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DISEASE AND ITS CAUSES, AND THE VALUE OF HYGIENE.*

Health is that condition in which all actions or functions proper to the body are performed in the most perfect and harmonious manner. This necessitates a perfect and natural state of the organs of the body. The perversion or partial cessation of one or more of the functions or processes of life constitutes disease. And anything which prevents, or interferes with, the perfect and harmonious performance of these functions, or which obstructs any of the vital processes, is a *cause* of disease. The continued operation of any such cause will sooner or later give rise to *altered organic structure*, and we then have diseased organs as well as functions. Health is an active and unimpeded renewal of the body and prompt elimination of worn-out substances, giving rise to the highest development of life in every part and organ. Disease has been termed a partial death. The human organization is of the highest complexity, and is therefore very liable to derangement, and its functions to perversion, by the many and various causes of disease by which we are surrounded.

The necessary conditions of health and life are a supply of air, water, and food, and also sleep, clothing, exercise, and bathing. These conditions or agencies of health and life are very liable to changes. The air around one becomes impure from the breath; foods are often improperly prepared; or one may take too much or too little exercise. Now as the functions of the body are directly dependent upon these agencies, when any one of them is deteriorated, and not good and appropriate, it is at once a cause of disease, and more or less functional derangement—disease, will assuredly speedily follow its use.

Nearly all causes of disease, and of premature death are, in fact, intimately associated with these agencies or essentials of life; or, in other words, they are to be found in perverted conditions of these agencies, which of necessity all are continually making use of.

* Extract from "Elementary Hygiene," now in press.

Breathing foul air, drinking impure water, eating bad or too much food, too little sleep, improper clothing, or want of exercise and perfect cleanliness, each and all interfere directly, more or less, with the natural or healthy actions of the organism, and cause disease.

Moreover, a very large proportion of the causes of disease arise from the imperfect manner in which the waste matters from our own bodies are disposed of; from these waste matters being conveyed back into our bodies again, and chiefly along with the air and water consumed. Many persons, in their bedrooms, breathe, over and over again, air laden with excrement given off by the lungs and skin, a highly injurious practice, and a very common cause of disease. Other excrete matters from the body are often thrown in proximity to wells of water, and hence find their way into the water, and with it get back into the system. These waste matters, if not absolutely poisonous when thrown off, soon undergo changes and become in many cases highly deleterious. All in the long list of contagious diseases—small-pox, cholera, scarlet-fever, typhoid, and the like—are often spread, and therefore may be said to arise, in this way. The contagion is in the excrete matters, and if these are not properly disposed of, as by free ventilation, disinfection, etc., such diseases will readily spread to other persons. The contagion is conveyed to others usually with the air or water, sometimes with foods.

Besides the above causes of disease, there are what may be called climatic causes—sudden changes in the state of the atmosphere or weather, mental or emotional causes, and hereditary causes—those inherited from parents, over all of which we have less control. Nevertheless, by proper regard to the state of the skin and to the clothing, and other agencies, climatic causes would be almost inoperative; and by careful attention to the laws of health generally, hereditary diseases would disappear in a few generations, and those arising from mental or emotional cause would be rare.

By means of knowledge regarding the nature of these agencies *in all their varying conditions*, and of their relations to, and effects upon, the organs and functions of the body, one is enabled to control the causes which disturb and pervert these organs and functions, and thus prevent disease. Happily, it is much easier for every one—much less knowledge is required—to take care of and preserve the health than to regain it when lost; to keep the organs and functions in a perfect and healthy condition, than to get them into such condition again after they have become deranged or perverted. When the parts and their functions become altered from their natural state, the most extended knowledge and profound skill and experience may be required to set them right again, if indeed it be possible to set them right, as it may not be. Every one has, then, in his or her own hands, to a great extent, the power to prevent disease and to prolong life, which disease might greatly shorten.

A high remedial value attaches to hygienic measures, and in all diseases their practical application is of the first importance. On the near approach or actual occurrence of disease, the prompt

removal or avoidance of all causes, as well those which give rise to the disease as all others, will very materially assist in restoring health. There is in our bodies a tendency toward perfection ; a tendency to set matters right when they have gone wrong ; in disease, a natural inclination to health. Hygienic remedies assist this natural effort, and are sometimes sufficient to restore health.

False ideas regarding disease have in times past proved unfavourable to hygienic effort, and operated against the employment of means to prevent disease. In early ages diseases were believed to be due to evil spirits which in some mysterious manner found their way into the system. Many now regard them as things having an independent existence, to be removed or thrust out of the system by medicines, as things that come arbitrarily, or are 'sent' by Divine Providence as punishments for sins committed. Many of the semi-religious story books now in the libraries for the young, at least convey these erroneous ideas. True, diseases come only because of our transgressions, not of the moral laws exactly, but rather of the simple physical laws of health. We bring them upon ourselves, for the most part, by our own acts or neglects. Since more enlightened views have somewhat prevailed, there have been numerous proofs of the great benefits to health and vitality from giving practical attention to the laws of health, to the condition of the essentials or agencies of life,—air, water, food, etc.

It must be borne in mind that the injurious effects on the organism of any of these causes of disease are not always, or even usually, immediately perceivable, but are frequently slow and cumulative, and not noticeable until much mischief has been done. The breathing of air contaminated by the products of respiration, as in unventilated rooms, is believed to be a most common cause of that most fatal of all diseases, consumption ; yet, frequently, this disease arises and increases so imperceptibly, that it is not manifested until too late to be remedied. So, intemperance, in both drinking and eating, is a very common cause of disease. Yet the diseases arising therefrom do not commonly attract attention until the intemperate habits have been indulged in for a long time, perhaps not until serious organic disease has been produced.

Pain, in some form or degree, whether severe or only amounting to slight uneasiness, is the most common symptom of disease, and not unfrequently acts as a kindly monitor to warn us that something is going wrong in our body, or that we have committed some error. But we are not always thus warned. Causes of diseases may continue to act, and produce effects of a more or less serious or permanent character, without causing pain or giving us any warning whatever.

One thing is certain, that is, causes always produce effects ; and this ought never to be forgotten. If we breathe foul air, or use bad water or improper food, some ill effect is certain to follow ; though it may not be appreciable to our senses, or possibly not of a permanent character.

THE PROPOSED SANITARY LEGISLATION.

After the address of the Lieut. Governor of Ontario at the opening in January last of the local legislature, in which reference was made to the desirability of the House giving attention to the important matter of Public Health, a large number of the thoughtful and intelligent of the community were pleased at the prospect of something being done at once to improve the public health. Indeed, of the whole address, this part, referring to public health, was by many thought to be the most important. Not a few were disappointed that more was not done during the session in the interests of the question, and for the better protection of the public from the ravages of disease. And truly, in view of the remarks made in the House by members, especially by the Attorney-General, regarding the importance of the subject, and bearing upon the cost of disease and death and the economy of health, it would be inconsistent and worse to delay practical action in the matter a day longer than absolute necessity for preparation demanded. But to do more than was done during the few weeks of the Session toward bringing before the House a comprehensive public health measure, some preparation should have been made some time before the opening of the House. This had not been done, and about all that was possible was therefore accomplished during the Session. It is gratifying to know that a beginning has been made, and that, as appears evident, the Government are in earnest, and have at length become fully alive to the great importance of the subject. More too was accomplished than many are aware of. A lengthy report was presented, but not read, to the House, though we believe it is soon to be printed and circulated.

