cut off. To the surprise of the gardener, scarcely any grapes during those years appeared; but afterwards the supply was restored, and the consequence was an abundant crop.

The other case was as follows: Pipes

were laid below two square yards of earth, twelve inches beneath the surface, which were fed with the slops through an upright pipe, about one large watering-potful daily. In the month of November, three roots of Tartarian oats were planted in this piece of ground. The stalks attained one inch and a quarter in circumference; the leaves measured an inch across. Several of the ears were twenty six inches long, and when the crop was gathered eight hundred grains were rubbed out of one ear. The whole weight of corn from these three plants was three-quarters of a pound. Twelve of these grains were put into the same piece of ground the following year: from these was grown one pound and three quarters of seed. In a garden of twenty perches, or one-eighth of an acre, by the use of both solid and liquid manure from one house, three crops were grown in the year, the value of which at market price would be twenty pounds sterling.

TUBERCULOSIS IN FOWLS.—At a recent meeting of the Veterinary Society, according to the *Sanitary Record*, M. Norcard presented a communication respecting tuberculosis, or consumption, in birds and fowls. We referred to similar experiments some time ago. M. Norcard had seen four poultry-yards, the fowls of which were infected with this disease. The disease, he believed, was communicated to them by eating the carcasses or excrement of animals affected by tuberculosis. These facts makes it apparent, says an exchange that a tuberculous cow is dangerous, if only through the medium of the milk, or through the possibility of the infection of fowls, whose scavenger habits leads them to frequent barn-yards or manure heaps, thus exposing themselves to the contagion of tuberculosis, and becoming the carriers of the disease to human beings.

## OPEN-AIR TREATMENT OF CONSUMPTION—INTERESTING EXPERIENCES IN PRACTICE.

DR. James Blake, F. R. C. S., etc., gives in the *British Medical Journal* of January 15th, '87, the following experience: "I am glad to find in the *JOURNAL* of December 4th, 1886, an account of the treatment of a case of consumption by a modified form of open-air treatment, as, so far as my experience goes, it is the only means by which there is any chance of curing the disease. Some twenty-four years ago (1862) I published an article on the subject (*Amer. Jour. of Med. Sci.*) I then gave an account of some cases, showing the beneficial result that followed, even when the treatment was carried out but partially, that is, where the patients lived in the open air during the summer, but had to come back to their houses in the winter. Whilst living in the open air they invariably improved, gaining in weight from four to twelve pounds; whilst living in their houses during the winter they all lost weight. Two of these cases that I did not lose sight of recovered from the disease; one dying of small-pox after twelve years, and the other is still alive, and was in the enjoyment of perfect health the last time I saw him, about six months ago. The history of this last case is interesting. He belonged to a consumptive family of four sisters. I attended three who died of the disease, and the next generation I attended one child that died of tubercular meningitis, and another that died of tubercular peritonitis. When I first saw the case there had been a cough for about three months. The upper part of the right lung was solid as far down as the nipple, with commencing breaking-down at the apex. There was emaciation and want of appetite as the stomach was upset,

and the disease was being hurried on by the use of cough medicines. Some improvement took place on restoring the digestive organs, and free exposure to air night and day. By the middle of April (I took the case first in January) he was well enough to join a surveying party that was surveying a route from California to Salt Lake for the Central Pacific Railroad, mostly through the Nevada and Utah deserts. At first he could do but little work, but his strength rapidly improved, and by the end of the summer the cough was almost gone. Two years were spent with the party, camping out all the time, with the exception of about three months in the winter. His health was perfectly restored, and has remained good ever since. As regards the etiology of the disease, the following facts may be interesting:—In the early days of the settlements in California, a great many Indian children were brought in and sold as servants, their parents having been killed as the country was settled up. The children were carefully raised, being well clothed and fed, but fully five per cent. of them would die of consumption, generally between the ages of 10 and 15 years. On looking into some of the cases, I arrived at the conclusion that the disease was caused from the children sleeping in too comfortable rooms, and having too farinaceous a diet. I advised that they should be lodged in out-houses, under sheds in bad weather, and when it did not rain that they should sleep in the open air. They were also to get a little more bacon and meat. This certainly prevented, to a great extent, the development of the disease, and many children that would otherwise have

died grew up to be useful servants. The great objection that, not only patients, but even physicians have to this out-of-door treatment, is that it is liable to give rise to catarrh. My experience is that there is no greater preventive of catarrh than living in the open air. I have had patients who could not go across a passage from one room to another without taking cold, and yet who could camp out, sleeping on the ground under a waggon, and who would tell me, after three or four months in the open air, that they had not had a cold during the whole of the time. When living in houses, I am particularly liable to take cold, often sneezing from putting on a cold pair of slippers; but I have left the Sacramento Valley with the thermometer at 80° to 90°, and in forty-eight hours have woken up with two or three inches of snow on my blankets without even thinking of taking cold. It is difficult to explain how living in the open air should confer such immunity from the effects of cold. Leaving theoretical considerations entirely aside, experience has satisfied me that no other treatment of consumption promises such favorable results as the open-air treatment; and I think it will be a happy day for consumptives when the search for new drugs for treating diseases shall give place to an attempt to find out those diseases which can be better treated without them.

In the same journal of January 22nd, W. R. Parker, M. A., M. D., Cantab, gives the following: "Three years ago, while riding about the west coast of the south island of New Zealand, examining on an average a hundred men every month for the life insurance department of the Colonial Government, I was so struck with the absence of consumption (notwithstanding that the great majority of the men were emigrants from

Great Britain, and that cardiac and other serious affections were by no means infrequent), that I took some trouble to study the conditions under which they lived, with a view to finding some explanation. I was very soon led to the conviction that it was largely owing to their houses, which were invariably constructed of wood, and in all of which there was unintentionally the most complete and constant ventilation, by reason of the very imperfect contact of the overlapping boards that formed the walls, often so very imperfect, that abundant daylight was easily visible also. In a report to the Commissioner I drew special attention to the fact, and suggested the above explanation.

