

# THE DOMINION SANITARY JOURNAL

DEVOTED TO THE

## PUBLIC HEALTH

AND KINDRED SCIENCES.

EDWARD PLAYTER, M. D., EDITOR.

GEORGE WRIGHT, M.A., M.B., Assoc. Lectr Mat. Med., Toronto School of Med.,  
J. W. MACDONALD, M.D., L.R.C.S.E., Londonderry, Nova Scotia,  
A. B. LAROCQUE, M.D., Medical Health Officer of Montreal.  
ALAN MACDOUGALL, Mem Inst C.E., and Consulting Sanitary Eng., Toronto,  
J. A. U. BEAUDRY, Civil Engineer, Montreal,

ASSOCIATE EDITORS.

*BEAUTIFUL, HEALTHY HOMES.  
PURE AIR, PURE WATER, GOOD FOOD.  
HEALTHY, HAPPY, CONTENTED FAMILIES.*

SALUS POPULI SUPREMA LEX.

### CONTENTS.

Insanity—its increase .....	217	Health—Back yards—Vaccination—	
The home-removal of filth .....	220	Beef Peptonoids—Koch's cholera	
Registrar General's Report .....	222	report—Study of tubercle in the eye	
The mortuary returns from the cities ...	223	—Detroit sewers—Cremation—Pre-	
The new public health act.....	225	venting consumption—Health resorts	
Health Commissioners .....	226	and other items.....	231 to 233
Peroxide of Hydrogen.....	227	Individual Hygiene—its importance—	
Gasoline and Turpentine .....	228	the lungs and how to preserve them	234
Coffee and Tea making.....	229	Water drinking—hot water.....	235
Home-made bread—Practical sanitation		Seasonable Hints.....	236
—Cider and Calculi .....	230	Personals—Questions and answers.....	237
Matters recent and current—Sanitary		Literary—Books and pamphlets.....	238
state of Ottawa—Ontario Board of			

Monthly, \$1.50 per Year, in advance; \$2.00 if not so paid.

The full set—Vol. I to Vol. V, bound, and current Vol., \$10.00.

Single Copy, 13 Cents.

Address SANITARY JOURNAL, OTTAWA.

THE

# SANITARY JOURNAL.

VOL. VI.

MAY 15TH, 1884.

No. 8.

## INSANITY—ITS INCREASE AND CAUSES.

Several years ago it was asserted in the *SANITARY JOURNAL* that in Great Britain and on this Continent, if not throughout the civilized world, insanity was evidently increasing. The press generally, and medical journals in particular, did not recognize the fact of the increase, but, for the most part, rather denied it, and attributed the fact of increased numbers in the various lunatic Asylum chiefly to a better appreciation of the value of these asylums in the management of the insane, and hence a greater number taking advantage of asylum accommodation for their demented friends, and to other causes. Within the last year it seems to be almost universally admitted that there is really an increase in the number of cases of insanity, and at the present time few subjects are creating greater interest; while the causes of the increase are being considered and discussed.

Not infrequently the question is asked, "what is insanity"? The line of demarcation between the sane and the insane has never been very well defined; the most experienced experts being sometimes very much puzzled in their endeavors to decide whether a certain person is or is not in his or her right mind—whether or not such a person is wholly responsible for acts committed. A distinguished expert in lunacy before a royal Commission in Great Britain once said: "gentlemen, there is but one sane mind in the universe". No man's mind, as no man's body, is perfect; and judgment, too,

upon the sanity or insanity of any one must be formed and passed by imperfect minds. Unquestionable, whether there is or is not any particular mark or boundary over which one hitherto in a "right mind" must pass before being regarded as "*Non compos mentis*, in the present rapid "progress" of the human family, in the race for life, for wealth, for position, for present luxuries or future ease, in the over indulgences permitted and encouraged by improved conditions, without improved powers of self control, a larger number of minds than formerly are becoming unbalanced and incapable of performing the duties of life.

And what are the real, definable causes? Numerous indeed and varied they are. Says Prof. Hitchcock of Amherst College, Mas.: "Whenever we read the tables of causes of insanity in the reports on Lunacy we are appalled not only at the number of inmates, but also at the number of causes which induce insanity. Religious influences too weak or too strong—moral impressions, emotional energies,\* will, much or little aestheticism, debauchery, licentiousness, irresolution, and many others, may be found under the mental and moral causes; while the physical or bodily causes are almost covered by the sweeping assertion that every disease, and almost every bodily accident, injury, or sometimes disorder, can plainly be said to be the cause of the insane condition."