It is a matter for congratulation that the medical profession was so far recognized as it was in forming the Sanitary Committee. Every medical man in the House was upon it, and with the exception of the Attorney-General and Minister of Education, every member of the Committee was a medical practitioner. London *Medical Journals* complain that in Great Britain the profession is not recognized as it should be in matters of this kind. A better state of things prevails here. Physicians are the proper guardians of the public health, and if given fair recognition and encouragement they will do all that can be expected of them, and more than should be expected.

As most of our readers probably know, the Sanitary Committee had a list of questions sent to every medical practitioner in Ontario. Several hundreds of replies were received, and to the most important points in these we refer elsewhere. Between two and three hundred were from gentlemen of the highest standing in the profession, and supply valuable information and suggestions. A list of questions was also sent to clerks of municipalities, and many replies were received, which show that absolutely nothing, almost, is

being done throughout the Province toward the prevention of disease or the improvement of the public health. Showing indeed a most lamentable state of inactivity and indifference in the matter.

The powers conferred upon local boards of health and health officers, where there are such, and there's but few in Ontario, by the present public health act—of 1873, are ample. The great difficulty is in carrying the Act into force. Better machinery is wanting for this purpose. In the comparatively few municipalities where any action whatever has been taken, the matter is usually more or less in the hands of the Municipal Council, and if they are inclined to act with a firm hand in any individual instances as regards nuisances etc., the result of the next municipal election is liable to come before them and perhaps render them timorous of action. If they appoint a health officer, in nine cases out of ten he is possessed of but little knowledge pertaining to the duties he should perform, or he carries out but imperfectly what he does know. Occasionally a medical practitioner is appointed as health officer. Only very occasionally however, for of the something like one thousand municipalities in Ontario, there are probably not more, judging from the replies of the clerks of municipalities, than twenty medical health officers, all told. When even the largest and most populous city in, and the capital of, the Province has no medical health officer, it is not to be supposed that many of the smaller places will have one.

What is required, chiefly, evidently, judging from the replies above referred to, is some more efficient machinery for carrying out the law, for compelling the removal of filth and nuisances, at least. And some better definition is required as to what "may endanger the public health." And also as to what constitutes the "public." Is not a man's own family, domestics, etc., a portion of it? And should anything be allowed to exist which would endanger their health and life, even if it did not endanger the health and life of their neighbors? It should be penal for anyone to deposit in any way whatever any excrement—night-soil, slops, stable manure, etc., etc., within a certain, defined, safe, distance from any dwelling-place or well of water supply, in any municipality, town, or country. And no such excrement should be allowed to be deposited in or very near any stream or water-course or in any way to create a nuisance, but if necessary be disinfected, as with dry earth or other disinfectants. Provision should also be made for insuring the proper inspection of milk and other foods; and for preventing the continuance or harboring of foul undrained cellars under dwellings.

Concerning the best organization for securing the carrying out of the law, and the organization of municipal boards, some central provincial power seems indispensable. Some power with government authority, which may be constantly exercised. For this we have long contended, and we are pleased to find a large number of physicians of the highest standing, in their replies to the circular of questions, strongly urge this point in Sanitary Legislation. This centre would be of very great value, too, in an advisory or educational

capacity, in reference to Sanitary matters ; as in such matters more than in any others the public require educating. To this centre municipal boards should be required to report at least once a year. A few inspectors, as say one in each county, or in two or more associated or united counties, appointed by government, and thus freed from local influences, might be necessary.

CAUSES OF DISEASES IN ONTARIO, AS GIVEN BY MANY OF
THE LEADING MEDICAL PRACTITIONERS; AND THE
PREVENTION OF CONSUMPTION.

The select committee on public health in the Legislature last session had a list of questions sent to all medical practitioners in Ontario. Several hundreds of replies, more or less full, were received, and from every city and county in the province, from most of the towns and many villages. The mass of answers to two or three of the questions are very instructive, and claim special notice. One question was as follows: 'State the causes which from time to time in your experience have injuriously affected the public health' in the locality in which you have practiced. In answer to this question, the chief causes which injuriously affected the public health, as given, were want of proper drainage and sewerage, malaria from marshes and undrained soil, impure water, chiefly from wells being near privy vaults, etc., and impure air, chiefly from want of ventilation. A good many mentioned foul damp cellars as a cause, and more than a few, gave slaughter-houses as a cause; a few also mentioned cemeteries, and intemperance, in both eating and drinking, as common causes. These then are undoubtedly the principal causes of disease in Ontario. All removable cause. And with the exception of malaria from marshes and wet soil, mostly arising from excremental matters finding their way into the bodies of the people along with the air or water consumed. We have before now stated that to keep the air and the water pure—free from organic excrement, should be the chief aim of public health.

The physicians of the province have spoken, and informed the Sanitary Committee, who in due time will inform the public, what the chief causes of disease are. It is for the public to have the causes in some way removed. To urge the Legislature, if need be, to devise some plan or provide some means by which they shall be removed. When asked, what means should be used to remove the causes of disease, and *with whom* should the authority be placed for enforcing measures to remove them, the weight of the evillence of the medical profession decidedly forces to the conclusion that the boards of health as at present constituted are quite inefficient, and that an absolute change in their construction is necessary; and also that some central provincial authority is indispensable to good sanitary administration.

A large number of physicians in their replies urge the necessity of educating the public in sanitary matters. The future generations may be educated most efficiently in our public schools. But what

of the present generation? How shall they of it be taught to preserve the health and lives of the next, as well as their own. A provincial department could do much, with little expense, in educating the masses in many ways in hygiene; as is being done by State Boards in Michigan, Massachusetts, and other of the United States. In Great Britain the aim has not yet been, seemingly, so much to educate the people as to enforce good public health laws.

Consumption, of all disease effecting the human race, is almost universally the most fatal. In Ontario, in 1876, according to the last report of Registrar General, there were registered 2,259 deaths from this disease alone. No doubt many more died which were not registered, for the returns, though a vast improvement has taken place, are not yet complete. Of the total number of deaths, from specified causes, 12.9 per cent. were from consumption; while, (for comparison) only 2.5 per cent. died from typhoid fever, and 5 per cent. from diphtheria, the next (to consumption) most fatal disease, excepting old age, (8 per cent). While the deaths of most of those registered under this last head were no doubt much hastened, if not quite caused, by some special local disease.

Now in reply to the question, 'can any Sanitary means be devised for the prevention of consumption,' hundreds of the medical practitioners of Ontario reply that, strict observance of the laws of health will largely prevent if not entirely eradicate the disease. It is said doctors differ. On this point, of the hundreds who reply to the above question, there are hardly two opinions; only two or three indeed who do not answer in effect as above stated. Almost all seem to believe, with members of the profession everywhere, and for the belief there are the best of reasons, that the great chief cause of this disease is the breathing of air rendered foul and poisonous by respiration; or, in short, want of ventilation. The disease is most prevalent on wet undrained soil, least so in high well drained districts. Certainly Ontario is an inviting field for sanitary work. A field which promises abundant return for labor expended in it. And delay in cultivating it is death.

AT THE THIRD annual meeting of the London Schools Swimming Club, Sir Charles Reed, president of the club, in the chair, the report showed that the club was founded in 1875 for the purpose of teaching children—both boys and girls—of public elementary schools the art of swimming. Last season 1,577 children (exclusive of adults to the number of 100) were instructed, making a total since the club commenced of 7,577.