Now, granting that in cows consumption prevails specially among those kept in numbers within stuffy dairies; that in horses it is found specially among those aggregated in ill-ventilated stables; that in monkeys it spreads among those herded together in cages; granting also that in human beings consumption is found in largest proportion where the population is most dense, as in every large city in the world; that it specially attacks indoor factory operatives, whether male (Birmingham, Sheffield, etc.) or female (Nottingham, Huddersfield, etc.); that its prevalence in our own and other European armies was reduced from 12½ to 1½ per cent., by abolishing the stuffiness of barracks; and that a similar improvement has been noted in our navy, gaols, work-houses, asylums and schools; granting finally that ten per cent. of our population still die of consumption, and that no other single disease kills half so many; surely we may rely much more than we do upon the efficacy of fresh air, and leave a smaller number to prop themselves up with hypophosphites and cod-liver-oil.

### LAST YEAR'S MORTALITY IN CANADIAN CITIES AND IN ENGLISH CITIES, CONTRASTED.

**D**URING last year (1886), twenty of the principal cities and towns in Canada, including all the large cities, made regular monthly returns to the Department of Agriculture in Ottawa, of the number of deaths, with causes etc., which occurred and were recorded in each of the places. Twenty-one cities made monthly reports, but we will estimate on only twenty, omitting the smallest one. These twenty cities and towns, according to the census of 1881, contained a total population of 524,458. In 1871, the total population of these places was 405,373. Now, assuming that the rate of increase in the five years, between 1881 and 1886, was at the same rate as during the previous ten years, the population of these twenty cities and towns in April 1886, was, giving St. John, N.B., an increase to 30,000, a little less than 590,000,—adding a number equal to half the amount of increase during that decade to the population of 1881. Montreal, Toronto, Ottawa, Winnipeg and St. Thomas, with perhaps two or three other cities, increased, it appears, at a more rapid rate than this, and we add 50,000 more, and assume the population of the twenty places to have been last year, on an average, 640,000, as given in the last number of the JOURNAL.

These twenty principal cities and towns, with a population of 640,000, reported to the Department here a total for the year of 16,018 deaths, from all causes; or a mortality at the rate of 25 per 1,000 of population, for the year.

In the twenty-eight largest towns in England, with an estimated population of over 9,000,000, there were, during the same year (1886), 189,610 deaths, as shown by the Registrar-General's weekly reports; equal to an annual

death rate of 20.9 per 1,000 of population.

In the Canadian cities therefore the mortality was over 20 per cent. greater than in the cities in England; and over 25 per cent. greater than in great London, where it was less than 20 per 1,000 of population. In the previous year, 1885, with the small-pox epidemic, the mortality in the Canadian cities was about 30 per 1,000 of population, or nearly 50 per cent. greater than in the English cities.

This high mortality in Canadian cities was largely due, to be sure, to the higher death rate (probably largely, too, of infants) in Montreal, Quebec and Ottawa; although in Toronto the mortality was 20 per cent. higher than in London, England.

In deaths from zymotic diseases, which are the best indicators of the sanitary conditions or requirements, the Canadian cities show to a still greater disadvantage. They return a total record for the year of 3,852 deaths from these causes; equal to an annual death rate, from these alone, of over 6 per 1,000 of population.

In the English cities the total mortality from zymotics alone was 2.9 per 1,000 of population for the year, or less than one-half that in the Canadian cities.

The rate of mortality from diphtheria in the Canadian cities was nearly ten times as high as in the English cities; and that from diarrhoeal diseases more than twice as high, and from fevers nearly twice as high, in the former as in the latter.

When, we may again ask, will some effort be made to remove this unhappy cause for reflection upon the otherwise fair cities and towns of Canada?



## THE PUBLIC HEALTH FOR FEBRUARY.

MORTUARY RETURNS FROM 26 CANADIAN CITIES AND TOWNS.

The total number of deaths in the month of February in the twenty-six chief cities and towns making monthly returns to the Department of Agriculture in Ottawa was 1,155, with no returns from Victoria, B. C. This number is less by 169 than that of the previous months (January) record. It must not be overlooked, however, that February is three days shorter than January, and as there was an average of about 42 deaths per day, the ratio of mortality in February was but little less than that of January, or of December either. There was in reality but little variation in the rate of mortality during the three last months; it being, on an average during that period, about 22.4 per 1,000 of population, per annum, and for February 22 per 1,000.

In Montreal, the actual rate of mortality in February was somewhat higher than in January; or 27 per 1,000 of population. Toronto, which gave an increased mortality in January, over December, shows a lower rate for February, or barely 20 per 1,000 of population. The mortality in Quebec fell in February to a rate per annum of about 24 per 1,000 of population—from 26 in January; and that in Hamilton to 15 per 1,000—from nearly 20 in January. In Ottawa, the rate, which had fallen to less than 18 per 1,000 in January, increased in February to 21 per 1,000, which was still lower than had been recorded in the Capital during a long previous period. In Kingston, where an unusual high rate, for that city, had been recorded in January, the mortality fell in February about 25 per cent. below that of the previous month. In Sorel, the mortality still further declined,—from 62

per 1,000 in January to about 52 in February.

From Zymotic diseases, in the twenty-six cities and towns, there was a decline in the mortality in February of over 25 per cent., as compared with the previous month, the total mortality from this class of diseases being at a rate of less than 3 per 1,000 of population per annum. In Montreal and Toronto the mortality from this class was about the same as in the previous month, while in Quebec, Ottawa and Hamilton there was a decided decline.

From small-pox there were no deaths recorded. From diphtheria there was a decline in the number of deaths, from a total of 105 in January to 58 in February; while the totals from diarrhoeal diseases declined from 31 to 22, in the same period. From measles there were 9 deaths in Montreal, there being 5 in January.

From constitutional diseases there was an increase in February of about 7 per cent.; with a decrease from both local and developmental diseases. There was precisely the same number (viz., 38) of deaths from violence in each of the two months.

