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# PUBLIC HEALTH MAGAZINE

AND

## LITERARY REVIEW.

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VOL. II.]

FEBRUARY, 1877.

[No. 8.

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### Original Communications.

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#### DISSEMINATION OF ZYMOTIC DISEASE AMONGST THE PUBLIC BY TRADESPEOPLE\*

By CORNELIUS B. FOX, M.D., M.R.C.P., London, Medical Officer  
of Health of East, Central, and South Essex.

The subject of this paper will, doubtless, be regarded as one of an alarming character by the public at large, as highly objectionable by tradespeople, as very important by medical men in general, and as one of the highest interest and concern by medical officers of health.

The necessity of preventing trades from being so conducted as to be injurious to public and private interests is admitted on all hands. We have not only Acts of Parliament which regulate the employment of dangerous substances used in trades—such, for example, as the Petroleum Act, the Pharmacy Act, the Acts relating to explosive compounds, as gunpowder and nitro-glycerine—but we have Acts which, although imperfect in their nature, regulate to some degree factories, coal-mines, bakehouses, workshops, &c. The employment of labor in such trades as lucifer-

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\* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Sheffield, August, 1876.

match making, fustian-cutting, the manufacture of mineral acids of earthenware, glass and metals, of percussion-caps, cartridges, paper, staining of prints, bleaching and dyeing, &c., is to a certain extent controlled. The first-named Acts, as also the Alkali Act, are designed to shield the public at large from the risk of an exposure to hurtful and poisonous substances, whilst the others are directed more especially to the prevention of injury to the health of those engaged in them, and to the non-employment of those who are physically unfit to be exposed to such unwholesome avocations. The protection of the public health by the regulation of offensive trades, such as those of blood, bone, tripe and soap-boiling, and tallow-melting, is relegated to the Public Health Act of 1875, under which power is also given to compel the consumption of smoke in certain cases.

The existence of all these legal enactments shows conclusively that the principle of the regulation of trades has been deemed by the Legislature to be sound, wholesome and expedient.

Legislation has proceeded on the assumption that, if a trade be so managed as to be injurious to the health of those engaged in it, or to the public generally, or in such a manner as to be a nuisance, *alias* an excessive annoyance or danger to the public, the best practicable means of preventing the evil shall be adopted. The several Rivers Pollution Bills have been drawn with this self-evident desideratum steadily in view. The Rivers Pollution Bill that will sooner or later succeed in running the gauntlets of the Lords and Commons will undoubtedly be thus framed,\* and the Air Pollution Bill, which, I fear, is in the very far distance, must be supported on this basis, if ever it is to be a reality. The liberty-loving people of this free country would never be able to submit to such interference with, and control over, their modes of carrying on business for less important considerations than those of national health and wealth.

Admitting, then, the facts (1) that, in the interests of the

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\* Since writing the above, the Act of 1876 has, by the consent of all parties, been allowed to pass with a view to a settlement of the question. It insists on the adoption of "the best practicable and available means" for counteracting the evils with which it is supposed to war.

public, it is highly desirable that trades should be supervised for public health purposes, and (2) that certain legal enactments at present exist of a very imperfect and limited character, having for their object the regulation of certain trades, so that they shall not be injurious to health, is it not a matter of logical necessity that, if it can be shown that there exist other trades not yet provided for, which are actively engaged every now and then in sowing broadcast the seeds of preventible disease, some remedy for such an anomalous state of things cannot be with any sense of consistency and justice longer withheld?

To prove to medical men, and especially to those amongst them who are engaged in the public health service of the country, that zymotic disease is disseminated by tradespeople amongst their unsuspecting customers, is really to waste time and to assume an ignorance of facts which they are constantly deploring. My object in addressing the Association on this subject is rather to suggest to and consult with those medical men who are attending this gathering, as to the best mode in which the existing sanitary law could be so altered and modified as to protect the public from the dangers to which they are exposed in this direction. As these lines will be read, however, by many who do not belong to the medical profession, it will be useful for me to narrate briefly a few instances of the spread of zymotic disease by tradespeople amongst those whom they serve, which have come under my immediate notice.

CASE I. *Scarlet Fever in a Public-house.*—Scarlet fever was exported from London into a public-house in Essex. Whilst the children of the publican lay ill of this disease in the bedrooms, their mother, who was in constant attendance on them, descended to serve each customer who called to partake of refreshment. I, as Medical Officer of Health, advised the temporary closure of this house of call, but my recommendations were unheeded. From that house, as was naturally to be expected, the fever spread into the surrounding parishes, and deaths resulted. There was no legal power to compel a cessation of business during the presence of this communicable disease in the house. It was found that the publican could not be punished under the Clause 126 of the Public Health Act of 1875.

CASE II. *Outbreak of Typhoid Fever from Polluted Milk.*—

An outbreak of enteric fever occurred in a portion of the town of Brentwood. Whilst the houses of the families affected were provided with different modes of disposal of excrement, some draining into private cesspools and others discharging into the town sewer, and whilst the water employed by all, with one exception, proved on analysis, although derived from different sources, to be very pure, there was one condition in common. They all, with one exception, drank milk from the same dairy, and the dairyman washed out his cans with water which was most offensive sewage water. The exception to the rule was the case of a young man who did not deal with this dairyman, but who drank of the same water as that with which he manipulated his milk. I could not learn that any one besides this young man employed this water for drinking purposes. I myself saw the milk-vendor milking his cows into a pail which resembled a filthy pig's bucket. His dairy, where the milk was stored in large pans, was situated virtually in a bedroom redolent of organic matter. My surprise was great to find that milk could be preserved for even a short time in a sweet state in such impure air. Why, I ask, should the lives of our children, who are great milk consumers, and our own lives be exposed to such dangers when nothing would be easier than to have dairy establishments under proper sanitary control, in the same way as we at present have slaughter-houses?

CASE III. *A Village School distributing Measles.*—Measles appeared in a parish under my supervision. On investigation, it was discovered that the day school was the centre from which it spread: for the children of the schoolmaster, who lived at the school, fell sick of the disease one after another, and imparted it to the children who daily attended the school. I recommended that the schools which were busily engaged in infecting the parish should be temporarily closed.\* The managers refused, on the

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\* The mere exclusion of the children belonging to an infected family from school will sometimes prevent the spread of such diseases as measles and scarlet fever. When several families of a parish are infected, the closure of the public school will be generally found the most effective method of limiting their diffusion.

plea that they should lose the Government grant, to secure which a certain number of attendances are necessary, although, when a school is closed by reason of the presence of epidemic disease, a reduction in the number requisite to secure the grant is allowed. There existed no legal power to compulsorily close the schools. Contrary to my advice, they were kept open, and they disseminated the disease in a most successful manner throughout the whole parish, which suffered severely.

*CASE IV. Small-pox in a Public-house and Restaurant.*—A traveller who was temporarily lodging in a public-house exhibited an eruption, which proved to be that of small-pox of a confluent kind. On entering the door of this house of public resort I could distinctly recognize the peculiar smell characteristic of the disease. In the bar where men were drinking the odor was still stronger. Trade was going on as usual. No remonstrance had any effect on the publican. There was no exposure of the sufferer, and it could not be proved that there was any exposure of infected articles. From this house the disease spread, and no legal means existed whereby the calamity could be prevented. The public were frightened some time ago by a report of the discovery of a bad case of small-pox lying in a shake-down bed in the kitchen of an eating-house in London. Some strong feelings were aroused as to the dangers to which people are exposed; but the circumstance was soon forgotten, and made no lasting impression on the public mind.

*CASE V. Enteric Fever spread by a Tailoring Establishment.*—A case of enteric fever appeared in the family of a tailor who lived in a small four-roomed house in a terrace. This tailor was employed by the fashionable and principal tailor of the town, who displayed his goods in a large and handsome shop situated in the best street. The assistant tailor, whose four-roomed cottage was his place of business, where clothes were made and repaired, employed under him a journeyman tailor and a sempstress who lived near. On my visiting the assistant-tailor's house I found that work was proceeding as if no fever existed upstairs. Clothes were being manufactured there for the fashionable tailor with the handsome shop, who would soon distribute them to the unsuspecting public. The journeyman tailor and the sempstress

both received from the assistant-tailor some clothes to be repaired. Both became infected with the fever, and communicated it to others.

CASE VI. *Scarlet Fever in a Village Grocery Business and Post-office.*—A child of a village grocer, who was the postmaster of the district, became infected with scarlet fever, the poison of which was conveyed into the house from a distance. On ascertaining that the house was a small one, and that the mother and father passed from the bedside of the sick child into the shop to serve customers, and fearing, moreover, that the poison of the disease might be circulated through the agency of the post-office, I recommended the temporary closure of the business. My advice was disregarded, and no power existed of compelling compliance. The disease, of course, spread throughout the village.