AN ASSOCIATION, already numbering 418 members, has been formed in Edinburgh, for the purpose of securing thorough periodical inspection of the drainage of the houses of members. Such an organization, employing competent inspectors, might be of immense sanitary value to any community, in the prevention of the many diseases that take their origin in defective sewers and drains. The plan is worthy of general imitation.

VITAL STATISTICS.

The subject of vital statistics is one which every man who takes any interest whatever in state affairs—any interest in the status of his country or the community in which he lives, must feel the importance of. Everybody desires to know, and it is most important that the state should know, the number or *quantity* of the people in the state. It is equally desirable to know the numbers which are born and the numbers which die, at what ages deaths occur, the causes of deaths, etc. Knowing these, an insight is given also into the *quality* of the people in the country. Hence, the quality as well as the quantity of the inhabitants is known; and this is very necessary. Besides this, and most important of all, while it is well known that many causes of disease may be removed, and many cases of disease and death prevented, it is only by the registration of vital statistics that knowledge is obtained of the most prevailing diseases and causes of death. This knowledge it is necessary to possess before measures for the prevention of disease can be applied.

We do not know of any subject or question affecting Ontario at the present time of greater importance than this one of registration of vital statistics in connection with public health. Upon the completeness of the returns must be based, more or less, action after the proposed and much needed legislation for promoting the public health in the province. While there has been great increase and improvement in the returns in Ontario during the past two or three years, and this year, we learn, there is likely to be considerable increase, they are yet a good way from being complete. At best, it necessarily requires time to 'work up' a matter of this kind, but we believe there are two chief causes of the incompleteness: one, a want of interest in, and appreciation of the importance of, this particular matter and that too of the general question of public health; the other, the long distance some live from the division registrar. The remedies for these are obvious enough; but to apply the remedies effectually may not be an easy matter. There is evidently an increasing interest manifested, especially among the more intelligent, in the public health question, and this interest should be encouraged and promoted in every possible way. In this way the importance of complete statistical returns, which form the basis of practical public sanitation, will naturally come up.

Some of the division registrars evidently take a deeper interest in this work than others do,—notably the registrar of this city, for one, and look after cases of deaths and births when they learn of any, in any way. But many deaths and births may take place in the cities, larger towns, and townships, and registrars never hear of them. It appears to us that if there were any means by which school teachers, or even school-trustees, could be induced to take an interest in the matter, they could assist very much in making the returns complete. School districts being sub-divisions of towns and townships, and covering a smaller area, a death could hardly occur without a teacher learning of it. Might not the trustees, and also the magistrates, of

which there are usually several in each municipality, be induced in some way to interest themselves in the matter? It is very essential that the returns be made complete in some way.

Finally, the completeness in the returns is largely in the hands of physicians. Few deaths take place previous to which a doctor has not been called upon, if only for the purpose of having him witness the death-throes and give a certificate of death. If all physicians would but give due consideration to the importance of this matter, we have no doubt they would take a little trouble to see that all cases of death coming to their knowledge were properly registered. The same remarks apply, though not quite so fully, to births;—more births than deaths take place without the doctors knowledge.

There is no reason why physicians should not be paid for giving a certificate of death. In most cases the deceased's friends are able to pay for it. They do pay frequently for a showy and superfluously expensive funeral. Arrangements might be made for the municipality to pay in cases wherein the friends are not able to do so. Until this is compulsory, we hope physicians will act on the liberal principle, and see that the death is registered, pay or no pay, as they usually visit the sick.

PRACTICAL HYGIENE.

The following good advice on individual practical hygiene was communicated to the *Herald of Health* (Ill. U. S.) for the benefit of its readers, by Dr. J. L. White, and is quite applicable in this country at the present season:—Just at this time, it is more than ordinarily necessary to guard against the insidious approaches of disease, and to destroy, if possible, all germs of contagion. The winter through which we have just passed, has been without parallel in the last half a century, in regard to mildness of temperature. As a consequence of this, all realize that the system has not been invigorated as it is wont to be by the bracing weather of ordinary winters. The hot months of summer will find us with enfeebled powers of resistance to any noxious germs that may find their way into the blood; while, on the other hand, the long continued moist and warm weather has been most favourable for the development of parasitic life in all its forms. It is reasonable to suppose the coming season will be fruitful in zymotic diseases, and there is great danger that they will be of a severe type. In view of this probability, it behooves all to take the best possible care of themselves in every particular, to avoid intemperance and excess of all kinds, to be regular in their habits of eating and sleeping, to avoid over-fatigue, and, as far as may be, mental anxiety, which last, in my humble judgment, at this time, is doing more than anything else to depress the vital energies of our people and render them easy victims to what otherwise would be curable diseases. The skin should be kept in a healthy condition by frequent bathing. The diet should be generous and of the most

nourishing kind. The digesting and assimilating organs should be encouraged to the performance of all the labor they can, without injury to themselves, accomplish. All zymotic diseases flourish best in the haunts of poverty, where the stomach is deprived of its just rights, and where the struggle for subsistence bars the door to Hygiea's inseparable companions—cheerfulness and happiness. Cleanliness in and around the house, is hardly second in importance to cleanliness of person. House-cleaning times are altogether too unpopular. They should at least be quarterly instead of semi-annual occurrences; and the woollen carpets should be most thoroughly aired, for the germs of disease not unfrequently lurk in them. They are one of the scourges of civilization. Cellars should be kept scrupulously clean, and the air given an opportunity for free circulation through them. Houses, from cellar to garret, have too little air and too little sunlight. Gloom and darkness are incompatible with health and vigor, either mental or bodily. All debris around the house should be gathered up and burned. Mouldy and decaying straw, seems especially to have the power of germinating disease-producing spores. Wells should be so fixed that the surface water cannot, by any possibility, find its way into them, and should be at least fifty feet distant from a privy or cesspool.

BACK AND FRONT HOUSE DRAINAGE.

Would it not be much the better way, in Toronto and other cities and towns in Ontario, where back lanes are universal, to have the drains, and in some cases even sewers, constructed under the lanes, and back drainage for the houses almost universally adopted. We cannot conceive why all the filth from water-closets, baths, and sinks should be conducted under the entire length of a dwelling-house as it is in almost all cases. *Public Health* says: 'The system which invites the excrementitious matter to travel beneath our kitchens and breakfast-parlours, which, in untold cases, are at this moment polluting the soil under our basements and creating an atmosphere laden with pestilential germs which defies inspection and courts scamping and all its attendant evils, is certainly to our mind, its own condemnation, and needs no further discussion.'

This is a matter of great moment and should receive the consideration of those in authority. We believe back drainage would be much less expensive than the present method. In many cases the house drains could be shorter than at present; the ground at the back of the house is usually lower, and less digging would be required. And the drain could be more readily opened for repair, or in case of obstruction, etc., while the breaking up of streets and the stoppage of traffic, and the tearing up of basement floors, would be largely avoided.

THE FLESH OF A DISEASED COW, in Wurzen, Germany, caused the sickness of over one hundred persons, three of whom died.

HYGIENE OF THE BRAIN.

From a paper treating upon this subject, in the "*Proceedings*," by Dr. G. M. Beard, of New York, we extract the following: Cerebral or brain hygiene consists mainly in the avoidance of the worry or friction that is the great element in the causation of nervous diseases, and in wholesome and varied activity of the intellect. Cerebral hygiene, like digestive and sexual, is therefore both positive and negative, including what should be done and what should not be done.