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A NATIONAL pure food convention was held in Washington on the 19th of January. Some two hundred delegates were in attendance, says the *Anti-Adulteration Journal*, representing every leading trade paper, board of health and trade association in the United States. The convention was a grand success. Every delegate was enthusiastic, and all hearts beat in harmony on the subject of securing such legislation as would prevent fraudulent and injurious adulteration of the supply to be sold for the sustenance of the people. All were in accord in demanding such legislation as a means of not only individual protection, but as an advancement of our domestic and foreign commerce.



## MISCELLANEOUS EXTRACTS AND SELECTIONS.

### NOTHING BUT LEAVES.

Nothing but leaves; yet many a slave  
Has early filled a drunkard's grave,  
And sadly owned the tempter's power,  
And cursed the day and cursed the hour  
When first he used tobacco.

Tobacco is a poison weed,  
It was the Devil who sowed the seed.  
To raise a crop of gin and rum,  
Dear friends, I think, most every one  
Commences with tobacco.

Nothing but leaves, yet something more  
When once we see the dreadful power  
It has upon the sons of men  
Who chew and smoke, and chew again,  
The filthy weed—tobacco.

—Good Health.

A CHINAMAN, Wong Chin Foo, says there are over two hundred different substances used in adulterating tea, and that no green tea shipped to this country is fit to use on account of the copper and other poisonous things which it contains.

**DANGER IN GELATINE.**—The *Anti-adulteration Journal* says, the use of gelatine in ice-cream, *Charlotte-Russe*, and other foods is becoming almost universal. It is employed in cases in which eggs were formerly used. The nutritive value of pure gelatine has been shown to be very low in the scale of foods. The beef gelatine of the markets that is used by bakers is far from being pure gelatine. It frequently has a very disagreeable, fetid odor, and has evidently begun to decompose during the process of manufacture. After a thorough drying, putrefaction does not take place as long as it remains dry. But suppose, however, that gelatine which has thus begun to decompose during the drying process, containing,

perhaps, the putrefactive germs in the dried state, be dissolved in water, and kept in this condition for a few hours previous to being used in hot weather; the result would be rapid putrefaction. This putrefaction would be checked by the freezing into ice-cream; but the bacteria causing it, are not killed by the low temperature. As soon as the cream is melted or eaten, they resume their activity in the body, and may cause sickness. Several cases of sickness have recently come under my personal observation, apparently from such a cause.....It is a well known fact that gelatine is an excellent medium in which to cultivate various kinds of micro-organisms; and if the conclusions here mentioned be correct, it seems that gelatine should be used with great care in connection with food preparation. When used carelessly it may do a great deal of harm, as the above cases show.

**BILL NYE AND BRIGHT'S DISEASE** — Bill appears to have observed that those who live "high" and are of sedentary habits have a sort of monopoly of Bright's disease, and hence he "gets off" the following: John Bright was born in 1811. He made a tour of the Holy Land at the age of twenty-four, but did not decide to purchase it, owing to the existence of a flaw in the title. On his return from the Orient, he discovered that what was most needed in Europe and America was a good, reliable disease for the use of the better classes. The poor and humble were well supplied; but the rich, the aristocratic and patrician statesmen, corned heads, and porkists, of the two lands, languished for a good, reliable disease that the poor could not obtain. So he began to sit up nights and perfect

Bright's disease. He gained the prize at the Paris Exposition, and honorable mention at the great central celebration at Philadelphia 'for a meritorious and effective disease for the better classes.' Since that time he has been gratified to notice that the very best people, both in his own land and in this, are handling Bright's disease. It has been kept out of the reach of the poor, and to die from this ailment has been regarded as a proud distinction.

Roosa, in his "Doctor's Suggestions to the Community," gives the following: Even the educated people, and we, indeed, ourselves, have not learned in any but an indefinite and most uncertain manner that the true function of the medical adviser is not so much to cure as to prevent disease. . . . The coming medical man will, I believe, so impress himself upon the wise and generous people about him, or perhaps make himself so important a character in the state, that he will have the means, now debarred the men of our time, for making investigations which shall lengthen life and mitigate disease. . . . It is to the medical profession that the general public must look for the main part of the work of what is technically called sanitary science, and that profession must be regarded as the final arbiter in all strictly sanitary questions. Yet the medical man of to-day has but a limited control over these matters, and in some places he has no control at all.

**BACTERIA, HOW THEY GROW AND GET INTO THE BODY.**—Mr. Watson Cheyne (*American Lancet*), in the January number of *The American Journal of the Medical Sciences*, gives a full yet concise summary of our knowledge on the relation of bacteria to the living animal body. He points out that the parasitic bacteria differ very much in

their seat and mode of action from one another. Some grow on the surface of wounds or on mucous surfaces, penetrating, as a rule, for only a short distance into the underlying tissues; such are the gonococcus, the diphtheritic bacillus, etc. Others grow by preference in the lymph channels (the micrococcus of erysipelas); some grow in the tissues, especially in the cellular elements (the leprosy bacillus, the tubercle bacillus, etc.); and others grow in the blood (anthrax, probably the organisms of the specific fevers, etc.). And there are all sorts of transitions, the same organism growing at times only locally, at others in the blood-vessels. Again, some bacteria are specific on one species of animal and not on another; thus the bacillus septicæmia of mice does not, so far as we know, affect man; while, on the other hand, several infective diseases of man do not apparently affect the lower animals. The conditions necessary to enable these parasitic organisms to enter and live in the living body are manifold, and are as yet but imperfectly known. Some of them, however, are indicated. Mr. Cheyne shows that the point of entrance of the bacteria exercises a great influence on the result. The cholera and typhoid organisms are apparently only pathogenetic in the small intestine. The idea that typhoid fever can be acquired by inhalation is extremely doubtful. In other cases the infection cannot occur through an unbroken surface. This is probably the case with syphilis, and possibly also with erysipelas. Other organisms, again, will act only when introduced into the subcutaneous or submucous cellular tissue; such are the bacillus of malignant œdema of guinea-pigs and mice. Again, in some of the bacteria which are pathogenic in the lower ani-

mals, the infection is only accomplished by introducing the organisms directly into the blood stream. Although a full development of the disease is, in many instances, only obtained by the introduction of the virus into a particular part, a modified form is often produced by inoculation in other places. A good example of this is found in the case of symptomatic anthrax. A very important point in regard to infection is the dose of the virus which comes into action. As the result of his experiments Mr. Cheyne finds that in certain cases the introduction of a single bacterium is sufficient to cause the disease; while in others a large number are requisite.