CASE VII. *Whooping-cough in a Village Beer-shop.*—Whooping-cough of a fatal character being very prevalent in one part of my extensive district, destroying in about four months forty-children, attempts were made to prevent the spread of the disease from any cases imported into other parts of the district. A case was conveyed into a beer-shop, and infected all the children of the publican. This beer-shop was daily frequented by many of the fathers and mothers of the village, or their children. I myself saw children entering it, having been sent with jugs for beer by their parents. I recommended the publican to temporarily close his house of public call, pointing out the danger to the whole village which a refusal would involve. He quite acknowledged the risk to his customers, but assured me that he could not afford to temporarily close his business. This assurance would have been received by me *cum grano salis*, had I not good reason for knowing that he spoke the truth. I asked the legal adviser of the sanitary authority whether some compensation could be granted him by the authority, if the publican agreed to close his house, but found that the auditor would not sanction an outlay of this kind, as the law does not provide for such an expenditure of public money. The disease, as was only to be expected, spread amongst the customers and occasioned three or four deaths.

The absence of any power to afford compensation has re-

cently been authoritatively declared by the Local Government Board in the following case. Scarlet fever of a mild description was imported into the families of some "Peculiar People," living in a village, who kept the matter secret. The children attended the National and Dame's Schools during the desquamative stage of the disease, and, through these schools, infected a portion of the village. I recommended that both of the schools should be temporarily closed. The clergyman of the parish, who had the control of the National Schools, consented. The periodical inspection and examination of the children had just been completed, and there was no danger of losing the grant. The old dame who taught the very young children of the parish, and who had to maintain her still older husband (above eighty) out of her weekly earnings, also closed her school; but very naturally looked for some compensation, as she could not afford to be deprived of her weekly pittance. The legal adviser of the Sanitary Authority wrote to the Local Government Board, asking, whether the Sanitary Authority could compensate the poor dame for the loss she would sustain by the closure of her school. The Local Government Board replied in the negative. In a former case of this kind I was obliged to compensate the dame out of my own pocket, as it was impossible to allow the poor creature to suffer. If village dames refuse to close their schools when engaged in propagating disease, there exists no power to compel them to do so.

To detail more cases of this description is needless. Dozens, all telling the same tale, are to be found published in medical and sanitary journals. Perhaps the most recent in the recollection of sanitarians will be that of the distribution of the scarlet-fever poison through the medium of cream, at a West-end party; and that of the discovery of a case of small-pox in a milk-shop at Manchester.

A cottage, used as a laundry or as a butcher's shop, may lodge in its bedrooms cases of typhus fever; a private school may disseminate scarlet fever through a district by means of its day scholars; a grocer's shop or public-house may be served by those who have just come from the bedside of persons dying upstairs of small-pox; the cottage of the village postwoman may



contain some communicable disease, the poison of which she may distribute with the letters; and yet there exists no power to temporarily close such disease-spreading establishments.

I have written enough to show what dangers surround the public, and as to the state of helplessness in which medical officers of health find themselves, when they wish to prevent a tradesman from disseminating the poison of some disease with his wares, be it the milkman with sewage in his milk, or the schoolmaster who distributes a dose of the poison of measles with a knowledge of the three R's amongst the village children, or the sempstress belonging to some drapery establishment, whose lodging may contain children laboring under malignant scarlet fever—a fact which may be unknown, in the absence of an Act for the compulsory registration of communicable disease to any sanitary official. That our children should be subjected to the risk of being poisoned with sewage in their milk, because some milk-vendor chooses to wash out his cans and manipulate his milk with sewage-water; that our wives and that we ourselves should be exposed to the chance of infection from wearing clothes ordered at some respectable shop, and made in some garret full of fever or other contagious disease, the existence of which is kept a profound secret, is simply intolerable. If the liberty of the subject, about which we in this country hear so much, is to be maintained at the expense of a quiet submission to an exposure to such perils, I, for one, would pray the Legislature for less liberty.

The question now arises as to how this evil of the dissemination of zymotic diseases by tradespeople can best be prevented. On this point, I doubt not, there will be some difference of opinion.

My own view is that it can be averted:

1. By placing the regulation of all trades under the control of the sanitary authorities and their officers (the power to compulsorily close a school or public-house, &c., when necessary, would be of course comprehended in an enactment of this kind);

2. By enabling a sanitary authority to grant compensation out of the rates in cases of temporary closure of business for the

protection of the public, when the sanitary authority has reasons for believing the truth of an allegation of inability to sustain pecuniary loss on account of poverty;

3. By extending the provisions of Clause 126 of the Public Health Act (1875), by inserting one making it a misdemeanor for persons to endanger the lives and health of their fellow creatures by wilfully spreading communicable disease in any way—an amendment which has recently formed the subject of a petition of the health officers of the country to both Houses of Parliament.

The proposal to place trades under the control of the health authority of the district in which they may be situated must sooner or later be carried out. It is merely a question as to the time when the public will become as fully alive to the importance of the subject as medical men already are.

There can be nothing unfair in expending public money in giving compensation to a very poor and struggling tradesman, when a sanitary authority compulsorily closes for a short time his business in the interests of the public. Sanitary authorities already possess the power of giving compensation to the owner on account of bedding, clothing and other articles exposed to infection which they wish to have destroyed.

Again, when schools are closed under the advice of the health authority, in consequence of the presence of infectious disease, a certain compensation is granted to them in not requiring the same number of attendances as is usually needful to secure the Government grant.

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**THE KITCHEN.**—Until the kitchen becomes thoroughly and systematically organised, and is regarded as one of the most important of household departments, there can be no such thing as habitual health in the family. Bad cooking poisons more persons than all the nauseous drugs ever administered to poor humanity, and it is the remote cause for the employment of two-thirds of all the divorce lawyers in existence.

## Reviews.

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ON PERSONAL CARE OF HEALTH. By E. A. Parkes, M.D.,  
F.R.S. London: Society for Promoting Christian Knowledge.

If this little book could make its way into every home in Montreal, and be carefully read by the inmates of each household, the services of a physician would be but seldom required. The lamented and gifted author, of whom we sorrowfully wrote a notice some months ago, was called away from his labors a few weeks after he had read the proof-sheets of this, his latest work. It is written on a subject to which he attached the highest importance, and is composed in language so clear, and in a spirit so benevolent, that it is a positive pleasure to scan its pages.

After explaining that health is not merely freedom from bodily pain, but that it is the capability of receiving delight from all surrounding things, and from the employment of all our faculties, he remarks on the strange carelessness with which this precious boon is squandered. He then points out that the secret origin of many diseases lies in the neglect of obvious rules of morality and common sense, and that, if he will, it lies in the power of man himself to erase from the world a large portion of those sufferings, the sight of which we have daily to lament. In the removal of these blots from a world which was originally pronounced good, Christianity and Science must be the chief agents.

The sanitary legislation of the present generation has done much to ameliorate the condition of the people generally, but legislation cannot effect all necessary reform. Personal hygiene must supplement its efforts, and it was to put forward for the benefit of the individual the main rules of the personal management of health, that Dr. Parkes wrote this valuable little treatise.

He has not touched on the subject of the health of children. This task he has left to others; but, without entering into details, he unhesitatingly asserts that at present the frightful difference between the infant mortality of the rich and of the poor classes

is chiefly owing to the ignorance and carelessness of the latter, and is attributable only in a minor degree to the poverty of their circumstances.

He begins his subject accordingly with the period of puberty in both sexes—that is to say, about the age of fourteen or fifteen in girls, and a year later in boys. When growth is completed, about the twenty-first year, manhood and womanhood commence, lasting for about forty years, more or less, and succeeded by old age. We have, therefore, the three natural divisions of puberty manhood and old age, for each of which Dr. Parkes gives the rules of health, as they necessarily differ somewhat in each period.