The one great cause of functional nervous diseases, and of some that are of a structural character, is, as I am more and more convinced, *financial trouble* of some kind. By this I do not mean poverty—for the absolutely and hereditarily poor do not suffer from these functional nervous maladies to any great extent; but fear of poverty, and a sudden or gradual loss of money. Now and then there are cases where simple overtoil is successful, and unworried business may produce symptoms of cerebral hyperæmia or neurosthenia; but almost always there is friction somewhere, if we can only find where—and it is this friction, and not the movement of the mental machinery, that does the harm. The hard times of the past five years has furnished the soil in which many cases of nervous trouble that I have seen have taken root.

Next to financial comes domestic trouble—the sorrows and joys of love, conjugal misery and bereavement. These causes are more influential with women, as financial trouble is more influential with men.

Simple escape from friction is sometimes all that functional troubles need—a change from mental to muscular work, and the moral counterirritation that is furnished by new scenes and unfamiliar faces. Nervous invalids do not always need to suspend all labor of the brain—better, indeed, that they should be actively though pleasantly employed. The most distressing cases of nervous debility that I have seen have been in men who have suddenly retired from business. When a muscle is weakened through disease, we try to strengthen it through passive and moderate active exercise, believing that thereby its nutrition is improved. This same law the brain must obey. The feeble and tired brain, like the feeble and tired muscle, needs a certain amount of gymnastics. Labor of the intellect of the higher sort saves us from friction of the emotions of the lower sort, and thus becomes a positive and valuable remedial agency. For this reason I rarely advise patients to permanently leave their business, provided they are happy and prosperous in it; but rather to fight out the battle on the lines where they are.

Probably half of our cases of chronic functional nervous disease would never have been sick at all—at least, never would have felt the need of consulting a doctor—if their minds were stronger. What we call grit makes its own hygiene, both saving men from nervous disease, and aiding in their cure when once enfeebled. Many of the world's best thinkers have been laborious invalids.

MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting of this Board was held at Lansing, January 8, -78. Dr. Kedzie, President, gave a brief statement of some interesting experiments which he had recently made in relation to the permeability of walls and clothing, and the relation of these to the healthful condition of houses and clothing.

Dr. Baker the Secretary, presented a bill drawn by Dr. Folsom of the Massachusetts State Board of Health, to prevent the pollution of streams by sewers, slaughter-houses, manufactories, etc. He stated that diphtheria had been more prevalent than usual in this and other states, and suggested that the board issue a circular on the subject. Dr. Hitchcock was requested to prepare such circular. The causes of diphtheria were thoroughly discussed, and the opinion seemed to prevail that sewer gas, dampness, and mould had much to do in causing it, although it is a contagious disease.

Dr. Kedzie made a brief report, giving an account of experiments and tests for the detection of lead in tin utensils in common use, having examined quite a number of specimens. He found about three-fourths of all the specimens examined contained lead in considerable amount. Dr. Dorsch detailed some cases of lead poisoning from the use of tin utensils. The test which Dr. Kedzie gave for this adulteration is quite simple. Place a drop of nitric acid on the tin to be tested, and evaporate to dryness; then add a drop of iodide of potassium. If lead is present, there will be a yellow coloration. If it is not present the spot will remain white.

An interesting communication was read, showing the advantage to farmers of securing good water and thorough drainage.

The regular annual meeting of the Board was held April 9th, -78. The president, Dr. Kedzie, presented his address. He said not only sanitarians but the people at large are grasping that very important and revolutionary idea, the possibility of the prevention of disease and death; that many diseases may be prevented altogether, or that when they do appear they may as certainly be stamped out as a forest fire may be extinguished, or they may be walled in like an inundation. A people who fully grasp the idea that half of their sickness and death may be avoided, as truly and really as they may prevent the destruction of their crops by cattle by proper fencing, have taken a long stride in state medicine. This fact ought not to be lost sight of, that each person is in the broadest and fullest sense healthy and safe only as every person about him is healthy and safe. He recommended that a general circular on the use of disinfectants be prepared and issued, so that whenever the board wishes to issue instructions for the prevention of any self-propagating disease, such a circular will save repetitions. He suggested the holding of sanitary conventions in different parts of the state to discuss sanitary subjects and to bring together dealers in sanitary appliances, sanitary experts, and the people generally who need instruction in sanitary work. If

such conventions were held the secular press would distribute widely the truths brought out.

The report of the Secretary showed that a large amount of work had been done by the board.

PUBLIC SANITATION.

The following extracts are from an address, delivered at Northampton, April 1878, at the opening meeting of the New Sanitary Association for Northamptonshire, by Edwin Chadwick, C. B. We have, he says, an excess of 1,422 preventable deaths within the year, involving, according to my estimate, founded on the average cost of all who have died, a money loss of upwards of 140,000*l.* for the deaths alone, apart from the losses from preventable sickness and from premature working disability on the part of the wage classes. Here, then, gentlemen, you may see what there is to do in this field of service of this one county and town—of the mass of preventable inflictions, of thousands of preventable diseases, of excessive pain and misery, of preventable working disability, and of cases of preventable premature deaths yearly to be arrested. It is as if a ruthless invading army every year made an incursion upon the population, and fought and won a battle, leaving between 1,000 and 2,000 of dead, and many thousands of wounded men, women, and children on the field, and only departed after levying a 'Dane-gelt' of between 100,000*l.* and 200,000*l.* upon the survivors. In superstitious times the unseen evil influences were personified as ruthless demons. If such inflictions came with passion and violence in an open field collectively, instead of coming silently and separately, little known to others, and without passion, how would the whole population be roused to resist them? Yet the enemy may be met by collective arrangements of force, guided by sanitary science and skill, and may be arrested. The task now before the county is to face round and to put the professional service on from the entirely curative service, which is a comparatively fruitless action, and put it mainly on a preventive footing, and give it an aggressive action against the enemy. In what direction must this preventive be applied? In the first place, to the town tenement, to the cottage, and to the homestead in removing the sources of disease—excrement, sodden soils, cesspool accumulations, and polluted well-water—and in enforcing such rudimentary arrangements as have had marked success in their application to common lodging-houses in the metropolis and elsewhere, where former fever-nests have now been made places of security to the inmates from attacks of epidemic disease. Other objective points are the centres of epidemics, the common schools, where filthy-skinned and filthy-clothed children are massed together in confined space. These, even after purification, should be subjected to the continued and vigilant supervision of the preventive officer, skilled in detecting the first symptoms of