**THE IDEAL CITY OF PULLMAN, ITS SEWAGE SYSTEM AND DEATH RATE.**—Probably few are aware how successfully the problem of the disposal of sewage has been solved in the model town of Pullman, which has been going on for nearly six years. The city of Pullman, Ill., has been visited several times by the representative of the *Sanitary Era*, and the following facts, the *Era* informs us, have been obtained partly from direct observation, and partly through the kindness of Mr. Duane Doty of Pullman. It is an ideal "city of brick," built by the Pullman Co. expressly for the residence of employees in their great car-shops. It has 9,000 inhabitants, and possesses all the advantages which can be obtained where ample capital allies itself to advanced science. Among all its notable features, the *Era* notices only some of the sanitary appliances. The sewage system is that called the "separate": that is, all surface drainage is carried away by one system of pipes and all house sewage by another. The former flows directly into Lake Calumet, near by; the latter flows into an underground, vaulted chamber directly be-

neath the water tower, cemented and capable of holding 300,000 gallons. From here the sewage is immediately pumped to the sewage farm three miles away, the amount averaging 100 gallons per day for each inhabitant, whereof only half of one per cent. is solid matter. This farm is underdrained and disposes readily of the sewage; the solid constituents being taken up by the growing vegetables, while the clear filtered water flows away to the lake. There are no offensive odors. The size of the farm is about one acre to 100 persons, and there is no reason why it could not be extended to meet the needs of a population of 500,000. Although Pullman is built on an almost flat prairie, but a few feet above Lake Calumet, this perfect system of drainage and sewage, inaugurated at the very beginning by the wisdom and foresight of Mr. Geo. M. Pullman, makes this city the healthiest in the world. Its annual death rate has not been over 8 in a thousand from the beginning, while that of other cities varies from 14 to 56 in a thousand. From personal examination we (the *Era*) find that the cemented cellars of Pullman are perfectly dry, so that they may be used for kitchens or store-rooms.

**SCHOOL LIGHTING.**—At a recent meeting in England of the Society of Medical Health Officers, Dr. Willoughby read a paper on school lighting, of which the following is an abstract:—In introducing the subject of school lighting, Dr. Willoughby referred to the fact that, unlike hyperopia, which was always congenital, myopia was the direct result of reading, writing, and otherwise exerting the eyes under unfavorable conditions, though, when once acquired, it showed a strong tendency to hereditary transmission; that, unknown among uncivilized races, it pre-

vailed among the civilized in direct ratio to the amount of "schooling," and in schools and universities increased progressively from the lower to the upper classes. Faulty postures and other circumstances aided in its production or aggravation, but these again were greatly dependent on insufficient lighting. From the ease with which one reads in the open air when the sky is overcast he argued that the perfection of illumination was to be found in a full, uniform, *shadowless* light; that while, under all circumstances, one had to avoid the projection of the shadow of the head on the work, and of the hand on the written word; in natural illumination one should also guard against the direct rays of the sun, and in artificial against the irritation and drying of the conjunctiva by the heat given off from gas or oil lamps, which Dr. Willoughby maintained, that, so long as the light from the left was the stronger, so that the shadow of the hand did not fall on the writing, the objections against "cross lighting" were imaginary, and that while the main source of light should be on the left, it might advantageously be supplemented by lights of lesser intensity from other sides, the total illumination being thereby increased. Blinds being open to several objections, he condemned south windows, except when ground or dimmed, and used as subsidiary sources, preferring north, east, and west windows, which did not admit direct sunshine. In wide rooms the rows of desks on either side should face in opposite directions, so that the nearer, and consequently stronger, light, whether east or west, should always be on the left.

**EVERY-DAY ARCHITECTURE.**—At the November meeting of the Dundee Institute of Architects, Mr. J. Sellars, J. A., etc., concluded a paper as follows:

I might speak of the necessity for light and air in this country, and condemn all styles which involve small windows and dark, though picturesque corners; and I might condemn the aesthetic taste which approves of stained and leaded glass in the windows of dwelling houses, shutting out from view the beautiful sky effects which we have in this country, or with that we may seem to fail, as compared with the engineer, in keeping pace with modern requirements. There is no more noble profession than that of the architect. His work reflects the history of the time in which he lives. The refinement and pure tastes of the Greeks is reflected in the exquisite examples of architecture still to be seen at Athens, just as the grandeur and magnificence of the Roman Empire is reflected in the public buildings and palaces which remain to us. The castles and the cathedrals of the Middle Ages in our own and other countries reflect the social and religious life of the time, the half-civilized state of society in its domestic and social relations, and the power and influence of Mother Church in those days. Future generations will, in some measure, be influenced in their opinion of the state of society and our mode of life in this age, by the buildings which are being erected now. In other departments of science and art this age shows an advance on bygone times, and it lies with the present generation of architects to show that they are capable of writing the history of their time in imperishable stone. Let their work, whether it be a humble dwelling, the most ordinary example of "every-day architecture," or a great public building, reflect in the highest degree the present advanced condition of architecture, science and art in this country.