Now are not these causes, mental and physical alike, almost all if not all, more or less removable or preventable? Yes,

as preventable as typhoid fever or cholera. Though their prevention relates rather to individual hygiene than to what is commonly regarded as the domain of public health. And not a few of the causes of insanity require more than one generation for their removal.

Once, one of the oldest and wisest superintendents of hospitals was asked for a condensed statement of the causes of insanity. He replied: "I should put it all in the one word *"excess."* If we go back further or look deeper we might embody most causes if not all in a *want of self control.* In failure to use the blessings of the higher civilization of the present century with wisdom, discretion, moderation.

Again, says Prof. Hitchcock (in *the Sanitarian*): "Among uncivilized peoples, and among the earlier nations of the world, we have reason to believe there is and has been comparatively little insanity. It is a condition which seems not to originate or flourish in a simple state of society, or where people live according to nature, or with uncultured habits and customs. It seems to be like fruit of the vegetable world: so long as it is wild and but little developed in richness it is simple and without much juice or pulp; but when it becomes cultivated by artificial care, pruning, protection and food, and is full of richness and flavor, then it is infested and injured by parasites and other forms of innumerable animal and vegetable life. So long as man lives in the habits of simple animal nature, so long does he keep this insane condition in its lowest place and power. But when he rises above the common sense gratifications, when his aspirations for something refined and higher take possession of him, then come in a multitude of influences which tend to disturb and destroy this higher part of his being, and man with all his knowledge has not as yet found the power to control this insane condition. Civilization, culture,

morality, religion and refinement, are not incompatible with our highest and most complete state of being hereafter, but as high cultivation in the vegetable world requires more labor, and brings in weeds, worms and adverse agents which are unknown to plants in nature, so does culture of man's higher powers bring in its host of enemies in the form of inordinate self-will, excess, epilepsy, apoplexy and the infinite variety of nervous diseases.

"The Creator has endowed us with passions, powers and possibilities over which we have control. We may gratify our appetites, or indulge our passions to the extent of a reasonable pleasure, so that we may desire again their proper indulgence, or we may so saturate ourselves that indulgence is repulsive; we may reasonably use our powers, or say with another, "Now comes the dark hour his surfeit has made."

"There are none of our powers but we may use to our satiety, disgust and revulsion, be they the tissue of coarse muscle or the rods and cones of the delicate retina. With our physical actions nature has given a sense of weariness, an instinct which says enough, before this disgust and danger appears. But our minds are of such make and capabilities, that overwork and excessive expenditures of nerve force may be almost indefinitely carried on by an indomitable or uneducated or uncontrolled will. The beast, with no wish for more than food and external comfort, ceases nervous expenditure when creature comforts are satisfied; the man with a feverish desire for wealth, a love of knowledge, a yearning for the immortal and infinite, with his physical powers in subjection to the spiritual, makes a slave of the physical part; over-works, exhausts the brain and nerves, and thus he is found by those about him to have lost himself and given the insane condition the supreme sway over him. . . .

"When a spirited but well-trained horse breaks loose from the stable or harness, he is in great danger of injuring or even destroying himself, because he has not the control of his master. There is no control of his powers by himself or his master, and his activity soon injures or ruins him. As men and women arrive at full possession of their powers and possibilities, with unlimited freedom to use them, it is too frequently the case that they are not able to exercise over them proper control, and so rush on to their destruction like a runaway horse. In a despotic government, among a people stupid and ignorant, with those who have no aspiration further than to say, "Let us eat and drink, for to-morrow we die," we not only find but little insanity, but we can assign the cause.—But as soon as ideas come into the mind that better physical conditions may be obtained—relief from excessive heat and cold, more palatable and nutritious food, more agreeable sensations secured, when the soul sees its possibilities and has longings for what is pure, elevating and infinite, then man becomes insatiate, and puts forth his utmost energies to secure what he so longs for, and feels that he will have. Then is the time when he lives and labors beyond his powers; then is the time when he puts his reason and judgment under his feet, and allows his impulses, his taste, his feelings, and too often his caprices, his appetites and his sensual nature to have the mastery of him; then he sets aside self-control; then he permits his sensitive nature, and not his reason, to guide him, when, in consequence, reason is overpowered, and he finds himself in a condition known as insanity. He has then lost, or has allowed to be lost, his self-control. It is not the higher nature of the man that now governs, but the control of self is gone; not as yet the man destroyed, but the power that governs him is set aside, and instead of the will, the disturbed mind and the associa-

ted disordered body have gained possession, and are reigning in riot and disorder.