disease, to separate immediately the infected from the uninfected, and to direct immediately proper protective measures to be applied. As respects the adults, the objective points, after the dwelling, are the workshop, for similar inspection. . . . I repeat that there is the great waste of health and life, and also the waste of productive power and capital, of all which I have presented you under estimates—that all this has to be stayed. What, looking at the past failures as well as the past success, is the administrative organisation, as apparent here, provided to do it? The gains and triumphs of science are not to be achieved by ignorance, by the unguarded ignorance which is lauded as local self-government. We are commonly met by assertions of disbelief on the part of the local authorities that the town is in so bad a condition as asserted, they not knowing what its relative condition is. In directing inquiries into the state of towns I have instructed the sanitary officers to set out carefully the localities where fever is always rife, and particularly to get the mayor, the town clerk, and town councillors, and other officials to accompany him. The common result has been exclamations of surprise and declarations on the part of these local authorities that they would not have believed in the existence of such conditions if they had not seen it themselves. Local authorities are frequently asked to go elsewhere and visit and examine the works of reputed amendment in other towns, when they often fail to see how to set about imitating them, and are stayed by imaginary obstructions and frequently fall victims to expensive quackeries. For relief recourse must be had to a special and practically successful science to devise works, and to science such as that of a sanitary officer in action. The sanitary officer should be especially competent to see to the right action of the engineers and to check shortcomings. Beyond the sanitary works a service is required to prevent overcrowding, to examine the defaults which are productive of disease, overcrowding, and filth. For all this—the perpetual examination and removal of preventable causes—special competency, undivided attention, high and independent yet responsible service is needed. Now, what do we find commonly prevalent? Here this town, I find, has a *curative service* of twenty-six medical practitioners. But the provision for preventive service is only of one officer of health, at a salary of 100*l.* per annum (which can only be for some quarter of his professional time given to curative service devoted to the preventive service), which salary is deemed to suffice for the preventive service of 50,000 of a population to withstand the preventable disease, which costs between 100 and 200 lives and a money loss of some 50,000*l.* per annum. At Brixworth I observe that a fee of five guineas is regarded by the sanitary authority as sufficient for the preventive service for the protection of 1,100 of the population, a small percentage of the cost of the curative service of which it would be a large saving of nearly 1,000*l.* a year for that population of the cost of preventable sickness and deaths. I may extend such instances, from which it will be seen that a lamentable ignorance pervades the

whole subject, and that there is prevalent an entire destitution of knowledge of administrative economy. . . . As to the young shoemaker who comes to settle, and in time marries, in Northampton, of the children born to him one-half will be in their graves soon after their fifth year. I estimate, moreover, that the money loss to a young adult couple from premature disability under such sanitary conditions will not be less than 150*l.* the two. Now, what might sanitary science do for his relief? It might give to his home, or to his weekly tenement, the like sanitary protection from localising causes of epidemic disease, by police regulations and sanitary inspection, that is given under Lord Shaftesbury's Acts to tramps and beggars' lodging-houses. Sanitary science might in its extreme advancement, which is beyond my present expectations, give him the same immunity from ravaging epidemics and a relief by three-fourths of the prevalent death-rate that it gives to the thief in the well-regulated county goal. I regret that legislation has ensured the best sanitary service hitherto to the idle and dishonest and the least to the industrious and the honest; but it is too true, it is so. It might easily extend his working ability by some ten years. Sanitation may indeed so far extend his working ability as to enable him to live long enough and with thrift to obtain a deferred annuity, and enable him to spend his last days with that ease and comfort and respectability which benefits a well-spent industrial life.'

ON DIET.

On this subject we are disposed to agree for the most part with the following extract from the *Periscope*: Go where you will, and the more refined and cultured the people—morally, intellectually, or spiritually, the more they are given to the delicacies of the table. Good, substantial wholesome food, properly cooked, *nicely served up, with neatly dressed servants*, all the decorations of the table tastefully arranged, is one of the highest marks of social and civilized life. Those that do not aim to do this, if able, spurn from their household the richest blessing God has given them. Show me a cross, morose, crusty and unaccommodating man, and as a rule I'll show you one whose wife is a poor cook, his table ill arranged, no order, neatness or decoration to adorn the domestic board. To eat, to fill up, and sustain life only, is to serve the baser part of our nature. To eat, to enjoy, and be thankful for the good things of life, nicely prepared and arranged, is no small part of a Christian life. Eat with thankful hearts the bounties God has given.

What shall I eat? Our answer is, "eat whatever agrees with you." Nature can, and will, dictate what is demanded better than we can, unless the appetite has become perverted in consequence of the use of stimulants. Should we take the Old and New Testaments as our standard, we would be conducted to the vast resources of

nature—viands gathered from the fields, fruits from the vineyard, fristlings from the flock and herds, the olive, the pomegranate, the pure juice of the grape, all that “divideth the hoof and cheweth the cud,” and a long catalogue not mentioned here, are promised and given as a reward for virtuous toil.

We are not advocating the use of these things whilst under the influence of acute disease. In such cases nature generally repels the use of food, hence none should be given, but in ninety-nine cases out of every hundred when the patient has a strong desire for a certain article of diet, that article, if administered judiciously, will not injure them. It is the abuse, and not the use, of these articles that injure the patient.

We must confess, however, that we have no sympathy for an exclusive diet of any kind. As man inhabits every variety of climate, it was doubtless intended that we should live upon every variety of food. The cow, the sheep, the deer, have already converted the nutrient substances of the vegetable world into animal matter for our digestive organs, and saved the labor which they necessarily would have to perform were we to live on vegetables alone. Our observation is, that those families which enjoy most of the bounties of nature, as well as the luxuries of a good, clean bed, are far more healthy than those who have naught but the rough things of life—eat and sleep only to live, rather than enjoy.

ARSENICAL COLOURS.

In an Editorial in the *Sanitary Record* we find the following :—Slow poisoning is perhaps one of the most horrible tortures which can be conceived ; and yet, although legislation has done a good deal, some forms of slow poisoning are still allowed to continue unchecked. But we draw attention more especially this week to the question of slow poisoning by means of arsenic, which continues to exist simply because there has been no legislation on the subject. This is no new theme, for many years ago the danger of the employment of arsenical colours in wall-papers was pointed out, but no efficient steps have ever been taken to prevent the dangerous practice from continuing to be adopted.

Formerly suspicion fell on green wall-papers only, and there was a certain reason for this, because there is really not the slightest excuse for using arsenic in even the brilliant colours of any other shade than green ; but paper-stainers, it appears, have found that it is such an unusually profitable practice that now they are not content to use arsenic in green wall-papers only, but are introducing it into even the palest white drawing-room papers, and especially into those which have an enamelled ground. Thus the evil, instead of diminishing, is being increased, because, while suspicion is frequently aroused in reference to a sample of green paper, it is but seldom that attention would be drawn to a paper which contained no shade of colour.

darker than the palest lavender. According to the present custom of the trade, however, this attention is necessary, as some analyses we have recently had made for us have resulted in the startling disclosure that many of the pale coloured wall-papers contain from fifteen to twenty-five grains of arsenic per square foot, or a quantity in excess of that which is contained in most of the brilliant green papers. By attempting to make the colour of the pattern as dead as possible, the evil is increased, for the arsenical colouring matter is put on in such a loose and powdery form that the mere friction of a coat or dress against the paper is sufficient to bring off quantities of arsenic which can be detected by a fairly delicate chemical test.

One case has recently been brought to our knowledge where a family of four persons all suffered from symptoms of arsenical poisoning, and on examination it was found that the walls of three of the bedrooms in the house were covered with papers heavily loaded with arsenic. Mr. Wigner has pointed out a still more recent case, where on examination of samples of the papers in a ten-roomed house—none of which were green—five of them contained arsenic in such quantities as to be injurious to health. Further, Mr. Tatlock of Glasgow, some eighteen months since, pointed out that even our cooking vessels are frequently enamelled with an arsenical compound and in one case he found more than 2 per cent. of arsenic in the enamelled lining of an iron saucepan; this arsenic was combined in such a loose form that on boiling a solution of citric acid in the saucepan arsenic was brought out. It seems to us that legislation should step in at once and prohibit the use of poisonous colours for any domestic or decorative purposes whatever.