DR. SAMUEL WILKES, the justly celebrated London physician, who has done excellent work in pathology and clinical medicine, in a lecture recently published in the *London Lancet*, gives his ideas upon the lack of real science in medical treatment, which arises in his estimation from a wrong way of getting at disease. He thinks all systems which begin with the cure by drugs are erroneous, narrow in principle, and savor of quackery, as making a direct appeal to popular feeling. The proof of this lies in the fact that all quackery consists in physic-giving and nothing else. Take away the quack's pills and there is nothing left; take away our pharmacopœia and there is a large basis of science and art still remaining for the benefit of mankind.

**INCREASE OF CANCER.**—The *Popular Science Monthly* quotes from the returns of the New York Board of Health, to show, in the alarming increase of cancerous affections, a reason for the establishment of a hospital exclusively devoted to the care and treatment of the disease: In 1869 there were 304 deaths from cancer in this city, being a little over one per hundred of deaths from all causes. In 1879 there were 572 deaths from cancer, or about two per hundred of all deaths; that is, in ten years the proportion of deaths from cancer had nearly doubled, one death out of fifty being from this dreadful disease. In 1880 there were 659 deaths from cancer, or 2.06 per cent. of all deaths; in this latter year cancer actually caused more deaths than scarlet fever, this being a very light year, with 618 deaths from this latter disease. In 1882 the mortality-tables showed 731 deaths from cancer, or more than two daily. During these fourteen years 6,843 persons died of cancer, in New

**A GOOD WORK PROPOSED.**—In New York, that very valuable body, the Association of Collegiate Alumnae, have just undertaken a systematic investigation into one of the most important questions that can possibly interest the community—the physical condition of school-girls between twelve and eighteen. These ages are selected, no doubt, because after eighteen these students may be regarded as women, while under twelve the problem of their physical condition is indistinguishable from that of boys. The welfare of the race—the motherhood of the coming generation, depends on the judicious management of school-girls between the ages here specified. The investigation is in charge of the daughter of an eminent physician of Boston, and is preceded by a circular calling attention to the following specific evils existing among school-girls: (1) Social dissipation and excitement; (2) the misuse of vacations; (3) habitual loss of sufficient and healthy sleep; (4) irregularity and haste in taking food, the omission of breakfast, and the use of a stimulating, innutritious diet; (5) tight, heavy, or insufficient clothing; (6) lack of proper exercise; (7) unsanitary conditions in the home or school-room; (8) the omission of instruction in sanitation and hygiene; (9) the ambition of parents and daughters to accomplish much in a little time. This is supplemented by a circular to be filled out by teachers or parents, covering 24 questions, with columns ruled for five successive years of school life. The record thus kept will be of the greatest value for the parents or teachers themselves, and will furnish to the society that broad basis of definite facts without which no really scientific inferences can be drawn.

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A MONTHLY MAGAZINE OF PREVENTIVE MEDICINE.

THIRTEENTH YEAR of Publication.

NINTH VOLUME.

Specially designed for medical and other health officers, heads of families and all interested in promoting the public health. The only Health Journal in the English language published in Canada.

ITS AIM To prevent sickness and promote public and individual health.

Communications solicited on all sanitary subjects.

Local health officers would confer a favor by sending to the Editor copies of their reports, brief notices of their sanitary condition, improvements, or events in any way connected with health.

See Club Rates to Health Boards and others on advertising page.

All communications, with remittances or otherwise, should be addressed,

"Health Journal," Ottawa, Can.

A blue cross opposite this indicates that the subscriber to whom it is addressed is indebted for *this year's* subscription (from Jan. to Dec.), and all such will confer a favor by kindly remitting, for which we shall feel obliged.

We cannot undertake to make out accounts and send them by mail or otherwise and only charge \$1.50.

All not remitting during the early part of the year—the first month or two—must expect to pay \$2.00; we must insist on this in common fairness. Physicians pay \$3.00 for their Medical Journal, containing no more reading matter than this one.

\$1.50 now is worth more to us than \$2.00 many months hence, with cost of time, bills and postage.

Will all friends please think of this, and help us in the work by an *early* remittance.

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## EDITOR'S SPECIAL CORNER.

THE word gospel, as applied, first it appears by a clergyman, to the "good news" of health, the knowledge or intelligence relating to the means of preserving a healthy condition of the bodily functions, was a happy and appropriate application. There are vast numbers of people who, like the ancient "dwellers of the heath"—the "heathen"—live in utter ignorance, receive not, and indeed sometimes resist, the truths, the glad tidings of health, which would, if received and acted upon, save them and their descendants from many physical ills and early deaths. There are a few, and but very few, who seek or grasp after this new gospel, while there are thousands to whom it must be sent and given, freely and without price, or they never will know of it. Hence, in almost all countries there are societies or associations for spreading free the gospel of health, as by means of sermons or lectures, tracts and the like. In England and the United States there are many such bodies. In Australia there is a very vigorous and successful "Health Society," with headquarters at Melbourne, which has recently issued its eleventh annual report. This Society has a sanitary library, and lends out many books on subjects pertaining to health.

In Canada such a Society is much needed, as much as in any other country. The death rate and sickness rate here are high, twenty to twenty-five per cent. higher than in England. In no other way, we are per-

sued, can these rates be satisfactorily lowered except by educating the people in the rules of health. There are hundreds of thousands of people in Canada who are in dense ignorance of these rules, and will probably remain so for decades, if not for centuries, if special means of this kind are not used to enlighten them. Meanwhile, amongst them many thousands of lives are yearly sacrificed and an incalculable amount of sickness and consequent suffering arises from this ignorance. For more than a dozen years we have been the means of having distributed yearly many thousands of little books, in the form of a "Health Journal," in which, as we have been told, repeatedly, there has been given much useful information, and we have no doubt it has been as seed which has borne, and will continue to bear, much valuable fruit. While we shall continue to send the JOURNAL to those "wise" few who seek and pay for it, we must cease to impoverish ourselves by sending it free as we have done to the many thousands who appear to think it something which they should get as free as the gospel of the Bible. For the benefit of these last we trust a society will soon be formed.