After remarking on the great importance of the period of puberty or growth, inasmuch as in it the foundations of health may be firmly fixed, or, on the contrary, undermined, he proceeds to give, under different headings, the rules of health for this division of life. Upon these, at present, we have no space to dwell. We must content ourselves with saying that he offers most valuable and practical suggestions on the varied topics of exercise, solid food, drinks, smoking, clothing, the care of the skin, teeth and bowels, fresh air, pure water, healthy houses, and unhealthy trades. He lays great stress on physical education, especially for girls. They ought, in his opinion, to have strong, firm muscles, and well-developed chests and haunches, as a race depends largely for its stamina on its mothers, and must degenerate if these are feeble, and want bone and muscle. He strongly advises every young man and woman to be a total abstainer, and gives his reasons, which we may briefly state as follows:—1. Alcohol cannot do any good to healthy persons in the period of growth. It contains no particle of nitrogen, and cannot, therefore, assist in building up the tissues of the body. 2. It does not aid muscular force, for its apparently reviving effect is transient, and is succeeded by increased languor. 3. It does not aid nervous force, for, though it may increase the rapidity of thought, it lessens the real power of the mind. 4. It does not increase animal heat, for it has been frequently shown by experiments that it depresses the temperature of the body; instead of keeping cold out, it lets it in. 5. A young man or woman who takes alcohol is laying the foundation of a habit which has a most

dangerous tendency. Prudence, then, counsels us all to abstain in youth from what is by no means "a useful friend," and may easily become "a deadly enemy."

On smoking, he remarks that a young man, without any good to himself, is forming a habit which may become very burdensome, and that, if he is a poor man, he is spending money for which there are fifty better and more pressing applications. At any rate, it is a practice which brings with it doubtful good, and, in most cases, very certain harm.

Dr. Parkes is of opinion that, in a physiological point of view, early marriages are the best. When people marry at about two or three and twenty, the children are likely to be more vigorous than when the parents are older. The parents are better able in the period of comparative youth to undertake the care and maintenance of children, and will be generally relieved of their charge before old age incapacitates them for the responsibility of superintendence. In the two chapters on Manhood and Old Age, the same topics of food, clothing, exercise and sleep are successfully handled, with a scientific discrimination as regards the changes which are naturally rendered necessary by these different periods of life.

On the question whether alcohol should be taken daily as an article of diet in manhood and old age, Dr. Parkes may at first seem to differ with Dr. Richardson, who condemns alcohol *in toto*. But the difference is more apparent than real. Dr. Parkes, as we have seen, has said that it is not "a useful friend, and may easily become a deadly enemy," during the period of youth. Surely there can be no limit to this statement, and what is true of youth must also be true of manhood. Under any circumstances, he considers that one and a half ounces of pure alcohol in twenty-four hours form the limit of moderation, and that the scientific uncertainty at present prevailing on the whole question, coupled with the difficulty of saying what dietetic advantage is gained by using alcohol, turns the scale in favor of total abstinence instead of moderate drinking.

The last chapter in the volume is a somewhat hopeful answer in the affirmative to the question, Will men follow the rules of health? Dr. Parkes shows plainly that the amount of physiological know-

ledge which it would be necessary for young people to have, in order to understand the importance of the rules of health, is very small. The bulk of the people, of course, cannot be taught technical physiology. Nor is this requisite. Certain points can easily be learnt in a few days, and, properly illustrated by a few models, would give a general view of the wonderful mechanism of the human body. After these simple lessons have been clearly understood, the reason of the rules of health would at once become transparent, and at last all would learn to treat their bodies with due care and respect. As Pallas says to Paris in Tennyson's poem of *Cenone* :—

“ Self-reverence, self-knowledge, self-control,  
These three alone lead life to sovereign power.”

The last few pages of the manual contain a few simple sanitary hints for workingmen, who would do well to follow closely the admirable rules laid down for the bettering of their physical, and consequent moral, condition. On the whole, there is very little in Dr. Parkes' volume to which any scientific man can take exception, and the general reader cannot err if he conforms to every hygienic direction that it offers for his benefit.

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VENNOR'S WINTER ALMANAC. By H. G. Vennor, F.G.S., of Geological Survey of Canada. (Dawson Bros.)

The love of the marvellous is so ingrained in the human system, that when once a name is up as able to feed this mental taste, the success of the purveyor is in the ratio of faith to fact, with always this in favor of the prophet that every one wants him to be right, for every one loves to peep into the future. When favored with “Vennor's Winter Almanac” we found exactly what we expected, the system of prognostication reduced to common sense principles. We were reminded when we read it through of Miss Edgeworth's story of “Eyes or no eyes, or the Art of Seeing,” which pretty tale lays the foundation of a lad's future character for observation. Two boys go the exact same walk; one pronounced it the most stupid saunter he ever took, the other returned with a pocketful of notes and facts of deepest interest. Such is Vennor's Almanac; it is constructed on the *marvellous*, we admit, but the marvel is that only one out

of one hundred ever see anything. Vennor's Almanac is essentially a book of probable facts founded on observation. The author is an "out-of-door" man, and writes about "out-of-door" facts; he has, as stated, lived in the weather, and Weather and the author have become very familiar with each other for a number of years, and no wonder then that, having watched her eccentric courses, he has made sound prognostics of what she is about. There is also in the Almanac a very telling feature, and one that will enlist a goodly number of admirers,—we allude to the scheme of inviting his readers and observers to become fellow meteorologists, and write on the memoranda page the record of the weather, the wind, and the thermometrical observations of their locality; then, by comparing the line with the past character of the corresponding day and year, a barometrical analysis is instituted. This is very interesting, and will give a scientific and useful bent to those interested in weather predictions. It is easy to observe the mould of the author's mind,—he has the properties of a thorough naturalist; he loves the creation, whether in the heavens above or on the earth beneath; the habits of both bird and beast are pressed into the service, and consulted as to what they think of the weather, and their habits are registered, showing that wild geese, like other *geese*, make mistakes. We can cordially recommend this interesting little book as a cheap and useful (two important items) present for the New Year of 1877.

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TWENTY-FIRST ANNUAL REPORT upon the Births, Marriages,  
and Deaths, in the City of Providence, for the year 1875.  
By Edwin W. Snow, M. D.

This Report is very concise and clear, and reflects credit on the compiler, and shews that Providence is as healthy if not healthier than the majority of American cities. There was but one death from small-pox, and he a man of foreign parentage. This grand result is obtained by vaccination. Evidences of full protection from small-pox are required of all children entering the Schools of Providence. When will this be the case in Montreal?

# PUBLIC HEALTH MAGAZINE

AND

## LITERARY REVIEW

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FEBRUARY, 1877.

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### "GOD MADE THE COUNTRY AND MAN MADE THE TOWN."

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As we were returning from the country into town, the other day, this old saying of our forefathers was strongly impressed upon our minds from a sanitary point of view. It was not alone the contrast that struck us of the beauty of nature, with its hill and dale, its land and water, its forests and its fields, compared with the close array of tall narrow streets, with their marts for merchandise, the imposing buildings of successful enterprise, and the crowded quarters for housing the sinews that labor in the midst of it. But in another view it struck us, that admitting the necessity of town as well as country, political economy should press upon the governing power that wise control which, while it provided and encouraged, cared for and secured the supply of labor for the demand in towns, should avail itself of the inexhaustible drain the country affords for disposing of a superabundant and suffering population. Emigration has been the successful channel for providing for the surplus population of the Mother Country, and her colonies have been evidently reserved by a wise Providence to form an outlet for the incredible increase of her population. Men of large and foreseeing philanthropy have lent themselves actively to this great work of guiding the stream of population to the vast fields of successful industry which colonization affords. And had the same wise policy met the tide of immigration and assisted and encouraged the free settling in Canadian forests of the multitudes



that have passed through to occupy the vast tracts of the States, we might have seen a far larger area of well cultivated land to-day than we are likely to do for years to come. And while on this head, it is not uninteresting to mark what has proved the most fruitful source among the many hindrances to the occupation of much larger extent of our surrounding country than is at present under cultivation. Among these and foremost was the mistaken policy of supporting "Land Companies," who for certain proposed benefits in the formation of roads into the heart of the lands they were to monopolize, were given for a nominal value vast tracts of land. These, instead of inviting the emigrant, who anticipated a free field for his labor and occupation, put him into the power of a company that exacted the uttermost farthing, and kept him a poor drudge for years and years, paying its exactions out of the increase of his few head of cattle, at such a price that the hay the animal consumed scarce met a quarter of the cost that raised it. Was it any wonder that the *poor emigrant* finally abandoned the land?

Too great inducements for the occupation and colonizing of a country cannot be given, for the most short-sighted politician can see that the possession of a vast uninhabited territory is only a source of weakness, and its true value consists in making it an inducement to mankind to occupy it. We boldly assert that the man who has put the strength of his loins and the patient endurance of his labor in chopping down an acre of forest trees, piling and burning them, clearing and cultivating it, has, in a country where the object is *to colonize it*, earned of that country an indefeasible right to the possession of it; and those who doubt it we recommend to go and try it. But to return to the point that we would urge as a true relief to an unhealthy and densely crowded town, let inducements to the unemployed to take up land be liberally held out to them; let the benefits of agricultural life in this country be shown them as affording a certainty of an honest livelihood; and this may be done by a free, liberal spread of short tracts on emigration and its advantages; and first among these advantages let health and the immunity from disease that surrounds the close-packed herds of human families in unhealthy suburbs be urged on their notice. It is a well-known

fact that the statistics of population taken in the Eastern Townships of the Province of Quebec, show nine families out of ten, with the three generations alive in the same locality. Small-pox, diphtheria and typhoid fevers are almost unknown, and when found are invariably traced to importation by some one or other coming from towns. Living, by which we mean the support of a family, is half as cheap again as in town: the abundance of milk and wholesome grains raise families of endurance and muscle. The habits of the people induce a healthy organization.