"Self-control is weakened, specially in our American public, by a disregard or disesteem of law and authority. The democratic idea, the intense individualism that permeates the body politic as does our blood the body, is a demoralizer to a sound mental condition. The disrespect for civil law, as manifested by many who only seem to see in it red tape and needless formality, is a good seed of insanity. The feeling that the letter of the law is not what it should be, soon leads to a disregard of the spirit of the law, and then with private interpretation of it, license and unbroken law readily supervene. The mind, to be sound, must be governed by laws, and anything which tends to weaken the outside workings of law by a most powerful reflex influence reacts in a deadly manner upon the mind itself; leads to the control of the mind by something outside of self, and often what is insanity but a loss of self-control!

"The disregard of law is seen not only in the broad sense of civil law, but in the child, and in the young child. A child in the arms of the nurse is almost insane often when not under the control of the mother or nurse. The crying, the struggling and the working of a stubborn will are but the seeds of insanity commencing to germinate. And the boy not restrained properly in his food, his play, or many of his whims, manifests a further development of the plant of insanity. And the youth who will not be controlled in the use of tobacco or alcohol has but a form of insanity, beginning, it is true, but too soon passed beyond the stage of arrest where he will be unable to check his appetite for narcotics and stimulants—and who is more insane than he or she who cannot control their appetites? And when the man of business loses such control of himself that to make money he will sacrifice sleep, proper rest, recreation, or other duties essential to health

as a physical and a moral being, has he not lost his reason? Would not a proper self-control prevent these habits and thus perhaps preserve his sanity? . . . The glutton, the drunkard, the tobacco-user, shows that his power to resist appetite is overpowered by inordinate strength of the baser and weaker elements of his nature. He who suffers himself to be overworked or overdriven, who gives way to excessive emotion, who yields his judgment to his sensibilities, who will not hear to sound advice or wisdom, this excess of weakness may be his cause of insanity. This excess of weak, selfish gratification and indulgence, this disregard of any of nature's laws, most positively brings its penalty in due time—it may be to-day, it will be to-morrow."

"The mills of the gods grind slowly,  
Yet they grind exceedingly small;  
"Tho' with patience he stands waiting;  
With exactness grinds he all."

A common cause of insanity, and perhaps of the worst sort—suicidal insanity, lies in the too constantly manifested, unchristian, "unrighteous inequalities of life and its surroundings," and the consequent inordinate desires and efforts to obtain wealth, or means, in order to appear equal, or a little beyond it, in "social position" with other people or neighbors, and the frequent disappointments resulting from such desires and efforts. The anxiety, the worry, the strain is often too much, the equilibrium of mind or of body functions or both, is destroyed, and now the self-control is entirely lost, the mind is too far unbalanced to be regarded as sane, and the unhappy career is closed, for a time, at least, if not for life, in a lunatic asylum.

#### WHAT ARE THE REMEDIES

For the multitudinous causes of insanity which we find enumerated? They are obvious enough, and being for the most part simple and within the reach of all ought to be applicable enough. They may be summed up in a few words, as

follows: Careful attention and constant living up to the simple, known laws of health. Health means more than the harmonious action of all the bodily organs, with bounding life currents, more than a well developed form and a happy freedom from all pains and morbid sensations, health implies *mens sana in corpora sano* (a sound mind in a sound body), and it is contrary to science and experience for an unsound mind to exist in connection with a perfectly sound body.

To promote the public health, especially by the education of the people, and above all of the young, in the laws of individual hygiene, is at the same time to develop the powers of self control, to promote true temperance in all things, and to aid in the prevention of insanity.

#### THE HOME—REMOVAL OF FILTH.

In the April number of this JOURNAL we discussed the points relating to the construction of a home—the site, the materials, warming, ventilating, &c., and promised to treat in this number of the best means for removing and disposing of waste excremental matters, especially in rural districts and villages and small towns.

