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THE
SANITARY JOURNAL

DEVOTED TO THE
PUBLIC HEALTH
 AND KINDRED SCIENCES.

EDWARD PLAYTER, M.D., EDITOR.

SALUS POPULI SUPREMA LEX.

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DIET--IT MAKES THE MAN AND THE NATION.

BY THE EDITOR, EDWARD PLAYTER, M.D.

“What shall we eat and drink, and wherewithal shall we be clothed? In each succeeding generation these questions appear to have received added importance, and to have kept pace with man’s progress towards a higher and still higher civilization.” So commences an article on “Modern Modes of Living,” in the June number of the *Canada Lancet*; which closes with the following sentence: “What to eat, and how to eat, we claim, are questions of the most vital interest to each individual and to society at large, and more worthy the attention of the hygienist and philanthropist than most people imagine.”

Successes and failures in life depend more upon the food that is eaten than most people suppose. Not only does the maintenance of health and life depend in the highest degree upon the supply of a proper quantity and quality of food, but the very nature or character of the life depends vastly on this supply. “The records of this and other nations,” writes Dr. Favy, probably the greatest of modern writers on diet, “have from time to time afforded bitter evidence of how intimately disease and mortality are associated with the supply of food. *Plague, pestilence and famine* stand associated together in the public mind, and, through an imperfect knowledge of the principles of dietetics, the most calamitous results have sometimes occurred from improper dieting amongst large bodies of men.” The records of nations do not perhaps afford the same manifest and manifold evidence that the personal qualities, the moral faculties, the disposition and humors of the people, are also intimately associated with the nature and quality of the food habitually consumed; neverthe-

less, there is both theoretical and practical evidence, which observation confirms, that such is the case.

THE PURPOSE AND SOURCE OF FOODS

Need not be dwelt upon here. Foods must contain the elements of which the bodily tissues are formed, for the growth and repair of the tissues, and substances which may be readily oxidised or burned, for supplying heat and force to the body; and they must be of such a nature as to be capable of solution or "digestion" in the alimentary canal. All organic matter has its primary source in the vegetable kingdom, and all foods are derived in the first instance from this kingdom. Vegetable products contain, with tissue forming substances, a store of force, accumulated from the vast supply continually emitted from the rays of the sun—potential energy, which the human organism, like other animal organisms, converts into various forms of actual energy, and these products are used by man as foods in great variety.

ANIMAL AND VEGETABLE FOODS.

It is, and with a portion of mankind probably always will be, an unsettled question whether animal or vegetable food is best adapted to the necessities of the human organization. While some nations, as in the torrid zone, subsist almost wholly or perhaps quite, upon food selected from the vegetable kingdom, other nations, in the frigid zone, feed solely upon animals, in temperate climates, amongst civilized nations, a diet consisting of a mixture of both animal and vegetable foods is almost universal. This is doubtless as it should be. If ever there is to be a change, it seems more probable that in future ages mankind, as the race reaches greater perfection, will subsist even still more than at present upon animal food.

Animal food being identical with the structures to be built up and maintained in the human body, contains neither more nor less than what is required for growth and renovation. In vegetable foods, on the other hand, we encounter starch, gum, lignine and cellulose, which have no existence in the animal body. These are as a rule more indigestible substances, and, indeed, the two latter are quite insusceptible of digestion by the human digestive powers, and simply traverse unchanged the alimentary canal. In the digestion of vegetable food, then, on the whole, a more complex process has to be gone through than in the digestion of animal food. Animal food may be regarded as vegetable food which has been once digested.

The vegetable feeder goes for his food directly to the vegetable kingdom; the animal feeder obtains his from a more highly organized source—the flesh of animals which, chiefly, have themselves subsisted upon vegetable products.

Vegetarians, so called, are it appears increasing their number, but it seems very improbable that the human race will ever become entirely vegetarians in regard to food. Vegetarians will doubtless do good by preventing a too rapid or complete change to a more exclusively animal diet, or over indulgence in animal food—prevent perhaps many attacks of gout and ill temper, doctors' bills and wounded feelings, but they never will convert the whole human race to vegetarianism; it would involve a waste of human force for purposes of digestion that human progress will never tolerate.

We are told that man originally subsisted solely on vegetable foods; and also that we ought to live *naturally*. On another page are some remarks bearing on the question of man *following* nature. Has man any *natural* food, especially in this civilized, perhaps too highly "artificial" life? It was decreed that man should "earn his bread by the sweat of his brow," which indeed even to this distant generation seems, as Pope has it, a

"Fixed decree which not all heaven can move."

Man by his wisdom and industry must discover substances upon which he is to subsist. If he cannot find such quite suitable and ready formed he must cultivate and alter them *from* their *natural* state to suit his purpose. There is hardly a vegetable which is at present employed by man as food that can be found growing naturally. The cereal grains in their present condition are really factitious productions, so are nearly all, if not all, the fruits and so called "vegetables" used as articles of diet. They have been developed by man's skill and industry from plants not now resembling them even to a degree that would enable us to recognize their relations. Likewise it is, or to almost the same degree, with the animals used as food.

We do not however, it must be observed, recommend the too free use of animal food. Individuals are much more liable to indulge to excess with animal than with vegetable foods, and the fluids of the body are more likely then to become overcharged with superfluous or excrete matters. A proportion of about one-third animal to two-thirds vegetable substances is the most that the best authorities recommend.

THE NATURE OF THE FOOD AND CHARACTER OF THE PEOPLE.

Has not some one said, tell me what sort of food a nation subsists on and I will tell you the character and standing of the people? When it is considered that every thought and word and act is the outcome, directly or indirectly, of nerve or brain influence, and that the brain is sustained only by the food we eat, through the blood, it can be readily enough understood that the nature of the food must influence the character of the thoughts and words and acts. And furthermore, when one considers the close relationship that exists, as every one knows, between the stomach and the brain, and that any physical discomfort (as from indigestion, or dyspepsia) directly influences mental perceptions and actions, one need not have difficulty in comprehending the extent to which the food consumed may and must influence the character of the individual.

It appears there are two ways in which the diet may influence character: one in which improper or excess of food gives rise to derangement and disorder of the digestive organs, in which even heredity not infrequently plays an important part, and of which the history of Carlyle affords an example; another in which some more subtle and less understood influence is exerted, and only becomes manifest through hereditary influences in more or less remote generations. Observe the difference in many characteristics existing between the English, the Scotch and the Irish people. It is well known that the nature of the food used by the masses of the people in England and in Scotland and in Ireland differs materially, and it cannot be doubted that to this is owing in a large measure the difference in the characteristics of the people.