ON DISINFECTANTS AND MEASLES.

At a meeting of the Society of Medical Officers of Health, Great Britain, Friday, April 12, 78, Mr. Lovett inquired whether it was generally thought desirable to flush the sewers with carbolic acid once a year, *e. g.*, during the month of May.

Dr. Dudfield thought it well that the Society should decide as to the best disinfectant for this purpose. In Kensington the sewers are frequently flushed with carbolic acid during the summer months. The objection to carbolic acid is, that it will not mix very readily with sewerage.

Dr. Stevenson approved of the use of carbolic acid for street gullies, but for sewers the results were unsatisfactory. The idea of Pettenköfer, that by acidulating the discharges from the body they will be rendered innocuous as regards the spread of disease, is worthy of consideration. Dr. Lionel Beale had found a weak solution of carbolic acid very serviceable in preserving plants from fungoid disease, especially those in Wardian cases.

Dr. Buchanan recommended crude perchloride of iron as very effective upon masses of excrement, though perhaps undesirable for general use in sewers, on account of its action upon the cement.

A communication was read from the Ladies' Sanitary Association, on the prevention of the spread of measles in schools. The ladies desire to have the opinion of the Society as to the period of incubation of measles and the length of quarantine needful after convalescence is established.

Dr. Bristowe, who has had considerable experience in this somewhat intricate question as medical officer to a public school, said that it would be difficult to give definite information, because measles is infectious in the early catarrhal stage, when it is impossible to distinguish it from an ordinary nasal catarrh. He had found measles to be infectious at least three days before the appearance of the eruption. It was therefore practically impossible to effectually isolate infected cases.

ZINC POISONING.

An exchange draws attention to this subject in the following words : Every one is familiar with the injurious properties acquired by water in contact with lead ; but few have become aware that the contact of water with a zinc surface is almost equally dangerous.

Not very long ago the public were informed through various channels that the great *desideratum*, a cheap and harmless water conductor, had been discovered in galvanized iron pipe ; and thousands of persons have adopted this kind of pipe for the purpose of water carriage. It has been determined, by actual experiment, that this kind of conductor is very unsafe and utterly unfit for use ; since the zinc with which the iron is coated is readily dissolved by the water in passing through, which thus becomes contaminated.

Iron pipe without any kind of protection is probably the best sort of conductor for common use now obtainable. All that is necessary is to let the water run a short time, so as to allow the portion which has become contaminated with rust to escape.

Of course the same objection which is made to the use of galvanized iron pipes applies to all kinds of vessels for containing water made of the same material or of zinc. The *Metal Worker* gives the following testimony on this subject.

In deciding the question of whether the salts of zinc are poisonous or not, facts are worth a great deal more than theories. We have frequently called attention to instances of zinc poisoning from the use of water conveyed through galvanic iron pipes ; and a number of such cases have come under our own observation. We have also produced the first symptoms of zinc poisoning in ourselves by drinking, for purposes of experiment, water contaminated by contact with zinc surfaces. We now learn of a case which, though not the first of its kind, is interesting and should put workers in sheet metal on their guard. A stove dealer in Hartford has died of a slight cut made in one of his fingers by a piece of ordinary sheet-zinc. The zinc inflicted a poisonous wound that in a few hours affected the whole

circulation, and baffled the efforts of physicians who were then summoned. Oxidized zinc, which is found in numberless houses, should therefore be handled carefully. Zinc oxidizes readily, especially in damp places, and we think it safe to assert that all the salts of that metal are poisonous. Care in handling sheets is desirable under all circumstances.'

FRESH AIR FOR THE LITTLE ONES.—“A case in practice.”—Dr. Van Bibber quotes in the *Sanitarian* a case which well illustrates the beneficial effects of abundance of fresh air for infants. ‘I will tell you, he writes, what happened to a neighbour of mine last summer. Mrs. M. had a sick infant about six months old. My daughter and myself went up one day to see if we could do them any good. It was in the hottest part of July. The same room served the family for kitchen, sitting-room, and the baby—as sleeping room. The room was a long, narrow one, extending east and west, with two doors, one north, one south, but not exactly opposite. The cooking-stove was in the northwest corner of the room, the baby cradle in the northeast. One door they kept always shut, the other partially so, for fear the child might catch cold. The poor little thing was panting and gasping for breath, the mother pale and black under the eyes; the air of the room fetid and miasmatic. ‘What doctor attends that child?’ ‘Dr. D. Before him we had Dr. L. Then we tried Dr. H. I think we’ll discharge him and call in Dr. N.’ ‘Mrs. M.,’ I answered, ‘that child is dying from want of fresh air. Did not the physicians employed suggest that remedy?’ ‘No, sir,’ not one; they did nothing but give it physic.’ Then I took the husband out on the little porch (for the air inside was making me sick) and told him in plain Anglo-Saxon what I thought of the case and of the restorative effects of fresh air, and why country infants had so much better chance for life in summer than those of a city, etc. He listened with evident attention, and said he would act on it, and a day or two afterward we walked up again and found both doors wide open, and the child evidently on the mend. The last time I was there the doors were still open, the child was rosy and hearty, the mother had recovered her good complexion, and all the other children looked gay and hearty.

CONSOLATION FROM STATISTICS.—“And is it really true that I shall recover?” asked a patient of his doctor. “Infallibly,” answered the man of medicine taking from his pocket a paper full of figures. “Here, look at the statistics of your case; you will find that one per cent. of those attacked with your malady are cured.” “Well?” said the sick man, in a dissatisfied manner. “Well, you are the hundredth person with this disease that I have had under my care, and the first 99 are all dead.”

SALICILIC ACID is used for preserving jellies and other confectioneries, to prevent fermentation. It is said to save twenty-five per cent. of sugar.

BREWERY GRAINS AS FOOD FOR COWS.—The *Canada Lancet* thus alludes to the custom which is common in large cities of feeding brewery grains to cows to increase the flow of milk. The result is an excess of quantity for the time being, with a very decided deterioration in quality; but, sooner or later this food, when used in considerable quantities, produces a poisonous effect on the animals, and renders the milk wholly unfit for use. The cows, if fed on grains alone, become covered with sores and eventually die. The poisons that are used in the manufacture of malt liquors, such as sulphuric acid, cocculus indicus, opium, copperas, alum, and strychnine, naturally settle (especially the dregs of them) in the grains. This furnishes a clue to the increased infant mortality in large cities. The Board of Health in Brooklyn has proscribed all swill milk, *i. e.*, milk from cows fed on the swill or rubbish from breweries and distilleries. Tons of brewery grains are constantly being fed to cows in our large cities, and if the various Boards of Health were at all equal to their duty, they would at once prohibit the sale of milk so produced.

FRESH AIR AND CONSUMPTION.—The *Sanitary Record* says:—“Recent statistics show that the rate of mortality among grocers is as 76 to 100 among the general population at equal ages, while the death-rate among drapers is as 108 to 100 by the same standard. On analysing the cause of this difference between the drapers and the grocers, it is found that it lies in the mode of living. The principal disease which destroys the draper is pulmonary consumption. The explanation is simple: The grocer lives in a shop, the door of which is open the whole day, and he is very active himself in business; the draper, on the other hand, lives in a close place, with the doors of his shop closed, and in a dusty and close atmosphere. No one, whose pleasure or business calls on him to enter the majority of our large drapery emporiums in London, but will feel in a position to testify to the truth of this description. The heat and closeness which are their usual characteristics sufficiently account for the general pallor and unhealthy appearance of the male and female attendants in them.”