On more than one occasion we have used as a sort of text the following words of that most eminent english Sanitarian, Dr. Parks, it will bear repeating "many a time and oft": It is highly probable that to barbarous and inefficient modes of removing the excreta of men and animals we must partly trace the great prevalence of disease in the middle ages, and there is no doubt that many of the diseases now prevailing are due to the same cause." And we have before now stated what is well known, that the worst forms of disease result from the used up, waste, excremental matters from the body, or the products of such, finding their way back into the body again with the air, water or food consumed. Hence the importance of the complete removal of

all such matters from the vicinity of the dwelling. Not only is the air contaminated by the decomposing refuse but there is great danger of water contamination, when proper disposal is not made.

It is well known how easily excretory matters find their way long distance through soil, especially when this is porous. Accumulations too of such matters, as in privy vaults and barn yards, are not infrequently situated in the course in which water-supply springs set.

Under no circumstances should sanitary authorities or individuals permit detention near dwellings for more than a day or two of any waste organic matters. No precaution can render them innocuous. It is one of the marvels of the day that privy vaults, these barbarous relics of the middle ages, which have slain so many thousands of human beings, are so universally permitted, or even permitted at all, in civilized communities.

The system of removal by water, when there is abundance of this and a good outflow for drainage, is expeditious, cleanly, and on the whole, best for towns of considerable size. It is a very nice thing to have abundance of water flowing through one's dwelling—scullery, closets, &c., and daily lavage the body; but the system is dangerous without the most complete and perfect plumbing,—which requires constant vigilance, and thorough ventilation of all pipes, drains and sewers.

With the water system too, ever so perfect, the kitchen refuse, garbage and ashes have to be carted away, while in the case of small towns and villages, with detached and more or less scattered dwellings, a system of water supply and of sewerage is usually considered impracticable on account of the expense. In such cases by far the best plan is to provide for the regular removal by carts of all solid waste matters—household garbage and closet excreta, at least three times a week, or better, every day. In

dwellings where coal is burned as fuel, by covering the closet excreta every day or oftener with coal ashes, the whole can be removed without the least offensiveness, the ashes being a complete deodorant. If there are no good house drains and sewers for conveying away the fluid excreta, kitchen slops, &c., these may with perfect safety, when free from infectious matter, be thrown about over a garden, but not too often on one place nor near a well; and if grass or some other vegetation cover the ground so much the better.

In places, either towns or detached dwellings, where coal is not used, dry earth, perhaps best of all, is not difficult to obtain in quantities sufficient to act as a complete deodorant for the closet excreta. In India even the dry earth system of disposal of excreta is being brought into very general use, and medical officers say that "nothing has been done in India of late years which has contributed so much to health and comfort."

If the governing bodies of towns and villages would provide for the disposal in this way of all the waste matters of the municipality, the saving through a reduced sickness rate would be many fold the costs of the carting away, even if there were no use made of the refuse. In many places doubtless market gardeners and farmers would be glad to get the compost as a manure and would cart it away free of costs to the municipality; while in other places the manurial value would at least partly cover the costs of removal.

HE FELL OVERBOARD, and was fished out and sent home, and while tearfully recounting his misfortunes to his wife said, "I swallowed about a gallon of water." "Then you know what it tastes like at last," she said. He wished he had been drowned.

THE REPORT OF THE REGISTRAR  
GENERAL OF ONTARIO.

The report relating to the registration of births, marriages and deaths in the province of Ontario for the year 1882 shows an increase in the total number of registrations for the year, though there was a falling off in the number of deaths registered. The total number of registrations was 77,678, an increase of 1,337 over the previous year. Of births, 42,429 were registered, or about 22 per 1000 of population. Of marriages there were 13,449 registrations, or about 7 per 1000 population. Only 21,800 deaths were registered, or a mortality of 11.3 per 1,000, for the whole province. The 37 county towns, including all the cities, returned a death-rate of 19 per 1,000; while the ten cities returned a rate of 21.4 per 1,000. But this includes a very high mortality of over 44 per 1,000 returned by Ottawa; owing to a mistake it appears in the returns. The Health officer of this City states that the actual mortality here was only 28 per 1,000. Leaving out Ottawa, the nine other cities returned a mortality of 18.2 per 1,000.