We cannot do better than to give here the words of the *Lancet*, in the article above alluded to. Truly, "as a person by eating naturally and rationally may eat himself, so to speak, into good health, and the happy, joyous spirits which bodily vigor confers, so by eating unnaturally and irrationally, a person may eat himself into ill health, ill nature, unhappiness, and even crime. Unkind words, domestic jars, and social discords, are, in no small degree, due to imprudent eating. Indeed, so long as faulty digestion continues to prevail to any considerable extent, just so long will domestic disquiet and social discord continue to drive happiness from our homes and peace and good-will from society."

THE QUALITY OF THE FOOD—GOVERNMENT SUPERVISION.

In considering dietetics, the quality of the food consumed is perhaps of the first importance. It should be *good* and *pure*, the best and purest of its kind. There is a tendency in all foods to undergo certain changes of a chemical nature—to deteriorate—some rapidly, some slowly, and to thus give rise to substances of a character more or less poisonous to the human organism, when eaten. Furthermore, most foods soon become a prey to, or a soil for the development and multiplication of, vegetable or animal microscopic organisms of a more or less poisonous character—various sorts of moulds, as *mucor* on fruits, and bacteria and monads. Hence “eternal vigilance” must be exercised or we are liable to be poisoned; while “tricks of trade” add to the risk. There is no denying these facts. We desire not to be alarmists; but if we would eat only pure food we *must* exercise great watchfulness. The great summer mortality amongst young children in cities, where food supplies are more exposed to such influences, is mainly due to the causes just above indicated. They are virtually poisoned by impure foods.

There is one thing of much importance in relation to the quality of foods which demands attention, but to which we have never known of any allusion being made. That is the too “forced” culture of both vegetables and animals for the market—the too rapid growth and fattening. It is for example the practise in some places to confine poultry very closely and so cram them with food as to fatten them very rapidly—even in a few days. Fowls treated in this way do not form wholesome food. Only a few days ago a most reliable gentleman informed us that in eating rhubarb pie early this season at a restaurant in this city he positively detected in the pie the taste or flavor of the stable manure used in forcing early and rapid growth. To put it mildly, this is carrying the forcing process rather too far. Such foods can not contribute to either mental or physical welfare.

It is at the present time only in relation to the quality of foods that state or municipal authorities can step in and exercise authoritative control in matters relating to the public food supply, and it is of the utmost importance that there should be either in connection with the government of the country or with the municipality a most complete, thorough and careful system of inspection of foods.

For the next number we must leave some remarks on the quan-

tity of food necessary ; the times and manner of eating ; and on the great importance of parents paying attention to the diet of their children—the future generation, which will influence all the generations to follow.

WOODEN STREET PAVEMENTS.

With the luxuries of civilization come also difficulties in connection with sanitation. The luxury of good city streets is no exception. The real difficulties in nearly every case, however, arise rather in, or by reason of, the manner or way in which the luxuries are formed, built or constructed, than in the luxuries themselves, in the abstract. This is particularly the case in regard to wooden street pavements. On every hand—surrounding us, are materials of wood, in no way injurious to health, why should not our streets be paved with wood ?

Anything injurious to the public health arising directly from wood paving, arises through the decay or decomposition of the vegetable product giving rise to noxious gases and to soil and conditions for the development and growth of the lowest forms of microscopic organisms—moulds, bacteria, etc. Where there are vegetable substances in contact with water from insufficient drainage, with sufficient heat, there will be decomposition, with the exhalation of just such poisonous effluvia as above named into the surrounding atmosphere. In cities, some of the germs of such organisms are sure to come in contact with susceptible human bodies, where they will take root and give rise to serious disease. Cannot wooden street pavements be so constructed as that they will actually wear out, like the floors of houses, before there is any appreciable decay or decomposition ? They can.

DRAINAGE OF THE STREET.

First, and probably most important of all, ample and efficient provision must be made for the most perfect drainage of the soil of the street on which the pavement is to be laid. If the soil and foundation of the pavement be kept dry, the decay of the under part of the wood will be prevented, almost indefinitely—it will wear out before it decays. All water, gas, drain, and any other pipes likely to be required, ought first to be laid down in order that the pavement need not be taken up after it is once laid. In London, Eng., there is a street, under the concrete-wood pavement of which, from end to end, is a subway, 12 feet wide by 8 feet high, with branch or side subways,

by means of which gas, water or other pipes may be laid down, and also the house service-pipes connected therewith, without disturbing the pavement. The main sewer is under the central subway and connected by the side subways with the house drains.

THE FOUNDATION FOR THE PAVEMENT.

If the provision for drainage of the soil be perfect, the usual sand foundation, as adopted in Toronto and most other cities, can hardly be objectionable so far as the public health is concerned, yet doubtless with a dryer and more solid foundation there would be less tendency to decay of the lower ends of the blocks; but will this sand foundation prove to be the most economical in the end? In London, Eng., they make a foundation of macadam or concrete to a depth of 6 or 8 inches, solidified with heavy rollers, making an even surface, sometimes including an asphalt mixture on the top of the macadam. The foundation must be crowning in the centre, so that it will dry rapidly after being wet. As the *N. W. Lumberman* has it, "the secret of a good wood block pavement is in the formation of a solid foundation from which the water can quickly drain after a rain-fall;" and "preferably the top should be water-tight." Such a foundation as above mentioned, as made in London, would last for ages and the renewing of the blocks from time to time would be a matter of comparatively little expense.

THE PAVEMENT ITSELF

Should consist of blocks of perfectly sound, live timber, if of pine, free from sap, and all interstices should be well filled with gravel, and better, well cemented; the whole being retained by curbstones. It is recommended that after the wear of a year or two or more, according to traffic, a second coat of gravel be put on, in order to restore the metallic surface gained by the tramping and rolling in of gravel by the horses and vehicles which pass over it, and which will wear off, more or less, in time. Such a pavement would wear out before there would be appreciable or injurious decay of the wood.

A strip of "boulevard" of a yard or two at least in width between the street pavement and foot pavement or sidewalk is a wise provision, not only as regards appearance—for the growth of grass, flowers and trees, but that there may be a much freer interchange of atmospheric air beneath and around the pavement and its foundation.

THE CLEANING AND REPAIRING

Of the pavement after it is laid must be closely and constantly attended to, not only as bearing upon the public health but as a matter of economy. If the droppings of the horses are allowed to remain on the surface and decay, this will be quite as objectionable as the decaying of the blocks. If kept perfectly clean, but little watering will be required even in the driest and hottest weather. The interstices at joints must be kept well filled with gravel, and all defective or too rapidly wearing blocks at once replaced; and any parts settling must be raised in order that there shall be no standing water whatever.