EDUCATION AND SIGHT.—We have received an instructive pamphlet, entitled ‘Is Modern Education Exerting an Evil influence upon the Eye-sight of our Children?’ By A. W. Calhoun, M.D., Professor of diseases of the eye and ear in the Atlanta Medical College. The author refers to certain defects of vision, to the lighting of school-rooms, quality of type and paper used in school books, etc., and concludes in the following words: Says a well-known writer, ‘It seems to me that the very etymology of the word education enforces the idea that the child is to grow better and stronger up through his school life; that by proper regulation of his diet and management at home; by properly lighted school-rooms and properly constructed desks, and a better regulation of his hours of study,

he should represent a much higher type of life when he has reached the age of twenty-five, than when he is just taken in hand with the view of giving him book knowledge. We certainly should not damage the eye in the process of education, and I believe that the damage done to the eye is to be taken as an index of that which is done to the other organs of the body.' In conclusion, when every school house in the land, and every school-room and school desk shall have been properly constructed according to the most scientific investigations, and plenty of good light thrown upon books properly and plainly printed with good ink—when the habits of study of all children shall have been regulated, both in the school-room and at home, then do I feel convinced that while we may not be able to banish these particular eye diseases from the world, without doubt will we be able to reduce them in number and in degree of severity.

THE FILTRATION OF AIR.—At the last meeting of the Manchester Literary and Philosophical Society, Dr. R. Angus Smith in the chair, Mr. Wm. Thomson, F. R. S. E., read a paper 'On the Construction of a Room, or Series of Rooms, free from Germ Life, proposed for Use in the Performance of Surgical Operations.' The paper was illustrated by a model room and apparatus. Mr. Thomson said his object in bringing the paper before the society was to show what he considered to be a valuable application of a well-known principle—namely, that of filtering from the ordinary air the innumerable spores that are constantly found floating about in it, and so to arrange a room or series of rooms in which the air may be rendered optically pure. He described a series of experiments by which he had succeeded in excluding fungus spores from a confined space or model room—the process being that of filtration through layers of cotton wool—and said that the results obtained showed conclusively that ordinary large rooms might be constructed and ventilated with filtered air by means of fans, so that flour paste, taken as a test standard, would remain in them free from fungus life.

ON CATCHING COLD,—The *Periscope* says: When a person begins to shiver, the blood is receding from the surface; congestion, to a greater or less extent, has taken place, and the patient has already taken cold; to be followed by a fever, inflammation of the lungs, neuralgia, rheumatism, etc. All these evils can be avoided, and the cold expelled by walking, or in some exercise that will produce a prompt and decided reaction in the system. The exercise should be sufficient to produce perspiration. If you are so situated that you can get a glass of hot water to drink, it will materially aid the perspiration, and in every way assist nature in her efforts to remove the cold. This course followed, your cold is at an end, and whatever disease it would ultimate in is avoided; your sufferings are prevented, and your doctor's bill saved. If you are where you can get a hot bath take one. A Turkish or Russian bath is better.

PREVENTION BETTER THAN CURE.—Everybody is ready to say that an ounce of prevention is worth a pound of cure. People do not however always act in all things as if they believed it. In Toronto, for example, the citizens willingly enough, on the whole, pay and support a large number of physicians, considerably over one hundred, we have been told, for endeavouring to *cure* them of the diseases which too constantly prevail, and from which many of them are constantly suffering, while not one physician is employed to do anything in the way of *prevention*. When, too, every one will admit the fact that a large proportion of diseases from which the people suffer may be prevented. In Ontario the people pay and support between fifteen hundred and eighteen hundred physicians for trying to cure them and effecting cures, when they can, and not half a dozen, all told, to give their attention in any profitable degree to preventive measures. Thus the public manifest their faith in the old proverb.

ON THE IMPORTANT SUBJECT OF INFANT MORTALITY, Burkart thinks that the two favourite modern remedies, water supply and drainage and sewerage of the city, would lower the mortality down to the lowest point. On the other hand, before all things, must the unfortunate position of pregnant women in poor families be ameliorated, as well as that of their newly-born babes and sucklings. The position of the mothers in poor families must be amended, and the vigilance over baby-farmers and wet-nurses must be increased. For this purpose ladies are recommended to have meetings. Nurses must be better instructed as to how to bring up infants. The town must see that good cows' milk be supplied by taking the wholesale supply into its own hand, so as to remove it from the tricks of milk sellers.

Above all, the most important of all things is the establishment of a council for the care of the public health.

THE CALEDONIA SPRINGS, a favorite resort for invalids and pleasure seekers is again about to be opened for the season. These springs are near L'Original, on the Lower Ottawa. The *Canada Lancet* says: 'they have been long and favourably known for their efficacy in the treatment of cutaneous, rheumatic and other chronic affections.' The large hotel in connection with the springs will be open from June to October. The accommodation is all that can be desired, and at moderate cost. For information concerning the springs address Mr. K. Arnoldi, Ottawa.

Prof. Church (*Health Reformer*) finds that the leather of bound volumes on the upper shelves of libraries is destroyed by the combustion products of coal-gas. Chemical analysis has shown that the injury is due to the sulphur contained in the gas, sulphuric acid in very large proportion having been found in leather which had been destroyed in this way. A chemical agent that will destroy leather cannot be very wholesome for human lungs.

VENTILATION.—Dr. William Ogle, of Derby, writes thus to the *Times*: ‘Any one with a very few grains of common sense may ventilate his room perfectly, and without draught, at the cost of a few shillings. You have only to knock a brick, or rather half a brick, out of an outside wall of the room that is to be ventilated; begin from the inside in a corner, and make the hole just above the skirting board. Be provided with a tube two feet long, with a second piece at right angles attached at one end and as many inches long as the wall is thick. Put the short piece through the wall and fix the long piece in the corner of the room so as to be vertical. That is all? For a small dining-room or for a bedroom the pipe should be 3in. in diameter; for a large room, two or more pipes and of larger diameter would be required. These pipes, if covered with the same paper as the wall, are scarcely seen; but, indeed, they have no cause to be ashamed of themselves. They are welcome guests, and each one supplies a volume of fresh air without any perceptible draught. If there is a bracket, or a picture frame, or other impediment immediately above the pipe there will be a draught, but not otherwise. Nothing can be more simple, nothing more effective. The only reason that I can think of as likely to interfere with its universal adoption is that it is so simple and inexpensive. I often prescribe it to my patients, and tell them that if I could but give it in the form of a Latin prescription and manage to make them pay ten guineas for it they would value it more, and in some cases, perhaps, adopt it more readily.’

QUACK MEDICINES.—At a recent convention of pharmacists in England it was proposed to take steps for limiting the “wholesale poisoning of the public by patent medicines.” It was proposed that even if it be impossible altogether to suppress the reaction of dishonest quackery upon vulgar superstition, the vendors of nostrums be compelled to divulge the composition of their wares, and prevented from publishing mischievous and mendacious advertisements concerning them. Among the examples cited, including sundry ‘hair restorers,’ which, in direct contradiction to their advertised pretensions, contain poisonous quantities of lead, the most glaring one is a largely certificated ‘Sure Cure for the Opium Habit,’ which is found on analysis to give two grains of morphine to the dose, recommended to be taken thrice a day.”—We would suggest that when Legislative action on public health takes place in Ontario, some restrictions be placed on the sale of these nostrums.