Of births, there were 106.6 of males to every 100 females. There were 389 pairs of twins and 5 cases of triplets registered.

Of marriages there were 343 more registered than in 1881; an indication of greater general prosperity. Only 175 males were married under the age of 20, though there were 2,808 females who married under that age. Beyond the age of 25 years, more males than females were married.

In the mortuary returns, March was as usual the most fatal month, November was the least fatal. Either November or June are nearly always the least fatal months in Ontario, according to the returns. Over 27 per cent. of all the deaths of the year were in the first quarter; next comes the second, third and fourth quarters, respectively. The year

commenced with a high mortality, 1929 deaths having been recorded in January (112 more than in the previous December), and the death wave continued to ascend, throughout February, though there were fewer deaths recorded in this short month than in January. A rapid rise in the curve took place in March, when it reached the highest point in the year, 2,176 deaths having been recorded in that month—247 more than in January, and 637 more than in November, the lowest month. The curve then gradually descended through April and May. In June there was a marked fall,—389 less deaths than in May, and only 42 more than in the lowest month—November. In July there was a rise in the curve, 107 more deaths having been recorded than in June, and it kept on rising through August, when the increase was 151 deaths in advance of July; it then again descended gradually through September and October, and made a very rapid fall in November, reaching the lowest point in the year, only 1,539 deaths having been registered in this month—nearly thirty per cent. less than in March. In December there was a rapid ascent, and 235 more deaths were reported than in November.

The two special features in the death wave in the year were, first, the high point maintained throughout the first five months of the year; and, second, the low mortality in the month of November.

As to ages, 6,118 deaths of the total of 21,800, were of children under the age of one year, a somewhat smaller proportion than in the previous year. 3,475 of those who died during the year had reached the age of 70 and upward; and 1,523 that of 80 years and over.

In giving the causes of deaths a new and better classification has been adopted than formerly. In class 1, "zymotic diseases," such as the various infectious fevers, diphtheria and dysentery, there were 4,670 deaths recorded, or 21.4 per cent. of the totals. Of "constitutional

diseases—"consumption, cancer, rheumatism, anaemia and the like, class 2, 5,715 died, or 26.2 per cent. And of "local diseases," class 3, diseases of special organs,—heart, lungs, kidney, liver, &c.. 7,001 died, or 32.1 per cent. of the totals, Of "developmental diseases," class 4,—diseases of women, children and old people, 2,842 died, or 13.1 per cent. while 869 died from violence. Thus the largest number died from "local diseases," the next largest from "constitutional diseases" and the third largest from "zymotic diseases." These last are commonly regarded as most preventable and consequently most engage the attention of the Sanitarian. But outside of this class, there are about three times as many more deaths from causes largely preventable which, as we have urged before now, ought to engage more of the attention of those interested in the public health.

From diphtheria there were 1,239 deaths; from typhoid fever, 555; and from scarlet fever, 543. From consumption there were 2,464 deaths.

CONSUMPTION INCREASING.

The following are the numbers of deaths from this disease during each of the four years, 1879 to 1880, respectively: 2,065—2,154—2,397 and 2,464, an increase in the four years of 23 per cent. The proportion of deaths from this disease had increased during previous years but not nearly to so great an extent.

Consumption is a preventable disease, and though probably contagious, is not so in the sense or degree that the infectious fevers are, and like many other constitutional and local diseases, the possibility of its prevention is chiefly in the hands of the one individual predisposed to it or in whom it is developing, while in the case of the infectious fevers, any one is largely at the mercy of careless neighbors and may, notwithstanding the utmost care, be exposed to and become the victim of any one of these diseases;

hence the former may be regarded as the more preventable.

CANCER CONTINUES TO INCREASE.

In deaths from cancer there has been a large increase during the twelve years in which registration had been enforced previous to 1882. The following table shows the proportion of deaths from this malady in the 12 years:

Year.	From Cancer.	in every	From all causes.
1870 .....	1	.....	90
1871 .....	1	"	85
1872 .....	1	"	79
1873 .....	1	"	89
1874 .....	1	"	72
1875	no returns.		
1876 .....	1	"	57
1877 .. ..	1	"	58
1878 .....	1	"	62
1879 .....	1	"	61
1880 .....	1	"	71
1881 .....	1	"	72
1882 .....	1	"	55

The year under notice, 1882, gives the largest proportion on record. In the first six years there was, on the average, one death from cancer in every 78.6 from all causes; in the last six years, one from cancer in every 63.1 from all causes.