THE ADVANTAGES OF WOOD PAVEMENT

Over all other pavements are so great in most respects that it should have a fair trial in every way. The fact that it is comparatively noiseless is one very great recommendation, though asphalt is almost equally so, but is more slippery when muddy, and more wearing on horses and vehicles. A noisy street in a city cannot but be injurious, a little or more, to the health, especially of "nervous" individuals. Wood pavement is cleanly, giving rise to little dust, and when well constructed, on a good foundation, is probably the most economical for this country. According to the *N. W. Lumberman* (in *Scientific American*), in wear and tear of vehicles, horse flesh, and shoeing, the saving in the life of horses is as five to two in favor of wood, and in repairs and shoeing, as two to one; in other words, it costs just one-half as much to keep up repairs upon shoes and vehicles upon wooden pavements as it does upon the stone and asphalt, and three horses will last as long travelling upon wood as would five upon the harder surfaces.

PROFITS OF MUNICIPAL HEALTH OFFICERS.

The people of every municipality in the Dominion, probably without exception, employ on an average two or three or more medical practitioners in efforts to cure certain afflicted ones of them of some one or another of the various diseases to which all are more or less exposed and liable. For this the people pay in cash yearly from four or five thousands of dollars, in the smaller or less populous municipalities, to tens of thousands and even twenties of thousands of dollars in the larger towns and cities. Every intelligent man amongst them will concede that there is no truer saying than the old

familiar one, that prevention is better—*more profitable*—than cure. Every one will carry into practice, too, to a great or less extent, the principal this true saying involves, in every thing probably except in matters relating to health, even the health of the people; for the domestic animals are often less neglected in this regard than the domestic human family. The farmer will have a furrow made with the plow from low places in the field he has just sown with grain to prevent “standing” water checking or destroying the development and growth of the prospective crop. Houses and fences and implements are protected by paint to prevent decay, and various precautions are taken to prevent losses by storms and by fires. But infinitesimal indeed are the means used to prevent sickness in the family. Why? Can any one tell? “Every body” will admit, for every body knows, that a large proportion of the sickness which prevails may be readily enough prevented—one-third of it, at least, it is estimated by those most competent to judge, and this by the judicious application of practical public health measures, proper, aside from what may be prevented in individual cases by the practice of individual hygienic measures. This is no over estimation.

The payment to every practising physician of at least two thousand dollars per year, on an average, is but a small part of the actual costs of sickness. The nursing and other expenses, with the loss of time in case of those old enough to work, cost usually vastly more than the doctoring; and this aside from the grief, mourning, bereavement, the irreparable loss, associated with preventable death.

If in every municipality a competent physician were paid, by the municipality, a moderate sum, say at first of from \$200 or \$400 to \$800 or \$1,000, according to the size of the village, town or city, or even township, to give a portion of his time to the work of *preventing* sickness, it would doubtless prove on an average to be by far the best invested money spent by any corporation. Some who read this may ask what a health officer could do in the way indicated? He could look after the general drainage and the water supply—whether from wells or other source, of the place; advise in regard to the condition of cellars—too often an immediate source of illness in a family, and the disposal of waste or excremented matters; and so greatly lessen the risk of typhoid fever, diphtheria and other epidemics. He could attend to the condition of the schools, through which disease is often spread; see that any case of infectious disease were properly isolated or so managed that the disease would

not be communicated to others ; and a great many other preventive things.

It must be remembered, for it is well known, that while, from one case of say diphtheria or scarlet-fever, dozens and scores of other cases may arise in a community, through neglect of ordinary precautions, and many deaths follow, by the exercise of proper precautions—*isolation, quarantine, disinfection*, probably not a second case of the disease would arise, and all the trouble, cost and distress associated with the many cases would be avoided. An instance is recorded in which in one locality some seventy cases of small-pox were traced directly to one first case.

It may be said that individuals should attend to this, and not the municipality. Individuals will not do it. What is everybody's business is nobody's business. Physicians are not paid, would not be even thanked, for spending their time and energy—for a good deal of time and energy would be required, in this sort of work, and heads of families, for the most part, will only look after their own affairs, and leave their neighbors to do likewise—to their neighbors' care. There should be some one specially appointed and paid to attend to such work—just as there is for most other work.

This will reach many municipal "fathers,"—mayors, aldermen, &c., and we hope be read by them. *The prevention of disease is no more advantage to the writer than to any other member of any community, no more advantage—hardly so much—to any medical practitioner, as is obvious enough. But the prevention of disease is doubtless desired by all. Let those connected with municipal government especially ponder these things well and they will hardly fail to see the practical value of the indications and suggestions ; and we shall hope for a general movement toward carrying them out, and that there will be ere long a medical health officer in every municipality in Canada.*

GOVERNMENTAL PUBLIC HEALTH ORGANIZATIONS.

Many times in this JOURNAL (and more especially a year ago last February), we have estimated the costs of preventable sickness and death in Canada. It has been shown that if the death rate and sickness rate could be reduced one tenth part, there would be actually saved to the people of this Dominion, over thirty eight millions of dollars yearly ; to say nothing of the anxieties and trouble of

sickness, and the bereavements by death. There are probably not less than 80,000 deaths every year in the Dominion, and 8,000 lives would therefore be saved annually. The best authorities in Great Britain have estimated that there the deaths, and consequently the cases of sickness, are fully a third more numerous than they would be if the existing knowledge of the causes of disease were properly applied; and that 250,000 persons were saved from death through the application of sanitary knowledge during the decade 1871 to 1880. Surely then a reduction of one-tenth might be reached in Canada.

Elsewhere we have endeavored to point out the advantages—the direct profits, which would result from the appointment of a medical health officer in every municipality; for it is in these localities that the practical work must be done, by the local officers. But in order that the work may be most efficiently done there must be Governmental centres—Departments or Boards—to which the local officers should report at regular intervals, and through which all could work unitedly, though separately, forming a complete sanitary organization. Our Federal system of Government seems to require provincial health departments as well as a Federal one at Ottawa, in order that the system may be complete. Surely such are as desirable and as necessary, as departments of immigration, or of agriculture, or those in connection with the liquor licence system, all of which there are in connection with the Provincial Governments, and also with the Federal Government. There need be no clashing between the Federal and Provincial authorities in health matters any more than there is in the departments just named.

It is to be desired that Quebec Province, which has been for some years moving toward it, will soon adopt the necessary legislation for forming a provincial board, or much better, a sub-department of health directly connected with one of the existing provincial departments; and also that all the other provinces will do likewise. The general apathy in regard to public health matters in this otherwise "go-ahead" Canada is unaccountable.

What is needed most of all is a Central Health Bureau in connection with the Federal Government—a Dominion Department or sub-department of health. The coming meeting of the Canada Medical Association in Kingston in September promises to be one of much interest and value in relation to sanitary matters, and we hope to see this question of a Federal head in connection with public health

taken up and some definite and practical plan settled upon which can be laid before the minister of agriculture, who would doubtless act upon it if possible. The expense yearly of such a department, or ordinary board if preferred, need be but comparatively trifling, and could accomplish a great amount of good in instructing the people, and creating public and individual interest, in sanitary matters.