SANITARIANS usually regard their field of labor as limited to epidemics, sewer gases, scavenging, water supply, and the like, neglect in which gives rise chiefly to zymotic diseases, and while the field of the health officer is practically confined within such limits, not one-third of the premature deaths



which occur are caused by this class of diseases. Those who would assist in spreading the gospel of health, must remember that at least three times as many deaths are caused by local, constitutional, and developmental diseases—diseases of the lungs, liver, kidneys, brain, bowels, &c., and consumption, cancer, and the many diseases of infants, arising chiefly from errors in diet. In the suppression of the prevalence of these fatal diseases, the health officer, with his powers of coercion, can do but little. The philanthropist or the Government, on the other hand, by disseminating practical information, amongst the masses of the people, in relation to diet—more especially the diet of infants; to ventilation—the want of which is a most fruitful source of consumption and other diseases; to clothing and exposure of the body to sudden changes, to bathing, exercise, and rest and sleep, could do a very great deal to prevent sickness and suffering and premature deaths.

The adulteration of food is a source of disease often leading doubtless, more or less directly, to serious consequences, especially among the poor, who consume the larger proportion of such foods. In the United States there has been a vigorous movement toward the suppression of the vile practice of adulteration, and the necessary legislation is demanded. In Canada we are ahead of our neighbors in this regard, and have now stringent laws for the suppression of the villainous practice. The difference between this country and that other is just here. While there the press and the public are aroused and are urging the Government on to action, here the Government have wisely already taken action on behalf of pure food, but the public and the press are dormant and are not assisting as they should do in the efforts being made to have the law carried out, and in exposing the guilty and bringing them to justice and to their well-merited punishment.

The adulteration of houses is a subject to which we have referred on various occasions before now. Much sickness, as well as crime, arises from badly constructed and over-crowded dwellings, and a suitable law should be enacted to prevent builders or landlords selling or letting houses not entirely free from anything injurious to health. Foul gases from dampness, scamped plumb-

ing and want of proper means of ventilation in houses, are as much adulterations as are sulphuric acid in syrup and vinegar, glucose in sugar and honey, and water in milk. Judges and juries are beginning, too, to take this view, and many actions at law have been reported in which a tenant has recovered damages for sickness proved to have been caused by these adulterated houses. But the processes of law are costly and deterring, and as prevention is in all cases better than cure, there should be a special and general law to protect the public from adulterations of this kind as well as from the adulteration of food.

THE "Sunday question" crops up now and again, and is now once more being discussed. The seventh day as a rest from all physical labor has doubtless a hygienic aspect. Some interesting experiments have been conducted at Munich, which show that a hard day's work diminishes the amount of oxygen in the system about one ounce. "It has been found that the laborer does not recover during the night the oxygen he has thus overdrawn. But an occasional day of rest, coming at just the right time, will serve completely to restore the equilibrium and make him as good as new. It has been found that the amount of exhaustion of the oxygen of the system—in other words, of the life power—by six days of labor is the amount that can be supplied by a day of complete rest." Von Humboldt once said: "I am convinced that six days is the just and true measure suitable to men in regard to their physical powers and perseverance in a monotonous employment. The selection of the seventh day for rest is certainly the wisest that could have been made." It would seem that the Sunday rest has its foundation, like many other ordinances of the "Giver of all good," in the physical needs of the human race.

#### OBSERVATIONS AND ANNOTATIONS.

WHAT are Ottawa and other cities doing in the way of making preparations for spring cleanliness? Anything? It is to be hoped the Mayor will not neglect to fulfil his promises of recent date in relation to making Ottawa first of all a healthy city. The Capital is well situated for this and ought to be one of the healthiest cities in the Dominion.

ON village improvements, the *Orillia Packet*, in referring to an article in the *Century*, truly says, the first step in village improvement should be to promote its healthfulness. It is a very poor sort of improvement which occupies itself in laying out walks, &c., &c., while it leaves the air around the dwellings to be polluted by the noxious effluvia arising from a neighboring drain or from foul substances left upon the surface, or which leaves households to depend for their water upon wells situated near cess-pools. "It is a cleaning of the outside of the cup and platter, while within it may be full of uncleanness." It would be well if more local papers would "rub" these facts more into their readers.

MONTREAL has made satisfactory sanitary progress of late, which is largely attributed to the energy of Mr. Ald. Gray. Plans for the following have been carried out: For the burning of the contents of the privy pits and all the city's household refuse; the building of a small-pox hospital; the re-organization of the Health Office on a good, practical, working basis; the regular reporting to the Health Office of all baptisms by both Catholic and Protestant ministers; the disinfection of houses after diphtheria and scarlet fever, and efficient house to house inspection.

In Toronto they appear to have good intentions. Committees "visit round" and see what other cities do. The fierce, slaughtering awakener of even well-fed aldermen, in the shape of a loathsome, terror-striking epidemic, has not sojourned among the people yet. The medical health officer has a pretty "tough time" in his efforts to keep things tolerable and make a little show of progress. A few dollars per head properly expended would make Toronto one of the most healthy cities on the continent. But she simply "won't." She would rather keep the few dollars per head in the bank or in her pocket, or, being a commercial city, "turn it over" in "trade."

ONE good thing Toronto did—reduced the number of saloons there. An example which ought to be more generally followed. This was much against the wish of many of the city fathers. *Grip* illustrates the event with a most touching funeral scene, headed

by the biggest-bodied alderman of modern times, in tears, and says:—"Most touching descriptions were given by these very humane gentlemen of the hardships in store for the doomed saloonists and their families. True, these hapless men will then have to work for their living, but they will have the consolation that their new occupations will not necessarily mean the ruin and degradation of their neighbors."