"Early to bed and early to rise,  
Make a man healthy and wealthy and wise,"

is proved true in agricultural life. If it be asked, but how commence a draft so as to ease off the pressure? Our reply is, commence as they arrive with the able-bodied youth from thirteen and upwards; they can all be placed out among farmers for their board and clothing and winter's schooling. Every trade requires apprenticeship, and farming is not an exception; the lad learns his business and the use of his axe, and he can get on to land, when experience has taught him the use and management of it. *Any trade* combined with agricultural employment is a sure success, for exchange of work and payment for labor in grain or meat is the easiest and most common truck system. Then, you do not find the jealousy of successful labor in farming as you do in other employments—farmers as a rule are glad to help squatters, and encourage their location among them, as they form by colonization the supply for help when needed. There is more mutual sympathy in the wants of the poor in agricultural districts, and it is patent that no one in the country is what is termed a "beggar." But it will be asked how, under present circumstances, recover our millions of acres? First then, by avoiding our former policy of giving up territories for supposed benefits which have only proved a snare and a delusion. Second, let an Act of Parliament enforce on Land Companies the same rules they do on individual squatters—"unless so many acres are cleared in five years, the claim on the land ceases." But if ever on these grounds we are unable to provide territory for retaining in our midst the continual tide of emigration that flows to our shores, let us aid in passing them on where they may

live like men, and do not die like sheep. We will just add that an immense source of lucrative employment and traffic could be carried on in cord-wood cut in our dense forests for town consumption, but for the refusal of the Grand Trunk to transport it. Cord-wood can be delivered on the sidings at \$1.50 to \$2.00 a cord, and what is to hinder open platform cars bringing this into town at \$1.00 a cord, and the Grand Trunk retailing it to the town at \$4.00. One of the general inducements to farmers to give right of way through their farms was the promise, "We will carry your cord-wood into Montreal and Quebec for sale."

It is certainly a reproach to us, to see forests rotting on their own stumps, and thousands of acres unoccupied around us, while the tide of emigration passes us to happier and free soils.—Poor Canada!

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#### THE ACT OF AMENDMENT RELATING TO THE PRACTICE OF MEDICINE IN THE PROVINCE OF QUEBEC.

The changes in the act are very important; and if carried out as intended, will lead to great good. The schools still have the power of granting diplomas, but no one can practice without having passed the required examinations and obtained a license. We are glad that a stricter course of preliminary studies is enjoined upon candidates for the Study of Medicine. But what pleases us most as Sanitarians, is, that the very point we have been advocating for months and months, that of a compulsory course of Hygiene, is at last required for qualification to examination. It is gratifying to know that our Professors have received some degree of light in this respect, and we forgive the hasty censure that was at first meted out to us for insisting on such a course being pursued in our universities. They are still, however, one material point in the dark, but we hope that time will enable them to receive that degree of light which teaches that prevention is better than cure, and to institute a more extended instruction than a three months course. While on this point we would recommend the adoption of a course of Hygiene in our public schools. We cannot make a people healthy by act of

Parliament, but if we bring up our youth to understand the advantages that would accrue from attention to Personal Hygiene, future generations would reap the benefits. Every child should be taught the necessity of daily washing; how filth is removed from towns, and why; what is the use of pure air and water; the objects of the scavenger's cart, the dustbin and ashpit; why the streets are paved, swept, and watered; the reason there are drain traps to our sewers; that the refuse of our food becomes unwholesome, and must be removed from the air we breathe; the responsibility of the individual to his family and neighbor. We cannot too strongly urge upon our School Commissioners the great importance of such a course. Plant the seeds of such knowledge in such soil and it would bear its fruit in good season a hundred-fold. Let any one visit the suburbs of our beautiful towns and there he will see our population, increasing daily, crowded into *pens*; so avowedly ignorant of the elements of healthy conditions that they are worse off than their very cattle. The ignorance of the people in such matters is positively alarming, and it is not with our poor alone; the middle and commercial classes the aristocratic and wealthy, are as badly off for instruction and information in such matters. These reforms we are never tired of advocating,—last month we published a paper by E. B. Ellice Clark on Sanitary education; the principles of which we invite our readers to spread broadcast; he testifies as we have done above, in similar terms but more forcibly.

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#### PUBLIC DINING HALLS.

Glasgow is pre-eminent for its public refreshment places, from the refined restaurant to the halls for the working classes. In the former good Scotch dishes are blended with high-class English cooking, adding thereto a touch of the French and German *cuisine*. Scotch collops and Swiss tart, hotch-potch and stewed hare, yellow turnips and German <sup>\*</sup>sauerkraut are of the same "carte" and present, with many other preparations, a diversified *régime* of cooking. The Scotch people take pains with their food, and anyhow give us more than one kind of bread,

Breads and soups are daily meals, so are stews of all kinds, porridges and cakes. Sweet puddings replace the large amount of pastry in England, and the use of milk is more abundant than with us. There is a want of spicing about many dishes in middle houses, showing that aromatic flavours, which do so much for our finer taste, are not fully understood, but upon the whole the Scotch people are far better cooks than we, both as to using more diversified material and making more nourishing combinations.

Mr. Corbitt, more than 14 years ago, established these public dining halls. We should say, having ourselves visited many of these establishments, that these dining rooms are at present the maximum of cheapness and comfort, and a boon of inestimable value to the work-people of Glasgow. The whole range of meals, the goodness and freshness of the food materials, the spaciousness of the halls, the agreeable influence of surrounding cleanliness and sobriety; all these particulars contribute towards creating an impression, as if an honest and sympathetic man had here erected something above all charity.

These halls strengthen the moral purpose of those who enter them by contributing to their comfort in cheap food, rather than lessening self-dependence by charitable meals never paid for and never earned.

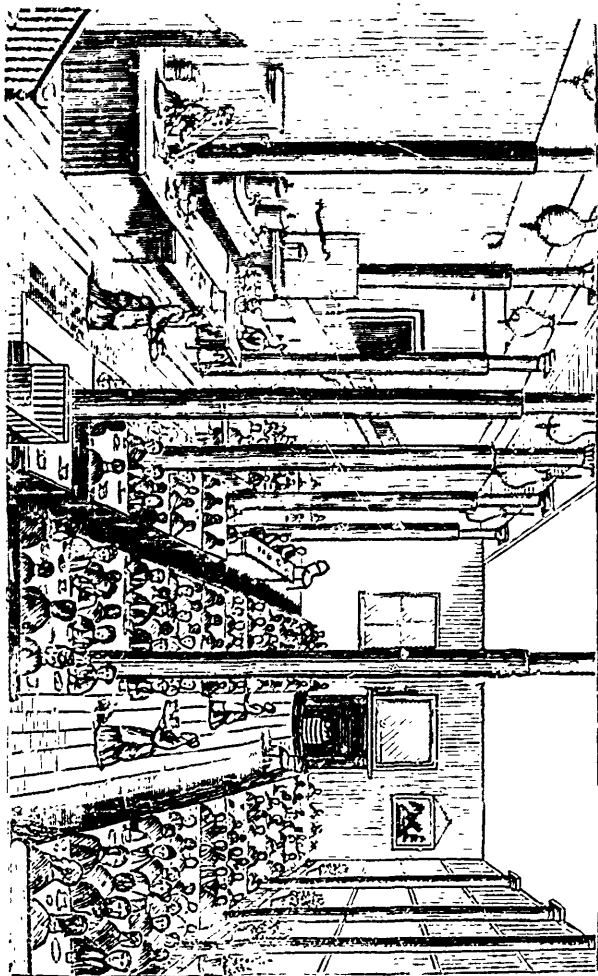
The temperance principle is maintained throughout all the branches, of which there are now twenty-six.

There is one central store where all goods are supplied to the branches and balanced monthly. It takes 150 cows to give the required quantity of milk. 1000 people visit the various branches daily for their meals, and at all branches the daily papers are supplied.

Our illustration shows the girls' room while they are at dinner; such an agreeable light as it represents should encourage us to try and introduce something similar in Montreal.