BACILLI—GERMS OF INFECTIOUS DISEASE.

In the interests of the public health a knowledge of the germs of disease cannot be too general and clear. A vague notion has prevailed from a remote age that infectious diseases are produced by minute living organisms : but it is only since Pasteur's researches on fermentation and putrefaction, and, more recently, his experiments on inoculation, together with those of Koch, Cohn, and other investigators, that the vague notion has taken the position of a very generally accepted doctrine. Comparatively few now doubt that these diseases, or perhaps rather the symptoms and consequences of these diseases, are due to the development and growth in the human body of myriads of living bodies. In size and form these are among the smallest and simplest of living things, and their chief manifestation of life is in their wonderful power of reproduction and multiplication. In a human organism furnishing suitable soil, they rapidly become so numerous that there is as it were a struggle for life between the parasitic invaders and the natural cell elements of the body. In this and succeeding articles we purpose giving a brief history of these little bodies, so far as the present knowledge of them permits, which will it is to be hoped prove of practical advantage in relation to the suppression of infectious diseases.

There are many forms of bacteria, constituting a large class of organisms, which have been grouped together under the designation of *saprophytes* (from the Greek, signifying plants which live upon decaying organic matter). This includes all the organisms associated with the decomposition and decay of organic substances, the yeast-plant and its allies and all the varieties of bacteria. They are indeed the essential agents in all decompositions and putrefactions, and we are but just beginning to realize their importance in relation to the health and life of the human race. Most of our readers are familiar with the nature and peculiarities of the yeast-plant. There is another very common bacterium, the *bacillus subtilis*, found in

vegetable infusions and in curdling milk. These two may be taken as representatives of the group above referred to. The bacillus subtilis (bacillus, from the Latin, a small stick or staff) is a straight rod-like body, so short in its longest diameter that it would require 3,500 or 4,000 of them placed lengthwise—end to end, to extend to the length of one inch.

THE BACILLUS ANTHRACIS—METHOD OF ITS PROPAGATION.

The first reliable observation of the presence of foreign organic forms in the body in infectious disease was made by Pollender in 1855. He discovered minute staff-shaped bacteria in the blood of animals suffering from anthrax or splenic fever, a formidable disease to which sheep, cows, horses and man are liable. The discovery was confirmed by the researches of Brauell, Davaine, Klebs and, most of all, and more recently, by Koch, who has removed all doubt on the subject. According to Cohn, the organism of splenic fever, the bacillus anthracis, is a straight, rod-like body, identical in size, form and development with the bacillus subtilis. The only difference between them which he could detect was, that while the former were motionless, the bacillus subtilis exhibited movements. Yet one is a deadly contagium, the other a comparatively harmless saprophyte.

The manner of propagation of these bacilli, as observed by Koch, is most interesting. He placed a speck of the spleen containing the bacillus on a glass slide in a drop of the blood-serum of an ox, and covered it with a piece of thin glass. He kept this in an incubator, at about the temperature of the body, and examined it from time to time under the microscope. In a couple of hours the rods began to lengthen, and in a few hours more they grew into long threads from twenty to a hundred times as long as the original rods. By and by they assumed a dotted appearance and the dots gradually increased in size and distinctness, until, after the lapse of fifteen or twenty hours from the beginning of the experiment, they appeared like oval bodies placed at regular intervals along the threads. Finally, the threads broke down and the oval bodies were set free and sank to the more depending parts of the drop. These bodies were spores, and on additional nourishment being provided, the new spores were seen presently to elongate into rods exactly resembling those originally existing in the blood of the spleen.

The bacillus of fowl cholera and that of tubercle (consumption) have been discovered and described; and also it appears those of

hydrophobia, of leprosy, and of remittent fever (*bacillus malariae*, found in the air of marshes). Some of the peculiarities of these and of the general characteristics of bacilli—how best destroyed, &c., will be given in the next number of the JOURNAL.

SHALL MAN ALWAYS "FOLLOW NATURE."

There are but few who doubt that everything is the consequence of design by the Creator and that there are certain natural laws by which the designs are carried out. We are surrounded with evidence that the Supreme Being is not alone in designing, but that, in bestowing upon mankind the wonderful intellectual capacity of which the race is possessed, He purposed that mankind should assist in designing and planning as well as in carrying out designs and plans for the improvement of all things and creatures upon the earth; and may it not be possible that so called natural laws, or some of them, as those for example relating to the development and growth of living things, or to some portion of these, may as it were yield in a measure to man's designs? We have no desire to exalt man above his natural position, but as he is the greatest work of the Creator on this sphere, he seems to have been placed here as a sort of sub-ruler, to rule the things of the earth. He may remove mountains, if not by faith, by dint of labor, mental and physical, and cast them into the sea. Man has been given, besides a marvellous intellect, a free will, limited to be sure, and subject to the universal forces, and though he is very largely the puny creature of circumstance, he is not wholly so. He has therefore a great responsibility. He is to assist in perfecting the earth and all that therein is, himself included, in all their utility and beauty. It is it may be that all mankind are, directly or indirectly, either consciously or unconsciously, more or less importantly engaged. While many are only designing to advance their own individual interests, yet it may be, they thus undesignedly and unknowingly promote in a measure, small or great, the good of the whole. Others are taking broader and worthier action, and study, often to their own immediate disadvantage, to advance directly the interests of the whole human family.

There are certain health reformers, for example, good and earnest, who aim for the good of mankind, yet who seem not regard the possibility of certain laws yielding to man's designs, and advise all to always "*follow Nature.*" No one doubts that there are certain

and many of the natural laws of life which unless complied with and followed by man, suffering and derangement of his organization are sure to follow. But it is not necessary nor desirable that man should go so far as to follow animal instinct; though not unfrequently the animals are pointed to as examples for us to follow in regard to matters connected with health. There are those who advise us to eat only of the coarser cereal grains, nuts and all the parts of fruits, and to drink only water. It is a mistake to advise, or to do, any such thing. Man, though classed as an animal, is, it is hardly necessary to state, a very different creature from ordinary animals, by reason of his vastly superior brain power, as well as by a still more wonderful, subtle and inexplicable endowment, and he should be guided by his judgment based upon broad, liberal and well considered observations, rather than by anything near akin to simple instinct.

It appears very probable that the time is not far off, comparatively, when mankind will subsist rather upon the finer extracts of our ordinary foods—of flesh, of vegetables, of fruits, and these partly digested, and drink—well, probably, in well and easily constrained moderation, light wines, and in this way save a large proportion of vital force.