A LABORATORY OF HYGIENE is being asked for by many prominent citizens of Michigan, and especially by the State Board of Health. A "Farmer" writes to the *American Pharmacist* in the following practical manner concerning it. Should the Legislature grant the funds, what will the people get in return? "A study of the subject warrants me in saying that a decrease of the average sickness will follow as surely as the plow follows the horse." The health report shows that "even with the imperfect means at the command" of the health officers of the State, there has been an "increased health," which when estimated "represents a saving to the people of over a million dollars." "To the farmer will directly accrue advantages not hitherto enjoyed," in the way of analysis of soil, water, &c., with the view of determining their effect upon the health of their families. "In the detection of adulteration in food—as in butter, jellies, preserved and canned fruits, etc., the farmer will reap a direct pecuniary benefit, as these, when shown to be prejudicial to health, will be removed from competition with the honest article manufactured by the farmer. Were oleomargarine entirely barred out of the market, the direct gains of the farmer in consequence in one year would pay for four laboratories such as is asked for."

In the *Canada Medical and Surgical Journal* Dr. Osler writes:—"What has become of the opponents of the germ theory? They seem to have been buried under the avalanche of bacterial literature which is pouring from the press. They are very quiet in England, even Dr. Bastian has not said anything since the debate at the International Congress in London; in Germany??; in France, Jaccoud and Peter occasionally enter protests, Cornil and Lancereux have carried the profession with them."

In referring last month to the chief officer of Orillia, we did not refer to the chief health officer, as the *Packet* appears to believe, but to the man elected by the people as chief officer of the town, and who is supposed to largely control the Council.

WET NURSES are strongly objected to by Dr. J. Lewis Smith, Prof. of Diseases of Children, Bellevue Hospital Med. College, in the *Journal of Reconstructives*. "A large proportion of the wet-nurses are morally and physically unfit for the duties which they seek. Many a wet-nurse has insufficient milk, or milk too thin and innutritious. Some wet-nurses are scrofulous, tubercular, or even syphilitic, and they resort to various expedients to conceal their defects. Many who might be good wet-nurses, have bad habits, and are so deficient in the requisite mental and moral traits, that their application should not for a moment be considered. Although we strongly recommend wet-nursing as a substitute for maternal lactation, provided that wet-nurses of the right kind can be obtained, nevertheless it is much better, much safer for the infant, to incur the risks of hand-feeding than to be intrusted to one who has serious bodily or mental deficiencies. Many cases of sickness and death of infants are attributable to bad wet-nurses."

"PINK PILLS" is the latest humbug we have observed. Is there no way of preventing a man or a company, who would advertise such a swindle and in such a filthy way, from placing "doctor" before his or its name? If not, there ought to be. All such, and especially "wizard oil" idiots, who made Ottawa hideous for a month recently, will, it is hoped, have a special place assigned to them in the future—say along with food adulterators.

BUT even the religious, as well as the daily press, sanction advertisements of such nostrums, and of the vilest sort, and so such filth finds its way, for the first time often, into many a pure family circle. The *New York Medical Record* has justly said: "While these Christian men are supposed to be sowing the good seed, they are being paid by the enemy to allow the sowing of tares also. But, unlike the enemy in the parable who came by night, the quack walks in broad daylight in company with the sower himself,

and with his free permission plies his damnable trade."

A BETTER EXAMPLE has been set by a weekly family journal in Philadelphia, *Quiz*, which contains the following notice: "Its prominent (advertisement) spaces are not taken up by quack medicine puffs and their obstrusive typographical devices—*Quiz* refuses all such—giving every advantage to reputable merchants and their wares."

AT a sanitary convention in Michigan last month, Dr. Stoddard read a paper on "Injuries of Every-day Drug-taking." He said the habit of taking drugs and nostrums was beyond comprehension. It partly comes from mothers dosing babies with soothing syrup, hive syrup, paregoric, worm lozenges, etc. Druggist and proprietary medicine companies distributed flaming bills, chromos and free samples of nostrums from house to house. The prevention was to educate the people in the injurious effects of drugs. There should be less medicine taken, and only on the advice of a physician after a careful diagnosis.

AT the celebrated convention of German physicians, held in Salzburg in 1881, to consider the subject of infant feeding, composed of men who have had such ample experience, and have contributed so largely to pediatric literature, that they are widely known as authorities in whatever relates to the care of infants, all agreed that animal milk is the food which, in the highest degree, promotes the growth and development of infants, and which therefore should be recommended in preference to any other kind of food. But the important problem arises how to prepare cow's milk. In the next number of the *JOURNAL* we purpose devoting space to this important subject.

AN authority on canned goods, says the *N. Y. Medical Times*, reveals the fact that most of the jellies in the market are made of apple parings and cores. Sometimes the stock is kept so long that it will not jelly; then they make strained honey of it. This is called enterprise in America. In France they call it a crime and jail the perpetrator.

THE *New York Medical Times* states that "Convulsions may frequently be cut short, like magic, by turning the patient on his left side. The nausea as an after effect of

chloroform or other narcosis may be generally controlled in the same manner."

The vital statistics of Paris show that 28 per cent. of all children are illegitimate. Of still-born, 35 per cent. are illegitimate.

MEDATH, the Italian, exceeded Tanner and Griscom in their prolonged fasts, having fasted fifty days, under strict surveillance, with no other sustenance than filtered water. He lost twenty-two pounds in weight.

The system of garbage cremation is as old as Jewish Jerusalem. The crematory outside that city was called Gehenna, and furnished the symbol of final destiny for the wicked that was introduced by the Lord Jesus.

STATISTICS recently published by the French deputy, M. Lockroy, show that 29,600 out of 36,000 communes in France are without either a medical man or a sanitary officer. The death-rate in France from infectious diseases is higher than in other countries; the deaths from typhoid fever for every 100,000 inhabitants at Marseilles being 149, at Paris 63, while at Brussels they number only 19, in London 17 and at Vienna 14.

BAD PLUMBING caused the death by diphtheria recently of two children of a family in St. Paul, Minn. So the doctors said who attended the cases and tested the work. Complaint was made to the health authorities, who suspended the plumber's license; he having, besides, failed to comply with the law. Too light a punishment. He ought to have been tried and punished for manslaughter.