Our space does not permit us to give in full detail the various meals, and the way they are prepared in the principal rooms, but we subjoin a bill such as represents the general prices of the halls. We have it on good authority that financially it is a

GREAT WESTERN COOKING DEPOT, GLASGOW.



perfect success, and the concourse of customers daily; viz: 10,000 is sufficient evidence that they are appreciated.

GREAT WESTERN COOKING DEPOT FOR THE WORKING CLASSES.

*Prices.*

|                        |            |
|------------------------|------------|
| Bowl of Broth.....     | One Penny. |
| Bowl of Soup.....      | One Penny. |
| Bowl of Porridge.....  | One Penny. |
| Plate of Potatoes..... | One Penny. |
| Cup of Coffee.....     | One Penny. |
| Cup of Tea.....        | One Penny. |
| Bread and Cheese.....  | One Penny. |
| Boiled Egg.....        | One Penny. |
| Lemonade.....          | One Penny. |
| Soda Water.....        | One Penny. |
| Ginger Beer.....       | One Penny. |

*All of the Best Quality and always ready.*

PUBLIC BREAKFAST EVERY DAY,  
*Consisting of the following Dishes:—*

Bowl of Porridge,  
Bowl of Milk,  
Cup of Coffee,  
Roll and Butter,  
Fixed Charge, 3½d.

PUBLIC DINNERS EVERY DAY.  
*Consisting of the following Dishes:—*

Bowl of Broth or Soup,  
Plate of Beef—Hot or Cold,  
Plate of Potatoes,  
Plum or Rice Pudding.  
Fixed charge, 5d.

*Roast Beef, Corned Beef, Minced Collops, Steaks, &c.*

ALL THE DAILY PAPERS.

## THE ALIMENTATION OF INFANTS.

The health of children depends in a great measure on how the mother's milk is administered. Too large quantity and too frequent repetition should be carefully avoided, for over distension of the stomach is almost as bad as giving indigestible food. During the day the infant should not have the breast more than once every three hours, and only once or twice at night, and not have more than just sufficient to satisfy its appetite, after which it should at once be removed.

If an *artificial diet* be judiciously selected, there is no reason why a child should not thrive as well upon it as upon the breast, but to this end it must consist of a liquid food possessed of heat and fat-producing properties. Cow's milk should in general be preferred to that of other animals, and, when properly prepared, answers all purposes. To this end it must be diluted, and for this purpose water is usually employed. But in far the greater number of cases mischief results from this, for the addition of water does not improve the digestibility of *casin*, inasmuch as it

does not dilute it; and when milk so treated is taken into the stomach the water is soon taken up, leaving the *casin* unchanged. Nor does the addition of sugar make the *coagula casier* of digestion, while skimming the milk deprives it of one of its most important constituents. As the mother's milk contains proportionately more fat than other milks, it may be that the finer *coagula* produced by it are due to the presence of this fat, and it would be better to use other milk from which *casin* had been removed than that which had been deprived of its cream. The admixture of farinaceous substances also leads to disastrous results. Barley-water, however, is an article that contains so small a quantity of starch that it may be advantageously employed for dilution. Good cow's milk diluted with one-third to one-half of barley-water forms one of the best articles of food that can be used for infants when it is necessary to bring them up artificially. When it cannot be procured, oatmeal may be substituted with advantage. By these a real dilution of the *casin* is produced, rendering the *coagula* much finer and more like those produced in human milk.

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#### OBITUARY.

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It is our mournful duty to chronicle the death of our esteemed friend and fellow-citizen, J. H. Springle, C. E. As an engineer few were his equals. As a sanitarian, Montreal could ill afford to spare him.

All his articles on Household Sanitary Matters (many of which he gave our readers the benefit of) were the contributions of one who had made a life long practice of endeavouring to perfect sanitary architecture to a science. His statements were worthy of the greatest confidence, for he never ventured an opinion without having proved its truth from practice. We deeply sympathise with his family in their great bereavement.

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## Miscellaneous Selections.

### CHEESE AS AN ARTICLE OF DIET.

As an article of diet cheese presents some curious anomalies. It is one of the most nutritious of all food-stuffs—so far as one aliment by itself can serve nutrition, whilst at the same time it is one of the most indigestible. And yet, again, if taken in very small quantities it materially aids the digestion of other foods taken with it. Of home-produced cheese in its ordinary condition few except the most hearty eaters will be disposed to partake at all largely at one sitting. The flavour of it is not sufficiently inciting to provoke appetite of the “cut and come again” character. But our tendency, as we have already remarked, is to become *gourmets* rather than *gourmands*. In the present day “man wants but little here below, but wants that little strong.” This tendency has extended even to the matter of cheese, and we have, unhappily, begun to refine also upon that standard dish of everybody’s dinner. We must eat, amongst other things, some superfine cheese. The delicacies of this kind most in request are the Camembert, the Gorgonzola, and the Roquefort, to name them in the probable order of indigestibility. All are more or less creamy, and unwholesomely rich; and all of them when “ripe,” that is to say, in the most tempting condition as regards flavour, have become to a greater or less extent delightfully decomposed, and correspondingly upsetting to the digestive organs. And yet, unhappily, they are at the same time most banefully suggestive of another slice, and most temptingly provocative of yet another.

When shall we resort to such simple and healthy kinds of food as the *Biftec à l’Anglaise*, *Pommes-de-terre au naturel*, and thé homely cheese called *Glostère*? The time may be yet far distant, but some day the reaction will inevitably come.—*Medical Examiner*.

## RECEIPTS.

The following receipts have been sent us:—

**CHICKEN PIE.**—Cut a fowl into pieces; place at the bottom of the dish two pieces of bacon, and place the fowl over it, fill up and flavor with nutmeg and a little mace, pepper, salt, a handful of finely chopped parsley and a little fine shalot or onion; over the top cover some pieces of steak. Just add a little water and cover with crust. Crust to be made of two-thirds butter and one-third lard; let this melt to boiling point in the oven, then mix with flour, beat up well with fork, moisten with hot water, and beat into a paste. Never touch with hands; roll out quickly, and your paste will be digestible to a child.

**VEAL OLIVES.**—Take veal stuffing, very fine sweet herbs, suet well chopped, bread crumbs, seasoning of pepper, salt, and nutmeg, mix with a couple of eggs. Divide into several portions; roll round it veal cutlet, cut into thin slices, and outside a piece of fat bacon; tie up with string. Place into frying pan, and gently frizzle till done. Place into dish, and trim with parsley and lemon slices.

**RISsoles.**—Liver; chop up liver, mix with bread crumbs, fine parsley, fine onion, pepper, salt, nutmeg, fine suet, and bind with two eggs. Roll up into flour and frizzle gently in lard. Also take Australian Rissoles, and when finely chopped use the same; trim both with endives and beetroot, so as to make a salad.

**SANDWICHES.**—Never make common beef or ham sandwiches. Best sandwiches are made with potted meats or potted ham. Cut tin loaves and butter thinly, spread delicately mustard over butter, then add potted meats, and over this again bread and butter. Too much mustard is disagreeable, and tough meat not nice; sandwiches for evening parties should only be made of potted meats.

**MAIZENA CHOCOLATE.**—Take maizena flour, mix with cold milk and add boiling milk, amalgamate with sugar, and simmer gently for twenty minutes; then turn out into buttered shape. Now take Cadbury's or Fry's chocolate, mix with cold water first; add then boiling water and amalgamate, stir an egg into it and a piece of butter and make into a kind of paste; boil up once, and pour over the maizena shape that has been allowed to cool and been put on a dish; strew over hundreds and thousands.

## Editorial Notices and Answers to Correspondents.

### BOARD OF HEALTH.

The City Council elected the new Board of Health, as directed by the new Health By-Law, Sec. 2, at their deliberations on Friday, the 19th January, with the following result:—His Worship, Dr. Hingston, Chairman; Alderman McCord, Vice-Chairman; Aldermen Mercer, Grenier, Childs, McLaren, Brunet, Roy, Rivard, McCambridge, Doctors, Girdwood, Mount, Rottot, G. A. Baynes, Lachapelle, Messers. C. O. Perrault, Shelton, Weaver. Space does not allow of more than a passing notice, but next number we will enter more minutely into the working of the Board itself.

We have to announce that a Public Meeting of the Citizens' Public Health Association will be held in the rooms of the Natural History Society on Friday, the 2nd February, at 8 p. m. Alderman Mercer will address the Association upon the new Health By-Law.