In like manner it may be with many other of the essentials of life—exercise, rest and sleep, bathing and clothing. Man's judgment must be exercised in all cases, and special rules not be by all too closely followed.

Furthermore, in "tight-lacing," for example:—We wish not to be understood as advocating such strictures of the body, when carried to any near approach to extremes; the tight constriction of the waist has without doubt been a cause of serious suffering to the human form, and of proportionate injury; but lacing in moderation may not necessarily be injurious, and who can say positively that it was the evil tendency of man or of woman which first prompted to the moderate constriction of the waist, and that no good could come of it? The human form is very yielding. Moderate constriction tends to develop a graceful form, the better adapted for the general duties of human life.

It must ever be remembered that extremes of any sort in regard to health are injurious, (excepting, perhaps, extreme cleanliness and care) and that moderation must prevail if *health* and perfection are to be obtained and retained. That which in the distant future, reached gradually, would not be an extreme, would be an extreme now.

THE PORK SUPPLY.—PROF. OSLER'S INVESTIGATIONS.

Dr. Wm. Osler, Prof. of Physiology, medical department McGill University, Montreal, has made some extensive investigations into the condition of the pork supply of that city;—reported in the *Canada Med. and Surg. Journal*. One thousand hogs, taken indiscriminately, chiefly from the Dominion Abattoir, were subjected to examination microscopically.

TRICHINOSIS, he believes, from "the somewhat limited number of observations," is a tolerably common affection in Canadian swine, though not nearly so frequent as in the neighboring States. Although a larger number of swine are infested here than in Germany, trichinosis in man is with us a very rare disease, while in Germany epidemics are of yearly occurrence. This the doctor attributes to the fact that here pork is usually well cooked before it is eaten. "The prophylaxis of the pot and oven in this country and in the neighboring States does more for the public than the most stringent inspection, as carried out in Prussia."

CYSTICERCUS CELLULOSÆ is not so formidable as the trichina, but is more common and a more frequent excitor of disease. It is the larval or immature form of one of the tapeworms of man, and is popularly known as the "measle." Man is infested with two chief forms of tapeworm, the *Tenia solium* and the *Tenia saginata*—the former derived from measley pork, the latter from measley veal or beef; hence the one is often called the *pork* and the other the *beef* tapeworm. Dr. Osler issued circulars to the city physicians and made other enquiries and believes he will probably be within the mark if he estimates the number of cases in Montreal as not far short of 200. How many of these are due to eating measley veal or beef, and how many to measley pork, he could not say, but from the specimens examined it would seem that the beef tapeworm is the more prevalent.

Among other of his conclusions are the following: In the matter of meat inspection, there are some affections in which an ante-mortem examination will be of most service, as an animal may be condemned as unfit for food, the meat of which, when dressed, might pass even a careful inspector. There are other affections which, interfering but slightly with the general healthfulness of an animal, render its flesh in the highest degree unfit for food, even though it may, on superficial inspection, look healthy enough.

The investigation shows that the hogs slaughtered for our markets present parasites in numbers sufficient to necessitate a more thorough inspection than is at present carried out.

To reduce the number of infested hogs, greater attention should be paid to their hygienic surroundings, particularly in the matter of feeding.

The public should be made aware of the possible dangers of eating, in any form, raw or partially cooked meat.

BATHING.

The bathing season is now at its height. It is healthful practice: it is cleanly; it is good exercise. The London *Lancet* has just been discussing it in this wise: It is necessary to raise a protest against the recklessness which too commonly attends the recourse to bathing as an exceptional, or at most a seasonable, exercise by those who are, though eager, perhaps, not always physically fit to bathe. There is practically less danger in bathing all the year round than in doing so only at certain periods. When to begin bathing? In what weather to bathe? and under what conditions of the bodily state to bathe? are questions of considerable perplexity, and by no means always easy to answer. . . . Obviously it is not right to dare the dangers of a "chill" either *when undressing* or by *immersion in the cold water*. Speaking generally, the "reaction," on which everything depends, will take place in proportion to the healthy circulation of the blood and the natural heat of the body when the bath is taken. . . . It is unwise to bathe when copious perspiration has continued for some time, unless the heat of the weather be excessive or the sweating has been induced by loading with clothes rather than by exertion. When much perspiration has been produced by muscular exercise, it is unsafe to bathe, because the body is so fatigued or exhausted that the reaction—that is, the return of the momentarily displaced blood to the surface—cannot be insured, and the effect may be to congest the internal organs and notably the nerve centres. It is from congestion of the nervous centres we get cramp, so often fatal in bathing. . . . Conditions under which a vigorous return of blood to the surface cannot be confidently counted upon are not favourable to bathing. If, therefore, the weather be "chilly," or there be a cold wind so that the body may be rapidly cooled at the surface while undressing, it is not safe to bathe. Under such conditions the further

chill of immersion in cold water will take place at the precise moment when the reaction consequent upon the chill of exposure by undressing ought to occur, and this second chill will not only delay or altogether prevent the reaction, but convert the bath from a mere stimulant to a depressant, ending in the abstraction of a large amount of animal heat and congestion of the internal organs and nerve centres. The *actual* temperature of the water does not affect the question so much as its *relative* temperature as compared with that of the surrounding air. Practically, there ought to be a good deal of difference between the two, the water being much cooler than the air, and the body much warmer than the water, but not so much warmer than the atmosphere as to be chilled by undressing. In short, the aim must be to avoid *two* chills; first, from the air, and second, from the water, and to make sure that the body is in such a condition as to secure a quick reaction on emerging from the water, without relying too much on the possible effect of friction by rubbing.

THE TORONTO PUBLIC SCHOOL BOARD AND THE MEDICAL
HEALTH OFFICER.

Obstacles to sanitary progress one would not have expected to meet in those to whom is intrusted the welfare of the young, who have the management of the very nurseries of the population, and in Toronto. But it appears such have been met. The Medical Health officer in the discharge of his duties visited some of the schools and made known the insanitary state in which he found certain buildings, out-closets, etc. It appears members of the board, instead of being glad to avail themselves of medical advice, disapproved of his action, and the chairman of the committee on buildings not only tried to belittle the work of the officer, but called in question his statements. From the chairman's statements the closets must be in a very objectionable state; and what was said of the alterations, and of the views of the committee, as reported in the *News* of June 27, manifest a great want somewhere of a knowledge of sanitary matters, and would be amusing were it not lamentable. We are surprised at, and are forced to express condemnation of, such a course, and believe the public will sustain the action of the health officer; and they should see that the management of the buildings in which their children spend so large a portion of their time at a most important period of their life is in competent hands. This concerns a serious matter.