AT A RECENT meeting of the Nuneaton Local Board, the medical officer of health strongly condemned the prevailing practice of administering soothing syrups, cough elixirs, teething powders, and other abominations to suffering children, and pointed out that the newspapers now-a-days were teeming with quack medicine advertisements—a proof of the gullibility of the public and the ignorance which prevailed as to the laws of health.

OUT-DOOR LIFE IN INCIPIENT CONSUMPTION.—The *Journal de Médecine et Chirurgie, Paris*, (*Pacific Med. & Surg. Four.*), in giving a brief summary of an article on "Camping Out," says, with reference to out-door life in threatened phthisis: 'It is remarkable that Dr. Gibbons should press this subject at the same moment when an important communication from Doctor Langneau directed the attention of the Academy of Paris to the influence of the exclusion of out-door air in the development and aggravation of phthisis among the labouring classes.'

AT WOLVERTON A meeting has been held at the Town Hall, the Mayor in the chair, and a 'Ladies' Sanitary Association' formed for the diffusion of knowledge in sanitary matters among the wives of working men. Lord Wrottesley and many of the leading clergy and townsmen were present, and a number of ladies.

SOME WELL-KNOWN analytical chemists have made an analysis of violet powder sold for use in the nursery, and they find that it contains 25 per cent. of white arsenic. The discovery of this important fact has been the result of observing quite an epidemic among children of a disease resembling erysipelas, which in several cases proved fatal.

BOOKS AND PAMPHLETS RECEIVED.

REPORT OF THE REGISTRAR-GENERAL OF THE PROVINCE OF ONTARIO, FOR THE YEAR 1876.

This is the largest and most comprehensive statistical report that has ever been issued in Ontario, and contains much interesting matter. It has already been referred to at length by the leading daily papers, and we need not occupy space with an extended notice. Reports of this kind are often laid aside unread by those to whom they are sent, who never know, because they do not look for it, the large amount of interesting, suggestive, and useful matter such reports contain. In this way much less profit accrues than should from the publication of reports. This report with just reason complains that the causes of death are not given so satisfactorily as they might be. We hope our medical readers will endeavour to be as careful as possible and give full conclusive causes as far as skill in diagnosis will permit. On this rests largely the value of statistics. The report shows that consumption is yearly increasing in Ontario, and that, as we have stated elsewhere in this JOURNAL, it is believed to be a filth disease; a prolific cause of it being, with other insanitary conditions, the re-breathing of breathed air, in unventilated rooms. Diphtheria has largely increased, and is shown to be, as is typhoid fever also, much more prevalent or fatal in rural than in urban districts. The proportion of deaths from diphtheria was six times greater in the county of Oxford than in the county of York, including Toronto.

An appendix to the report, on the influence of the weather on mortality, by Mr. Thos. Monk, of the Meteorological department, forms a valuable addition. It is largely the duty and work of sanitary science to counteract the influences of the weather on the public health. It is not yet possible to produce copious artificial showers to wash and purify the air and give rise to ozone, nature's great disinfectant, and thus prevent the great rise in the death-rate in such dry months as was August of 1876, but it is quite possible, and would prove highly profitable, to clean the city thoroughly and remove the soil and hot-beds for the development, growth, and spread of disease germs during such weather. It might be possible, too, by proper habits, care of the skin, suitable clothing etc., to counteract the effects on the nervous system of the cool, humid weather in March.

THE CANADIAN MONTHLY AND NATIONAL REVIEW: Toronto, Hunter Rose and Co.

This admirable periodical certainly does not lose in character by its frequent change of publishers. As a National Magazine it deserves liberal support, while its high character should command the same. In the May number we get five chapters of 'The Monks of Thelema,' by the now pretty well-known authors, Walter Besant and James Rice. We hope this will prove as good a story as 'Such a good Man,' in previous numbers, by the same authors; which was interesting, instructive, and life-like, and not sensational or too long. 'Home,' a poem, containing much true poetry, in the May number, is exceedingly good, and one wishes to know who H. M., Toronto, is. There are interesting and instructive articles on 'Sleep and Dreaming,' 'Communism,' 'Buddhism and Christianity,' and other subjects. Maple Leaf, of Montreal, furnishes a very good and pretty story, with a most unromantic uninviting name, 'Lazy Dick.' As we have before said, the thoroughly independent criticisms on 'Current Events,' especially as relates to Canadian political matters, are most refreshing, and somewhat reassuring as regards Canadian politicians, and are highly valuable in a national sense. The Review department seems of late more extensive, and adds much to the value of the Magazine. If we might be permitted to suggest anything which we think might improve the Monthly, we would say a few good illustrations would make it more attractive, in this picture age. They would be quite consonant with the somewhat miscellaneous character of its matter.

THE JUNE NUMBER OF THE MONTHLY reaches us before we go to press and seems in every respect equal to its predecessors.

BELFORD'S MONTHLY MAGAZINE: Toronto, Rose-Belford Pub. Co.

We do not receive this magazine very regularly, and have not a late number, but those we have received are highly creditable to the publishers. It holds a different position in literature from that occupied by the Monthly, above noticed,—cultivates a different field, and all who can afford to do so, could not do better we believe than take both magazines.

A NEW JOURNAL OF OBSTETRICS AND GYNÆCOLOGY: Toronto, Hart & Rawlinson.

The Obstetrical Journal of Great Britain and Ireland, including Midwifery and the Diseases of Women and Children, with an American supplement, Edited by J. V. Ingham, M.D., Obstetrician to the State Hospital for Women and Infants, Philadelphia. Published Monthly, each Number containing ninety-six octavo pages, very handsomely printed, with illustrations wherever required. Single Numbers, 50 cents. Annual Subscriptions, free of postage, five dollars in advance.

THE VEST-POCKET ANATOMIST: By C. Henri Leonard, A.M., M.D. Second enlarged edition. Detroit, 1878.

A little 50-cent memorandum book of anatomy, which may prove useful to refresh the memory of students.

NINTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH, of Massachusetts, Jan., 1878.

This is a large volume (over 500 pages), with maps, tables, and diagrams, and contains much valuable matter.

SIXTH ANNUAL REPORT of the Sec. of State of Michigan, relating to the registration of births, marriages and deaths.

A bound volume of 450 pages, consisting chiefly of tables, conveniently arranged for reference.

THE HERALD OF HEALTH, A MANUAL OF PRACTICAL HYGIENE: E. W. Gray, M.D., editor, Bloomington, Ill., U. S.

Judging from the first number published, May, 1878, this is an orthodox, practical little monthly, exclusively devoted to Health. It has a large field for labor in the great West, and cannot fail we think to be productive of much service in the cause of health. We are highly pleased with it, and give an extract from its pages elsewhere.

The publisher of this JOURNAL owes an apology to its readers, especially to those who have paid in advance, for the long delay in the publication of this number. The delay has been unavoidable, but it is hoped there will not be more such.

At a recent meeting, Dr. B. W. Richardson, F. R. S., mentioned that he had succeeded in re-making morion, the soporific liquid which was administered to criminals condemned to death by the Jewish Sanhedrin to prevent them from feeling the pangs of execution.