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**BARNJUM'S PATENT PANTS STRETCHER.**—This most useful contrivance is intended to obviate the unsightly appearance caused by the "bagging" and wrinkling up into numerous creases round the knees of trousers which have been at all worn, and also by maintaining them always of the same length, to prevent the unpleasant necessity of letting out additional holes in the suspenders, accompanied by the wretched sensation always experienced when trousers are not "well up in the fork" as the tailors express it. The machine is most simple in its operation; the trousers only require to be folded, and placed in the clasps, which are closed in an instant, a lever is then drawn down a latchel, and the operation is complete, excepting that with thick material, it is necessary to pass a damp sponge over the legs of the trousers after these are fastened in the machine.

It give us pleasure to speak in terms of commendation of this invention, as we have tried it ourselves, and find it fulfils all that the inventor claims for it. Agent, Mr. J. B. Wray, 235 St. James Street.

# Sanitary Reports.

RAIN AND SNOW FALL DURING 1876.

McGILL COLLEGE OBSERVATORY.

| Month.          | Inches of rain. | No. of Days rain. | Inches of Snow. | No. of Days Snow. | Inches of rain & snow melted. | No. of days on which rain and snow fell. | No. of days on which rain or snow fell. |
|-----------------|-----------------|-------------------|-----------------|-------------------|-------------------------------|--|---|
| January.....    | 1.87            | 7                 | 27.4            | 16                | 4.61                          | 3  | 20                                      |
| February ... .. | 1.12            | 4                 | 27.5            | 15                | 3.87                          | 3  | 16                                      |
| March .....     | 0.74            | 5                 | 45.6            | 17                | 5.30                          | 3  | 19                                      |
| April .....     | 1.03            | 10                | 12.0            | 7                 | 2.23                          | 4  | 13                                      |
| May .....       | 3.45            | 21                | 0.3             | 1                 | 3.48                          | 1  | 21                                      |
| June .....      | 3.21            | 15                | .....           | .....             | 3.21                          | .....                                    | 15                                      |
| July .....      | 4.33            | 17                | .....           | .....             | 4.33                          | .....                                    | 17                                      |
| August .....    | 1.98            | 9                 | .....           | .....             | 1.98                          | .....                                    | 9                                       |
| September ..... | 5.51            | 16                | .....           | .....             | 5.51                          | .....                                    | 16                                      |
| October.....    | 2.64            | 17                | 1.0             | 2                 | 2.74                          | 1  | 17                                      |
| November .....  | 1.76            | 12                | 0.7             | 5                 | 1.83                          | 1  | 16                                      |
| December .....  | .....           | .....             | 23.6            | 19                | 2.50                          | .....                                    | 19                                      |

Total rainfall during the year was 27.64 in.  
 Total snowfall during the year was 138.1 in.  
 Total rain and melted snow was 41.59 in.  
 Total number of days on which rain fell, 133.  
 Total number of days on which snow fell, 82.  
 Total number of days on which rain or snow fell, 198.  
 Total number of days on which rain and snow fell, 17.

## SYNOPSIS OF METEOROLOGICAL OBSERVATIONS FROM MCGILL COLLEGE OBSERVATORY, FOR THE YEAR 1876.

Barometer readings reduced to sea level and to temperature of 32° Fahrenheit. Humidity relative saturation 100. Greatest heat was 92.2, on the 6th of August; greatest cold was 21.8, on the 17th of January; giving a range of temperature for the year of 114.0 degrees. Greatest range of the thermometer in one month was 60.5, in January; greatest range of barometer was 2.223 in February; highest barometer reading was 30.989, on the 5th of February; lowest was 28.766, on the 15th of February; range for year, 22.23 inches. Least relative humidity was 29, on the 27th April. Rain fell on 133 days. Snow fell on 82 days. Rain and snow fell on 17 days. Total fall of Rain, 27.64 inches. Total fall of snow, 138.1 inches, Total precipitation inches water 41.6

Greatest mileage of wind during year, in one hour, was 51 on February 2nd, when the velocity in gusts was 60 m. per hour.

## MORTALITY OF THE CITY AND SUBURBS OF MONTREAL, FOR DECEMBER, 1876.

| CLASS.                            | ORDER.                 | DISEASES.                                     | Total by Sex. |         | Total both Sexes. |
|-----------------------------------|------------------------|---|---------------|---------|-------------------|
|                                   |                        |   | Male.         | Female. |                   |
| I. ZYMOTIC.                       | I. Miasmatic.          | 1. Small Pox.....                             | 73            | 58      | 131               |
|                                   |                        | 2. Measles.....                               | 1             | 2       | 3                 |
|                                   |                        | 3. Scarletina.....                            | 2             |         | 2                 |
|                                   |                        | 4. Diphtheria.....                            | 17            | 17      | 34                |
|                                   |                        | 5. Quinsy.....                                |               |         |                   |
|                                   |                        | 6. Croup.....                                 | 15            | 4       | 19                |
|                                   |                        | 7. Whooping Cough.....                        | 3             | 5       | 8                 |
|                                   |                        | 8. Typhoid Fever, (Infantile Remittent Fever) | 3             | 3       | 6                 |
|                                   |                        | 9. Typhus, and Infantile Fever.....           |               |         |                   |
|                                   |                        | 10. Relapsing Fever.....                      |               |         |                   |
|                                   |                        | 11. Fevers.....                               | 2             | 5       | 7                 |
|                                   |                        | 12. Erysipelas.....                           | 1             | 1       | 2                 |
|                                   |                        | 13. Metria, (Puerperal Fever).....            |               |         |                   |
|                                   |                        | 14. Carbuncle.....                            |               |         |                   |
|                                   |                        | 15. Influenza.....                            |               |         |                   |
|                                   |                        | 16. Dysentery.....                            |               |         |                   |
|                                   |                        | 17. Diarrhœa.....                             |               |         |                   |
|                                   |                        | 18. Pyœmia.....                               |               |         |                   |
|                                   |                        | 19. Cholera Infantum.....                     |               |         |                   |
|                                   |                        | 20. Cholera.....                              |               |         |                   |
|                                   |                        | 21. Ague.....                                 |               |         |                   |
|                                   |                        | 22. Remittent Fever.....                      |               |         |                   |
|                                   |                        | 23. Cerebro-Spinal Meningitis.....            | 1             | 2       | 3                 |
| II. CONSTITUTIONAL.               | II. Diabetic. Embello  | 1. Syphilis.....                              |               |         |                   |
|                                   |                        | 2. Hydrophobia.....                           |               |         |                   |
|                                   |                        | 3. Glanders.....                              |               |         |                   |
|                                   | III. Diabetic. Embello | 1. Privation.....                             |               |         |                   |
|                                   |                        | 2. Purpura and Scurvy.....                    |               |         |                   |
|                                   |                        | 3. Delirium Tremens.....                      |               |         |                   |
|                                   |                        | 4. Intemperance..... } Alcoholism ..          |               |         |                   |
|                                   | IV - Parasitic.        | 1. Thrush.....                                |               |         |                   |
|                                   |                        | 2. Worms, &c.....                             |               |         |                   |
|                                   | II. CONSTITUTIONAL.    | I. Diabetic.                                  | 1. Gout.....  |         | 1                 |
| 2. Rheumatism.....                |                        |   |               |         |                   |
| 3. Dropsy and Anæmia.....         |                        |   | 3             |         | 3                 |
| 4. Cancer.....                    |                        |   | 2             |         | 2                 |
| 5. Noma (or Canker).....          |                        |   |               |         |                   |
| 6. Mortification.....             |                        |   |               | 1       | 1                 |
| 1. Scrofula.....                  |                        |   | 1             | 1       | 2                 |
| 2. Tabes Mesenterica.....         |                        |   |               |         |                   |
| 3. Phthisis (Cons. of Lungs)..... |                        |   | 15            | 18      | 33                |
| 4. Hydrocephalus.....             |                        |   | 2             |         | 2                 |
| 5. Tubercular Meningitis.....     | 3                      |   | 3             |         |                   |
| <i>Carried forward.....</i>       |                        |   | 144           | 118     | 262               |