HOW TO AVOID DROWNING.—Dr. MacCormac, of Belfast, Ire., writes that it is not at all necessary that a person knowing nothing of the art of swimming should be drowned if he depends simply and entirely on the powers for self-preservation with which nature has endowed him. “When one of the inferior animals takes the water, falls, or is thrown in, it instantly begins to walk as it does when out of the water. But when a man who cannot ‘swim’ falls into the water he makes a few spasmodic struggles, throws up his arms, and drowns. The brute, on the other hand, treads water, remains on the surface, and is virtually insubmergeable. In order, then, to escape drowning, it is only necessary to do as the brute does, and that is to tread or walk the water. The brute has no advantage in regard of his relative weight, in respect of the water, over man; and yet the man perishes while the brute lives. Nevertheless, any man, any woman, any child, who can walk on the land may also walk in the water just as readily as the animal does, and that without any prior instructions in drilling whatever.” There is doubtless much truth in this, and if people who cannot swim would endeavor to impress it on their mind when on the water, they might be able to practice it in case of accident.

DIRT IN THE WRONG PLACE.—There could hardly be a more marked instance of dirt in the wrong place than is exhibited in Toronto in the foul matter in the thousands of closet vaults. These deal out liberally—during the warm weather especially—causes of disease and death to the innocent little ones. If householders who use such relics of barbarism would have abundance of their coal ashes thrown down over the excreta, in vaults not retaining too much water, as we have repeatedly suggested, it would tend greatly to, or even entirely, check the poisonous emanations. The extra work in cleaning out the vaults would be comparatively of no consequence, and all much less disagreeable. Try the ashes.

DESTRUCTION OF MALARIA.—According to the *Medical and Surgical Reporter* (Phil.), it would seem from the crucial test of experience that cultivation of the soil of malarious localities is not only the most influential, but really the only means of eradicating the poison, as shown in the Roman Campagna; where the eucalyptus globulosa, however, has been planted on a large scale, along with the cultivation. The improvement in the health of the inhabitants has been great.

NO TOBACCO.—(Report of Wisconsin State Board of Health). In 1862, Napoleon III of France had his attention called to the facts that there were more than five times as many paralytics and lunatics in the hospitals of France than there were, in proportion to the population, thirty years before, and that the government revenue from the tobacco monopoly had increased during that time in about an equal ratio. He appointed a commission of scientific men to examine whether this were a case of cause and effect or only a coincidence. This commission devoted much time and attention to the young men in the government training schools, dividing the students into two classes—the smokers and the non-smokers. The latter were found so much superior physically, mentally and morally, that the Emperor at once prohibited the use of tobacco by students in all the schools under government supervision throughout the country.

ON SANITATION AND PHYSICIANS' INCOMES, the editor of the *Therapeutic Gazette* aptly writes, "We would rather have the facilities, national, state, municipal and private, increased until it would come to be a misdemeanor for a man to allow a member of his family to be attacked by a preventable disease; but we would also attach to the services rendered with such prevention in view, a proper remuneration. We believe it to be the highest conception of the physician's calling to prevent rather than to cure disease, but before the profession can afford to devote itself in this direction the public must be educated up to the rightfulness of recompensing the physician who dispenses an ounce of prevention equally with him who prescribes a pound of cure."

DANGER IN FALSE HAIR.—Good hair from safe sources costs from \$15 to \$50 an ounce. That which sells at a price much below this must have been obtained from a questionable source. Hair is sometimes taken from the heads of persons who have died of syphilis, of typhus fever or of small-pox, and there are manufacturers who purchase such hair, without question. The most loathsome and serious diseases may be spread in this way.

DR. CASPAR ON LONGEVITY states that "marriage is decidedly favorable to longevity," and that the medium duration of life is as follows:—In Russia about 21 years, in Prussia 29, in Switzerland 34, in France 35, in Belgium 36, and in England 38 years. The so-called climacteric periods of life do not seem to have any influence on the longevity of either sex.

IMPORTANT SUGGESTION.—Dr. Larocque, health officer of Montreal, proposes to invite the health officers and chairmen of the boards of health of the eleven cities in the Dominion which return mortuary statistics to the department in Ottawa, to meet the public health committee of the Canada Medical Association in Kingston in September, at the general meeting of the Association—which committee consists of Dr. Botsfords of St. John, N.B., Dr. Larocque of Montreal, Dr. Playter of Toronto, and Dr. Worthington of Clinton. The idea is a good one and we trust will be carried out, and that there will be a full attendance. It is proposed to discuss, among other things, how municipal boards of health may be best constructed, and the most efficient means they should adopt to prevent the spread of infectious diseases. Questions in reference to vaccination will also be brought up.

CORSETS.—It is not so much the corset as tight-lacing that is opposed by those who value health. With “Ball’s Health Preserving Corset” it is impossible to lace very tight, as it has in each side a spiral spring elastic strip extending its length, which makes it most agreeably yielding and self adjusting. We know a number of ladies who have tried them and would not now wear any other. One remarked, “I can breathe freely and easily in it.” Husbands and fathers induce your wives and daughters to buy them, and ninety-nine in a hundred of the wives and daughters will soon learn to object to buy any others. It is strange the improvement was not thought of and brought into use long ago.

A PURE WATER-SUPPLY.—Deep well boring for the public supply of water, says a medical exchange, is being more generally adopted, and superseding the usual sources of supply, which are, as a rule, impregnated with dangerous impurities, and a fruitful cause of disease. Deep well water has obvious advantages. It undergoes such prolonged and exhaustive filtration through great thicknesses of porous rock as to render it extremely unlikely, if not impossible, that any portion of the organic matter still remaining in it should be of a noxious character.

AT THE INTERNATIONAL CONGRESS of Hygiene, held at Geneva, Dr. Haltenhoff stated that in Europe one person in every thousand was blind. This gives about three hundred and thirty thousand blind in that country. Most of these could have been prevented. The blind of Europe cost society 100,000,000 francs annually.

CONTAGIOUSNESS OF CONSUMPTION.—Dr. J. E. Graham, of Toronto, in a paper read at the late meeting of the Ontario Medical Association, referred to many cases in practice strongly supporting the theory of a contagion in consumption. He thought it difficult to understand why distinguished London physicians opposed the theory “They are as a class very conservative and slow to accept new views.” And consulting physicians have not the same opportunity as general practitioners to watch the course of the disease.

IN REFERRING TO THE OUTBREAK OF CHOLERA at Damietta in Egypt, the *Medical Times and Gazette* states that while there is at present (June 30) no reason to fear the disease will reach Great Britain, increased zeal on the part of sanitary inspectors would place London in a better position to face it if it were to come, and if it came not the city would reap the benefits of the sanitary improvements in a hundred other ways. The same remarks might apply to Toronto and other cities in Canada.