We purpose returning to some other points in the report on another occasion.

THE MORTUARY STATISTICAL REPORT.

THE DEATHS IN THE CITIES.

The annex to the report of the Minister of Agriculture for the year 1883, which we have received, consisting of abstracts of the returns of Mortuary statistics from the six principal cities of the Dominion for the first six months of the year, as obtained under the new regulations for that purpose, is a volume of nearly 300 pages of conveniently arranged tables of much interest to the Sanitarian and of great importance to the Dominion. It is creditable as well to those in the sub-department who compiled and prepared the tables, which give evidence of much



and careful labor, as to the master statistical mind which devised the plan, and has so far superintended the working of it. Moreover, it affords evidence that women are competent to do almost any sort of work that men can do, and quite as well, if only they see fit, and make up their mind, to do it.

The Mortuary returns are from six cities, viz: Montreal, Toronto, Hamilton, Ottawa, Halifax and St. John, which, only, at that time, had completed arrangements for making the returns. From some of these cities these returns are evidently about as complete as it will be possible to obtain them, while from others they are evidently imperfect. It cannot but be very gratifying however to those who inaugurated the plan that they are as full as what they are at the very commencement of the work. Time is always required in order to perfect the operation of any new plan of this kind. As the Deputy Minister of Agriculture, Dr. Taché, states in the introductory chapter, "by the 'rules and forms', the subjects of the investigation on deaths are to comprise the ascertaining of the sex, age, marriage, state, religion, nationality and occupation of the deceased, with the time of the occurrence of the death, and its cause. The general classification of the causes of death was made similar to the classification adopted for the reports of the Registrar General of England". But "this preliminary partial report is limited to causes of death, sex, ages and marriage state of the deceased".

It was found impossible to complete a report for the full year in time for the annual report of the department, but one for the full year will appear later. In the mean time this for the six months will give an idea of the extent and difficulties of the work undertaken. Below we draw attention to the most noticeable and interesting features in it. The short period of time covered by the report makes any deductions from it much less valuable than would be the case were there a

longer period covered by it. Still some points are important and worthy of notice, and may prove of interest to our readers.

In estimating the population of the different cities for last year we have simply added one-fifth of the amount of increase in each city during the last census decade—1871 to 1881—to the population as returned in 1881. This, though not the most correct way of arriving at the actual increase or nearest approximation to it, is sufficiently accurate for our present purpose.

The following table which we have compiled shows the total death-rate in the six cities, collectively, and the rate for each city separately; also the total rate for each of the principal diseases and the rate from these diseases in each city; estimated as per one thousand of population per annum. The returns from some of the cities being incomplete, fair comparisons cannot be made, nevertheless we give them such as they are.

Total death-rate from each of the principal diseases, and the rate from each in each city, per 1,000 of population.	Old Age.					
	Totals	Montreal	Toronto	Hamilton	Ottawa	Halifax & St. John
Infectious diseases—diphtheria, measles, scarlet, typhoid and other fevers	2.05	3.28	2.5	2.1	1.6	1.7
Nervous, or cerebro-spinal disease, including apoplexy & paralysis.	2.1	2.7	1.9	2.3	1.48	1.44
Disease of heart and blood vessels.	1.2	1.12	.8	1.3	1.8	1.2
Lung disease other than phthisis.	3.35	2.7	5	4	3	2.2
Phthisis or Consumption.	3.1	3.1	2.5	2.6	2.7	4.8

Total death-rate, and rate in each city, per 1,000 of population per annum.

Totals	25
Montreal	50
Toronto	23.3
Hamilton	20.3
Ottawa	27.3
Halifax	18
St. John	20

The high mortality in Montreal is made up largely of infants under one year old; as it is also in Ottawa. If we eliminate those dying under one year (in Montreal, 910 out of a total for the six months of 2200), we find the death-rate of those above one year to have been a fraction

higher in Toronto than in Montreal—being 17.6 and 17.7, respectively; while in Ottawa it was only 14.6; in Hamilton, 15.3; in Halifax, 14.5; and in St. John 18. In Montreal over 500 infants under one year died of “atrophy and debility”. In Toronto 53 were so returned; in Ottawa, 16; in Hamilton, 12; in Halifax, 2; and in St. John, 5. St. John shows by far the lowest infantile death-rate and Halifax the next lowest.