## MORTALITY OF THE CITY AND SUBURBS OF MONTREAL—(Con.)

| CLASS.                       | ORDER.                                       | DISEASES.                                     | Total by Sex.                     |         | Total both Sexes. |   |
|------------------------------|--|---|-----------------------------------|---------|-------------------|---|
|                              |  |   | Male.                             | Female. |                   |   |
|                              |  | <i>Brought forward</i> .....                  | 144                               | 118     | 262               |   |
| III. LOCAL.                  | I. Brain and Nervous System.                 | 1. Cephalitis .....                           | 2                                 | 5       | 7                 |   |
|                              |  | 2. Apoplexy.....                              |                                   |         |                   |   |
|                              |  | 3. Paralysis.....                             | 3                                 | 5       | 8                 |   |
|                              |  | 4. Insanity.....                              |                                   |         |                   |   |
|                              |  | 5. Chorea.....                                |                                   |         |                   |   |
|                              |  | 6. Epilepsy.....                              |                                   |         |                   |   |
|                              |  | 7. Tetanus.....                               |                                   |         |                   |   |
|                              |  | 8. Convulsions.....                           | 8                                 | 3       | 11                |   |
|                              | 9. Other Brain diseases &c.....              | 9   | 4                                 | 13      |                   |   |
|                              | II. Organs of Circulation.                   | 1. Carditis, Pericarditis and Endocarditis... |                                   | 1       | 1                 |   |
|                              |  | 2. Aneurism.....                              |                                   | 1       | 1                 |   |
|                              | III. Respiratory Organs.                     | 3. Other Heart diseases, &c.....              | 5                                 | 4       | 9                 |   |
|                              |  | 1. Epistaxis.....                             |                                   |         |                   |   |
|                              |  | 2. Laryngitis and Trachitis.....              | 1                                 | 1       | 2                 |   |
|                              |  | 3. Bronchitis.....                            | 9                                 | 4       | 13                |   |
|                              |  | 4. Pleurisy.....                              |                                   | 1       | 1                 |   |
|                              |  | 5. Pneumonia.....                             | 10                                | 8       | 18                |   |
|                              |  | 6. Asthma.....                                | 1                                 | 3       | 4                 |   |
|                              |  | 7. Other Lung diseases, &c.....               | 3                                 | 3       | 6                 |   |
|                              |  | IV. Organs of Digestion.                      | 1. Gastritis.....                 |         | 2                 | 2 |
|                              |  |   | 2. Enteritis.....                 | 1       |                   | 1 |
|                              |  |   | 3. Peritonitis.....               | 2       | 5                 | 7 |
|                              |  |   | 4. Ascites.....                   |         |                   |   |
|                              |  |   | 5. Ulceration of Intestines.....  |         |                   |   |
|                              |  |   | 6. Hernia.....                    |         |                   |   |
|                              |  |   | 7. Ileus and Intussusception..... |         |                   |   |
|                              | 8. Stricture of Intestines.....              |   | 1                                 |         | 1                 |   |
|                              | 9. Fistula.....                              |   |                                   |         |                   |   |
|                              | 10. Diseases of Stomach and Intestines, &c.. |   |                                   |         |                   |   |
|                              | 11. Pancreas Diseases, &c.....               |   |                                   |         |                   |   |
|                              | 12. Hepatitis.....                           |   |                                   |         |                   |   |
|                              | 13. Jaundice.....                            |   |                                   | 2       | 2                 |   |
|                              | 14. Liver Disease, &c.....                   |   |                                   |         |                   |   |
| 15. Spleen Disease, &c.....  |  |   |                                   |         |                   |   |
| V. Urinary Organs.           | 1. Nephritis.....                            |   |                                   |         |                   |   |
|                              | 2. Ischuria.....                             |   |                                   |         |                   |   |
|                              | 3. Nephria (Bright's Disease).....           | 2   |                                   | 2       |                   |   |
|                              | 4. Diabetes.....                             |   |                                   |         |                   |   |
|                              | 5. Calculus, (Gravel, &c).....               |   |                                   |         |                   |   |
|                              | 6. Cystitis and Cystorrhœa.....              |   |                                   |         |                   |   |
|                              | 7. Stricture.....                            |   |                                   |         |                   |   |
|                              | 8. Kidney Disease, &c.....                   | 1   |                                   | 1       |                   |   |
| VI. Gen-erative Organs       | 1. Ovarian Disease.....                      |   |                                   |         |                   |   |
|                              | 2. Disease of Uterus, &c.....                |   |                                   |         |                   |   |
| VII. Or-gans of Loco-motion. | 1. Arthritis.....                            |   |                                   |         |                   |   |
|                              | 2. Joint Disease, &c.....                    |   |                                   |         |                   |   |
|                              |  | <i>Carried over</i> .....                     | 202                               | 170     | 372               |   |

## MORTALITY OF THE CITY AND SUBURBS OF MONTREAL.—(Con).

| CLASS.  | ORDER.                                     | DISEASES.                                  | Total by Sex. |         | Total both Sexes. |
|---|--|--|---------------|---------|-------------------|
|   |  |  | Male.         | Female. |                   |
|   |  | <i>Brought over</i> .....                  | 202           | 170     | 372               |
| V. VIOLENT DEATHS, IV. Developmental Diseases | VII. Integumentary System, I. Of Children. | 1 Abscess.....                             |               |         |                   |
|   |  | 2. Ulcer.....                              |               |         |                   |
|   |  | 3. Skin Diseases, &c.....                  |               |         |                   |
|   |  | 1. Stillborn.....                          | 10            | 9       | 19                |
|   |  | 2. Premature Birth.....                    | 4             | 7       | 11                |
|   |  | 3. Infantile Debility.....                 | 19            | 18      | 37                |
|   | II. Of Women                               | 4. Cyanosis.....                           |               |         |                   |
|   |  | 5. Spina Bifida and other Malformation.... |               |         |                   |
|   | III. Of Old People.                        | 6. During Dentition.....                   | 3             | 2       | 5                 |
|   |  | 1. Paramenia.....                          |               | 1       | 1                 |
|   | IV. Of Nutrition.                          | 2. Childbirth.....                         |               |         |                   |
|   |  | 1. Old Age ..                              | 3             | 5       | 8                 |
|   | I. Accident or Negligence.                 | 2. Atrophy and Debility.....               |               | 2       | 2                 |
|   |  | 1. Fractures, Contusions, Wounds.....      |               |         |                   |
|   |  | 2. Burns and Scalds.....                   |               |         |                   |
|   |  | 3. Poison.....                             |               |         |                   |
|   |  | 4. Drowning.....                           |               |         |                   |
|   | II. From I. Accident or Negligence.        | 5. Otherwise.....                          | 5             | 3       | 8                 |
|   |  | 1. Murder, Manslaughter.....               |               |         |                   |
|   | III. Suicidal.                             | 2. Execution.....                          |               |         |                   |
|   |  | 1. Wounds.....                             |               |         |                   |
|   | IV. Suicidal.                              | 2. Poison.....                             |               |         |                   |
|   |  | 3. Drowning.....                           |               |         |                   |
| V. Suicidal.                                  | 4. Otherwise.....                          |  |               |         |                   |
|   | 1. Chirurgical.....                        |  |               |         |                   |
|   |  | Not known.....                             | 5             | 6       | 11                |
|   |  | Infection purulente.....                   |               |         |                   |
|   |  | Emesis.....                                |               |         |                   |
|   |  | Lock Jaw.....                              |               |         |                   |
|   |  | Total.....                                 | 251           | 223     | 474               |

## FOREIGN HEALTH STATISTICS.

United Kingdom of Great Britain, during two weeks, ending November 4th, 11,900 births and 6,478 deaths were registered in London and twenty other large towns, and the natural increase of the population was 5,422. The mortality from all causes was, per 1,000: in London, 20; Edinburgh, 14.50; Glasgow, 21; Dublin, 19.50; Portsmouth, 18; Norwich, 22.50; Wolverhampton: 22.50; Sunderland, 18; Sheffield, 26.50; Birmingham, 20; Bristol, 18.50; Liverpool, 22.50; Salford, 35.50; Oldham, 29; Bradford, 23; Leeds, 23; Hull, 19.50; Newcastle-upon-Tyne, 21.50; Leicester, 21; Manchester, 23.50; Nottingham, 21.50.—Other foreign cities at most recent dates, per 1,000; Paris, 24; Rome, 19; Vienna, 22; Brussels, 22; Berlin, 26; Hamburg, 23; Calcutta, 24; Bombay, 26; Madras, 35; Amsterdam, 22; Rotterdam, 29; The Hague, 22; Christiana, 16; Breslau, 24; Buda-Pesth, 34; Turin, 18; Alexandria, 46; Copenhagen, 18; Munich, 36; Naples, 20.—*The Sanitarian*.