A PHYSICIAN AND HIS DONKEY.—At his own expense, a physician tells a story about a small donkey he sent to his country house for the use of his children. One of his little daughters going out with the nurse to admire the animal in the paddock, was distressed when the donkey brayed dolefully. “Poor thing, poor thing!” she exclaimed, and turned to her nurse and said, “Oh, I am so glad! Papa will be here on Saturday, and then it won't feel so lonesome.”

A NEW SYSTEM OF VENTILATION was shown at the national health society's exhibition recently, in the fresh air inlet of which is an Arnott's valve, and affixed to the wall a little below this is a glass tube containing a column of mercury, in which rises and falls a counter-balance connected with the valve, so that as the temperature in the room rises the mercury expands, raises the counterbalance, and opens the valve, thus keeping the room to the required warmth.

EPIDEMICS OF PNEUMONIA are reported (*Med. Times and Gaz.*, Lond., E., June 23) as having occurred in villages in Germany. Many cases occurred and the mortality was high. A study and analysis of the cases lead strongly to belief in its contagiousness.

AN EXPERIMENT has been tried in one quarter of Paris with the pneumatic system of exhausting the sewers of their contents, and it has led to such remarkable results in the decline of typhoid fever that it is to be extended to other quarters of the city.

THE WESTMINSTER SANITARY ASSOCIATION.—At a meeting recently held under the presidency of Cardinal Manning, it was reported that after four months' experience, signal success had attended the labors of the members. In thirty-two families in which scarlet fever had broken out, the malady had been confined to *one case in each*. The latest and most approved methods of dealing with infectious cases are adopted, under the supervision of the visitors of the Association. Let us have such an association in Toronto.

A NOVEL DRESS has been exhibited by the National Health Society, intended for the protection of sanitary visitors, nurses, and others exposed to infectious diseases. The garment is of Mackintosh, glazed inside and out, and made completely to envelop the wearer, with a hood to cover the head. Only the hands and face remain exposed—a matter considered of not much importance, as these can be easily washed with disinfectants.

CHARLES DICKENS said that “we hear sometimes of an action for damages against the unqualified medical practitioner who has deformed a broken limb in pretending to heal it; but what of the hundreds of thousands of minds that have been deformed for ever by the incapable pettifoggers who have pretended to form them.”

THE BACILLUS OF LEPROSY has been found in cases of this disease in different parts of the world. It resembles in size and in the beaded appearance (suggestive of spore formation) the bacillus of tubercle. The site of predilection in the skin is the deeper parts of the corium.

VALUE OF SANITARY WORK.—In 1851, the death-rate in England and Wales was 22 per 1,000 of population, though the number of persons to the square mile was but 308; in 1881 the death-rate was only 18.9 per 1,000, though the population had increased to 447 per square mile.

INFECTED DISPATCHES.—A London contemporary says:—The official at the Ministry for Foreign Affairs, Paris, has just been stricken down by a violent attack of yellow fever, contracted by opening dispatches from Brazil, where the fever is now raging.

STATISTICS PROVE that large cities are considerably warmer than the country, otherwise under similar climatic conditions, caused by the large quantity of coal burned and the heating of vast masses of brick, together with the thousands of living bodies.

LITERARY AND SCIENTIFIC.

MIDDLE MEN AND WORKING MEN.

In the *Century Magazine* for July is an article on the great need of the working men, with which in the main we agree. Instead of agitating and "striking" for higher wages they might better learn to use in a more rational way the income they now receive. In the matter of food, which is of the first importance, it is safe to say that there are many families who might with a more perfect practical knowledge of the art of cooking and preparing foods, live just as satisfactorily and be better nourished on about half what it now, without that knowledge, seems to require to feed them. One great want of the working man, however, not referred to in the *Century*, is, not so much more wages, but shorter hours of labor (which means to the employer, higher wages); more leisure—more time to cultivate their mind and body—to attend to their health—to keep themselves clean. The mass of the working people sadly need elevating. The refined, cultured man suffers, is really pulled down, little or much, through anger or contempt it may be, by contact with ignorance and dirt and crime. The one great drawback in the way of securing shorter hours is the difference between the prices received by the manufacturer for the products of labor and that paid by the consumer. This goes to support "middle men." It can hardly be for the good of mankind that those who really contribute nothing to the community—who simply handle what is made and cultivated—buy often in the cheapest market and sell in the dearest, should receive so large a share of the surplus wealth, indeed on the whole the largest share. There are too many middle men—agents and "travellers" and pedlers; who frequently, moreover, induce people to buy what they do not really require. A remedy it is not easy to suggest. More co-operative societies would seem to be the only one.

IN *The Toronto World* of the 10th inst. is an article—"The Country is Safe"—with which most thinking men, who have deeply at heart the welfare of the country, will fully agree. It is as plain as can be that failures of luxury and fancy goods importing houses and such are benefits to the country. What is wanted is *production—less trade*. The "worst" of over-production even, is to check trade, though it may reduce wages for a time. He "who makes two blades of grass to grow where only one grew before" should receive

in every way greater consideration than he who only traffics in the surplus blade. There are also too many traders and brokers and speculators. They in no way contribute to the world's wealth.

WE MISS IN *The Toronto Mail* the valuable Saturday, religious or anti-agnostic articles of the past. What has come over the writer of them? The subject of them is inexhaustible. Many would be glad to see more of the sort.

HAD ANY ONE ON *The Globe* been reading a proof of our article in this number of the JOURNAL on the value of municipal boards of health? Hardly. The article bearing upon this subject in the *Globe* of the 9th inst. would be endorsed for the most part by every sanitarian. Let the public have less on politics and more of this sort on health—and on religion, too.

THE *Lancet*, in referring to the possibility of the outbreak of cholera in London (Eng.), writes:—"Medicine as a preventive art, in its dealings with germs of disease, ought to be able to grapple instantly and successfully with cholera." So, even now, we believe preventive medicine is able, if the people would only assist—do their part. But they will not. We believe it will be generally conceded that practical preventive medicine might, with the entire co-operation of the people, soon eradicate infectious disease in Toronto, and quickly stamp out any fresh outbreaks. But the people will not entirely co-operate. They will not spend the money; prefer to spend much more in cure. Some, sooner than pay \$1.50 for the SANITARY JOURNAL, for example, to prevent sickness in their family, prefer to run the chance of paying \$100 or \$200 for expenses of sickness.

THE STYLOGRAPHIC PEN, says the *Contributor, Boston, Mass.*, is one of the necessities of our modern civilization. If Hood's song had been "dip, dip, dip," instead of "Stitch, stitch, stitch," it would have lost its text at the hands of Mr. Livermore, who has given his age this perfection of pen, penholder, and case, and ink, all in one, handsome, and always at hand and ready for use. The inventor has put some new improvements into it, and now what remains but for every scribe and letter writer to find it on his desk. Ink, filler and cleaner, all go with it. And to crown all, the price has been reduced to \$2. Send that amount to the sole agent, Mr. Louis F. Durlap, 290 Washington St., Boston, Mass., and the return mail will bring you this most perfect pen.