EVERY plumber in St. Paul is obliged to take out two licenses, one from the Board of Public Works, under a bond of \$500, and one from the Water Board, with a bond of \$5,000; to obtain a permit for every job, and an inspection and test of the same on completion.

THE eminent surgeon in abdominal diseases of women, Mr. Lawson Tait, never permits anything in the nature of organic matter to remain about his hospital, and never examines a patient there until she has taken a bath and changed her clothes. He is scrupulously clean in everything he does, and has a proper contempt for disease germs.

PNEUMONIA (inflammation of the lungs) is said to be unknown in the polar regions,

though common on the Mediterranean—increasing in direct ratio from the poles to the equator.

JOSH BILLINGS says: "If i was a doktor, and understood my bizziness, i should doktor my pashunts, and let the disease take care ov itself. More folks are kured this way than enny other."

#### NOTES ON CURRENT LITERATURE.

THE CENTURY for March contains an article on Composite Photography, by Professor Stoddard, of Smith College, accompanied by eight examples of this wierdly fascinating art. Other articles of a piquant interest in the field of photography are, we are told, in preparation for the magazine. There is an able article on "The Coinage of the Greeks;" another, the third, on "French Sculptors;" and an introductory paper to a series on the "Cathedral Churches of England." The Lincoln history enters a new stage, and relates to the "Movement for Slavery Extension." Another topic, especially noticeable herein, is that of "Faith Healing and Kindred Phenonema," which is the subject of a second paper by the Rev. Dr. Buckley, who has made a special study of the topic, his first paper having appeared in June last. Dr. Buckley combats what he considers the delusions and impositions of a fanatical creed. This paper is preceeded by an article from one of the leading disciples of the Faith Cure which may be considered as an apology for the believers in this doctrine. The number contains some lighter reading matter, pieces of good poetry, and a portrait with "recollections" of Edward M. Stanton.

MANY readers of this journal have boys and girls, and boys and girls must be provided with reading matter. We do not know of anything in the form of a periodical at once so chaste in every respect, so attractive and instructive, as *St. Nicholas*, published by the "Century Company," New York. Every number is thoroughly original, and fairly sparkles with all sorts of historial bits, in poetry and prose,—bits of travel, bits about girls, "historic girls," and boys, and dogs and birds, princes and peasants, and fairies and brownies—the last the funniest of all. With its "riddle box," and its puzzles, along with all the rest, *St. Nicholas* as an aid in-keeping boys at home has probably

no parallel. The magazine is always well illustrated, and forms, when bound, a handsome volume.

ACTUARYS is the name of a new "Canadian journal of literature and life," published in Toronto of which the well-known writer, Mr. John Charles Dent, is editor and proprietor. We have received several numbers of this weekly, which are, in every respect, of the first order,—just what one would expect of Mr. Dent. It deals with political questions in an independent and a national spirit, and discusses religious and social subjects in a liberal manner. As a literary paper we should say, from the numbers we have examined, it may fairly claim a high position, while its price, two dollars a year, brings it within the reach of a large number of readers. It seems destined to occupy, in a large measure, a special field of its own, and ought to secure, and certainly we wish it may, a large circulation.

THE POPULAR SCIENCE MONTHLY for March gives us many attractive papers. "Are Railroads Public Enemies?" is the first, and the writer does not believe the railways are as bad as Mr. Hudson and others represent. There is a highly interesting paper on "Comparative Psychology: Its Objects and Problems," by Wesley Mills, M.D., of Montreal; another on "Genius and Mental Disease;" and an interesting biographical sketch of Prof. E. L. Youmans, with a portrait. We find a valuable paper on the "Habits and Family History of Centenarians," by Prof. Humphrey, from the work of the investigating committee of the British Medical Association, referred to on several occasions in this JOURNAL. And, perhaps most important of all, a paper on "The Higher Education of Women and the Family," in which the writer especially refers to the address of Dr. Withers Moore, a synopsis of which was given in this journal a few months ago.

THE ANNALS OF SURGERY, which is the only journal published in the English language devoted exclusively to surgery, is a superior monthly. It gives very able practical papers by some of the best writers and authorities. Illustrations are introduced whenever required to elucidate the text. The last number, for March, just to hand, contains an admirable and exhaustive editorial article on

"the Surgery of the Liver;" and indeed a second one on the discussion of this subject at the last meeting of the British Medical Association. The *Annals* are published simultaneously in London by Bailliere, Tindall & Cox, and in St. Louis, U.S., by J. H. Chambers & Co. Each number contains from 90 to 100 large octavo pages, and its general typographical appearance is all that could be desired, making two nice volumes a year for binding.

#### HEALTH MAXIMS FOR DAILY PRACTICE.

You may always be able to earn and get money, but health once lost you may never regain.

One-fourth of the disorders of fashionable life are said to be due to lack of sufficient water in the dietary.

Water acts as an internal as well as an external health bath, and one who drinks but little water is not clean inside.

Learn to enjoy the "good thing" of the table by eating them very slowly.

It is a good rule to try how fine you can chew every mouthful.

Never take a mouthful of drink when you have any solid food in your mouth.

Never eat when very tired, nor when over-heated.

#### PUBLISHER'S NOTICES—FOR THE READER'S BENEFIT.

THE "GALE SPRING MATTRESSES" are a superior article—EASY and DURABLE. They thus fulfil the two chief requirements in this part of the bed, on which resting place man spends the third of his life. Anyone wanting a superior wire mattress can obtain one of these through any dealer, or direct from the manufacturer, Waterville, P.Q.

INTENDING purchasers of furniture should, before purchasing, visit the store of Messrs. Harris & Campbell, on O'Connor St., near Sparks. They will find there a handsome, well-selected stock, at very reasonable prices.

THE "SEELY'S HARD RUBBER TRUSS" is becoming recognized very generally as the best made, in every respect. It is light, cleanly, durable, and little affected by time, the fine steel springs being covered with highly-polished hard rubber. Sold by nearly all druggists. In special cases address the makers, 1347 Chestnut St., Philadelphia, U.S.