## TOTAL MORTALITY BY AGES.

|                         |       |
|-------------------------|-------|
| Under 1 year.....       | 157   |
| From 1 to 5 years.....  | 157   |
| “ 5 to 10 “.....        | 40    |
| “ 10 to 15 “.....       | 4     |
| “ 15 to 20 “.....       | 9     |
| “ 20 to 40 “.....       | 48    |
| “ 40 to 60 “.....       | 27    |
| “ 60 to 70 “.....       | 5     |
| “ 70 to 80 “.....       | 20    |
| “ 80 to 90 “.....       | 5     |
| “ 90 to 100 “.....      | 1     |
| 100 years and over..... | ..    |
| Not known.....          | 1     |
|                         | <hr/> |
| Total.....              | 474   |

## TOTAL MORTALITY BY NATIONALITY.

|                        |       |
|------------------------|-------|
| French Canadians.....  | 309   |
| British Canadians..... | 129   |
| Irish.....             | 18    |
| English.....           | 8     |
| Scotch.....            | 5     |
| Other Countries.....   | 5     |
| Not known.....         | ..    |
|                        | <hr/> |
| Total.....             | 474   |

## TOTAL BY WARDS.

|                     |       |
|---------------------|-------|
| St. Ann's Ward..... | 55    |
| St. Antoine “.....  | 94    |
| St. Lawrence “..... | 37    |
| St. Louis “.....    | 33    |
| St. James “.....    | 92    |
| St. Mary “.....     | 111   |
| West.....           | 2     |
| Centre.....         | 4     |
| East.....           | 13    |
| Not known.....      | ..    |
|                     | <hr/> |
|                     | 441   |

|                                |       |
|--------------------------------|-------|
| City Hospital.....             | 11    |
| Hotel Dieu.....                | 9     |
| Montreal General Hospital..... | 6     |
| Other Institutions.....        | 7     |
| Foundlings.....                | 53    |
| Outside City Limits.....       | 139   |
|                                | <hr/> |
| Total.....                     | 666   |

N. B.—The foundlings and deaths outside city limits are not included in classification of diseases, ages or nationalities.



## PUBLIC HEALTH IN THE UNITED STATES.

Mortality per 1,000 inhabitants, annually, from all causes and certain special causes.—(THE SANITARIAN).

| POPULATION AND REGISTRATION AT MOST RECENT ESTIMATES AND DATES. |  | Deaths under 5 years. | Total No. of deaths from all causes. | Per 1,000. | By Violence. | Small-Pox. | Diphtheria. | Scarlatina. | Measles. | Croup. | Whooping Cough. | Typhoid Fever. | Typhus Fever. | Puerperal Diseases. | Diarrheal Diseases. | Consumption. | Lung Diseases other than Consumption. |
|---|--|-----------------------|--------------------------------------|------------|--------------|------------|-------------|-------------|----------|--------|-----------------|----------------|---------------|---------------------|---------------------|--------------|---------------------------------------|
| New York, 1,066,350—5 weeks ending Nov. 25.....                 |  | 774                   | 2063                                 | 20.62      | 115          | 2          | 100         | 70          | 13       | 61     | 65              | 36             | 1             | 28                  | 63                  | 178          | 361                                   |
| Philadelphia, 825,600—5 weeks ending Dec. 2.....                |  | 600                   | 1652                                 | 19.83      | 46           | 47         | 64          | 18          | 1        | 47     | 12              | 76             | 3             | 15                  | 7                   | 24           | 175                                   |
| Brooklyn, 609,000—5 weeks ending Dec. 2.....                    |  | 398                   | 949                                  | 18.88      | 31           | 18         | 83          | 42          | 2        | 44     | 11              | 12             | 1             | 16                  | 8                   | 151          | 150                                   |
| St. Louis, 498,000—3 weeks ending Dec. 2.....                   |  | 189                   | 246                                  | 8.65       | 11           | 8          | 13          | 4           | 1        | 4      | 1               | 4              | 1             | 1                   | 1                   | 7            | 42                                    |
| Chicago, 429,000—2 weeks ending Dec. 2.....                     |  | 156                   | 330                                  | 20.42      | 8            | 34         | 53          | 6           | 2        | 16     | 6               | 9              | 2             | 2                   | 3                   | 33           | 24                                    |
| Baltimore, 350,000—5 weeks ending Dec. 2.....                   |  | 156                   | 609                                  | 16.61      | 21           | 12         | 77          | 7           | 1        | 16     | 6               | 16             | 2             | 2                   | 4                   | 39           | 34                                    |
| Boston, 352,000—4 weeks ending Dec. 2.....                      |  | 178                   | 606                                  | 18.65      | 21           | 33         | 77          | 7           | 1        | 16     | 6               | 12             | 2             | 2                   | 4                   | 108          | 34                                    |
| Cincinnati, 286,000—5 weeks ending Dec. 2.....                  |  | 131                   | 305                                  | 16.2       | 31           | 16         | 19          | 6           | 1        | 12     | 6               | 12             | 2             | 2                   | 3                   | 48           | 34                                    |
| San Francisco, 276,000—month of Oct.....                        |  | 180                   | 526                                  | 22.05      | 30           | 62         | 61          | 10          | 8        | 13     | 6               | 12             | 2             | 2                   | 10                  | 70           | 67                                    |
| New Orleans, 210,000—month of Nov.....                          |  | 147                   | 524                                  | 20.04      | 23           | 24         | 6           | 1           | 1        | 12     | 6               | 12             | 2             | 2                   | 10                  | 70           | 67                                    |
| Pittsburgh, 142,000—5 weeks ending Dec. 2.....                  |  | 101                   | 250                                  | 16.77      | 21           | 17         | 16          | 8           | 3        | 16     | 1               | 6              | 2             | 2                   | 12                  | 44           | 34                                    |
| Providence, 101,500—month of Nov.....                           |  | 155                   | 146                                  | 17.1       | 3            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Millwaukee, 100,781—month of Nov.....                           |  | 129                   | 218                                  | 26.95      | 4            | 6          | 18          | 3           | 1        | 4      | 1               | 6              | 1             | 1                   | 1                   | 1            | 1                                     |
| Rochester, 70,000—month of Nov.....                             |  | 35                    | 107                                  | 18.34      | 3            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Richmond, 72,500—5 weeks ending Dec. 3.....                     |  | 40                    | 129                                  | 17.22      | 3            | 8          | 1           | 1           | 1        | 2      | 4               | 2              | 1             | 1                   | 1                   | 1            | 1                                     |
| New Haven, 60,000.....  |  | 55                    | 163                                  | 34.50      | 6            | 1          | 1           | 1           | 1        | 2      | 4               | 2              | 1             | 1                   | 1                   | 1            | 1                                     |
| Charleston, 57,000—4 weeks ending Nov. 11.....                  |  | 55                    | 41                                   | 0.84       | 7            | 24         | 1           | 1           | 1        | 2      | 5               | 6              | 1             | 1                   | 1                   | 1            | 1                                     |
| Toledo, 50,000—month of Nov.....                                |  | 51                    | 78                                   | 1.56       | 3            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Mobile, 40,000—month of Oct.....                                |  | 50                    | 37                                   | 0.93       | 3            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Dartmouth, 39,000—month of Nov.....                             |  | 27                    | 73                                   | 1.83       | 3            | 25         | 6           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Knoxville, 27,000—month of Nov.....                             |  | 27                    | 63                                   | 2.34       | 10           | 4          | 4           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Wichiting, 28,000—2 months ending Nov. 30.....                  |  | 31                    | 124                                  | 4.43       | 10           | 4          | 4           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Indianapolis, 26,000—month of Nov.....                          |  | 27                    | 124                                  | 4.77       | 10           | 4          | 4           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Buffalo, 26,000—month of Nov.....                               |  | 31                    | 124                                  | 4.77       | 10           | 4          | 4           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Knoxville, 18,000—month of Nov.....                             |  | 2                     | 4                                    | 0.22       | 1            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Petersburg, 16,000—month of Nov.....                            |  | 33                    | 80                                   | 5.00       | 1            | 27         | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Paterson, 15,000—4 weeks ending Nov. 25.....                    |  | 10                    | 20                                   | 1.34       | 4            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Selma, 8,000—month of Nov.....                                  |  | 12                    | 12                                   | 1.50       | 1            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Elmira, 20,000—month of Nov.....                                |  | 12                    | 20                                   | 1.00       | 1            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Hudson Co., N. J., 170,869—2 months ending Nov.....             |  | 257                   | 683                                  | 20.47      | 37           | 10         | 45          | 27          | 2        | 14     | 1               | 10             | 3             | 2                   | 21                  | 70           | 67                                    |
| Yonkers, 17,600—month of Nov.....                               |  | 10                    | 21                                   | 1.19       | 1            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Memphis, 46,000—month of Nov.....                               |  | 30                    | 88                                   | 1.91       | 1            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |
| Erie, 26,037.....   |  | 30                    | 88                                   | 3.34       | 1            | 1          | 1           | 1           | 1        | 1      | 1               | 1              | 1             | 1                   | 1                   | 1            | 1                                     |

\* Yellow fever.