SYPHILIS FROM VACCINATION.—In the House of Commons, June 7, Sir C. Dilke, in reply to a question by Sir Lyon Playfair, said it was true that one of the officers of the Local Government Board had, while investigating the conditions under which syphilis could be transmitted through vaccination, infected himself with syphilis.

ELEPHANT'S MILK.—According to Dr. Charles Doremus, the milk of the elephant is the richest that he has ever examined. It contains less water and more butter and sugar than any other, and has a very agreeable taste and odour.

THE RUBBER PLANT.—Mexico is making a study of the culture of the rubber plant. The hardiness of the plant is such that its culture is exceedingly simple where the climate and soil are suitable.

THE GREAT PERFUMER Rimmel has now given to the public a "natural air purifier" which produces the healthy emanations of the pine and eucalyptus, a most agreeable deodorizer and disinfectant.

POOR DARWIN felt that his theory was incomplete because he had not discovered the missing link. An exchange has it, had he lived a little longer he might have seen a dude, and died happy.

IT IS PROPOSED to use pure, liquefied carbonic acid to impregnate carbonated beverages, as the purest and best method of preparation of these. The *Scientific American* suggests the solidified acid.

STRYCHNIA is said to be to alcoholism what mercury and iodide of potassium are to syphilis; administered by subcutaneous injection, not more than a centigramme at once.

FOR THE REGISTRATION OF PLUMBERS arrangements have been made in San Francisco. A board of examiners appointed by the board of health are to examine all applicants for registration.

AT A RECENT MEETING of the Paris biological society it was stated by Mr. Galippe that all cereals—wheat, oats, rye, barley, contain traces of copper.

SIR WILLIAM THOMSON follows Dr. Thomas Reed in ascribing to man six senses instead of five, namely, the sense of force, of heat, of sound, of light, of taste, and of smell.

IN THE NEXT NUMBER of the JOURNAL will be articles on Hygienic Management of Children, Disposal of Excreta in Towns and Cities, Bacilli, Temptations and Temperance, Mistakes in Education (not room for in this) and other topics.

THE PUBLIC HEALTH IN ONTARIO FOR JUNE.

TORONTO.—There have been we understand a large number of cases of diphtheria here of late, with a good many deaths. The cases have occurred in localities not by any means in a good sanitary condition. Many of the lanes have not been regularly visited by the scavengers. The staff is doubtless too small. There are hundreds of yards in which the accumulations of past months are allowed to remain. The weather so far has been favorable. Should it become dryer and continue warm, putrefactive decomposition will be more rapid and destructive, and we venture to predict much more sickness, especially amongst children, after the late heavy rains. One case of cholera was reported to the medical health officer, who on visiting the locality found a sad want of sanitary attention. From what we can learn, the present sanitary state of the city is far from satisfactory. The health officer seems to be making the best of his time, with the limited authority he has, to mend matters; but as the *Globe* has it, "the lack of facilities, such as district inspectors and other officers, to aid him in the details of his work, must militate against any great good resulting from his single-handed labors."

STRATFORD.—Dr. D. M. Fraser reports a case of cerebro-spinal-meningitis, and a few cases of diarrhoea there, with more of scarlet fever and some typhoid fever; not much diphtheria; many cases of bronchitis, with a few of congestion and inflammation of the lungs, also of remittent fever and acute rheumatism, the latter repeatedly relapsing. Ery-sipelas had been more than usually present. The mortality there too had been low, with an increase in number of cases and severity of diarrhoea, and likewise of the other diseases named, excepting diphtheria and scarlet fever. No epidemic.

CHATHAM.—Dr. Bray reports that there had been there also a good many cases of diarrhoea and some diphtheria; measles was epidemic; with a few cases of typhoid fever and whooping-cough. Some cases of bronchitis and congestion and inflammation of the lungs—but less than usual; more of remittent fever and acute rheumatism, and numerous cases of intermittent fever. The mortality had been very low, but there had been an increase in the number of cases and severity of diarrhoea and malarial fevers, but a decrease in both in regard to the other diseases.

LONDON.—Dr. Edwards reports that in that city there were a good many cases of diarrhoea and diphtheria, a few cases of measles and of whooping-cough, but no typhoid fever. Bronchitis prevailed to a considerable extent, and there had been a few cases of remittent and a large number of cases of intermittent fever. The mortality in all these diseases had been very low, and the health of the city would appear to be good.

GUELPH.—Dr. Brock reports a few sporadic cases of diarrhoea, diphtheria and whooping-cough. Measles is epidemic, with a low mortality. A few cases of bronchitis, congestion and inflammation of the lungs and remittent fever. The general health of the town is good. He thinks the excessive rain has diluted and washed away surface impurities.

PORT HOPE.—Dr. Hamilton reports a few cases of diarrhoea and whooping-cough there; many cases of bronchitis, with a decrease however; a few cases of catarrhal croup, congestion and inflammation of the lungs, remittent fever and acute rheumatism—many cases of the latter during spring. The general health was good, with low mortality.

BARRIE.—Dr. McCarthy reports a few cases of diarrhoea and scarlet fever there; measles and whooping-cough are epidemic, with a decrease in the severity of the latter. A few cases of the usual inflammatory diseases, and malarial and puerperal fever. The general health appears good, with a low mortality.

NOTICES OF BOOKS AND PAMPHLETS RECEIVED.

ON THE DISPOSAL OF SEWAGE, issued by the Provincial Board of Health for Ontario. A compilation that may be useful.

A TREATISE ON MILK AND NESTLÉ'S Milk Food, by H. Lebert, Medical Privy Councillor: Vevey, Switzerland.

SEVENTH ANNUAL REPORT of the State Board of Health of Wisconsin, to which we purpose referring again.

LIST OF PREMIUMS, RULES AND REGULATIONS, of the Industrial Exhibition Association of Toronto. Each of the three last exhibitions has been better than those preceding it, and from the efforts being put forth now by the managers it is safe to predict that the next one will be much the best of all.

THE THIRD VOLUME of the Census of 1881 and its Critics, by Dr. J. C. Tache, Deputy-Minister of Agriculture. The author says:—After such a diligent search, to have found so very few errors, or possible errors of no general consequence, and an array of supposed errors, of the Census which, in reality, are blunders on the part of the critics themselves, is certainly a result well calculated to please those who have had something to do with such a vast undertaking, and to enhance public confidence in one of our most important state documents.

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