Furthermore, if we eliminate those who died under five years of age, the mortality of those over five was, in Montreal, 12.3; in Toronto, 13.8; in Ottawa, 12.2; in Hamilton, 12.5; in Halifax, 11.5; and in St. John, 15. Of those above five years therefore, Ottawa returned a lower death-rate than any one of the other cities except Halifax; Montreal being the third lowest; then Hamilton, Toronto and St. John.

In Montreal it appears, and also in Ottawa, the high mortality amongst infants was doubtless very largely in the various hospitals and asylums for young children. And in many of the cases the mothers were not properly residents of these cities and the infants were not born there.

We see, as in the table, that while Toronto presented the lowest mortality from consumption, it shows the highest mortality from lung disease. Consumption was most fatal, proportionately, in St. John and next so in Halifax—down by the sea. As in the case of the mortality above the age of five, excepting Halifax, Ottawa shows the lowest death rate from consumption and lung disease together—Halifax being lowest of all. In deaths from diseases of the heart and blood vessels—organs of the circulation of the blood supply—Toronto and Ottawa stood lowest and about equal. In deaths from nervous diseases Halifax stood much the lowest; and St. John and Ottawa came next. In the mortality from infectious diseases Toronto stood highest, with Halifax about one third, and Ottawa and St. John about half that of Toronto.

From old age, though Halifax returned the largest number under this head, St. John's record shows a larger proportion of deaths, per thousand of population, above seventy years of age. The same is found with reference to Montreal and

Toronto; of those whose age was given, a larger proportion above the age of seventy died in Montreal than in Toronto. About the same proportions are found, in both instances in regard to those dying above eighty years of age.

In deaths from drowning and from railway accidents Toronto stands high; returning 13 and 9 from these causes, respectively. Montreal returned 10 and 7; Ottawa, 3 and 2; Hamilton, 4 and 2; St. John, 1 and 1; and Halifax, 2 from drowning only.

Under the head of unascertained causes, Toronto returned 16 deaths, while Montreal, Ottawa and Hamilton returned only 4 each; St. John, 2; and Halifax, none.

#### THE NEW PUBLIC HEALTH ACT.

The new act which comes into operation on the 1st. of July, is deserving of careful study by every body. It has been framed in a very lenient spirit and contains no provisions with which every body cannot agree, and we desire to bespeak for it a fair and impartial trial. The Public are not disposed generally to consider very carefully questions of public health, so long as they are well themselves. To many the figures 29 per 1000 or 13 per 1000, of population, in relation to death-rates, do not represent the value they really possess. If for example a town has 20,000 inhabitants and its death-rate was 20 per 1000, that would mean, 400 people died in that town every year; if by means of improved sanitary measures such as those now capable of being enforced under the new act, the death-rate were reduced to 13 per 1000, the number of deaths would then be 260, and there would then be a saving of 140 human lives every year. It is not among the higher classes that this saving tells, so much as among the working people. Every workman's life is as valuable to a community as a rich man's, and in some ways it is perhaps more so. If the head of a family be cut off, leaving the children penniless, they must perforce become a burden on the public, and

tax payers generally have to pay increased taxes for the maintenance of these poor little ones in public institutions until they are able to provide for themselves, now it would be far better, as it is the more rational way, to spend that increment of taxation in promoting public health, and saving valuable lives. A little money judiciously expended by the health Commissioners under the new act will do a great deal of good in every municipality, and particularly so in the cases of our smaller towns and villages. The mere cleaning out of all cess-pits, privy vaults and manure receptacles will work a change at once; though it would be much better to do away with all such collections of filth, by daily or tri-weekly removal, as recommended on another page. The systematic whitewashing of places where horses and cows and other animals are kept, and small matters like this, which are at present usually ignored, will all tend to increase the general public health.

The health commissioners are not called upon to inaugurate extensive systems of drainage and water supply in every place. There are plenty of smaller questions which can occupy their attention most profitably, which, insignificant in themselves, have a great bearing on public health; and we will be glad to see this act received in a hearty spirit, and the work of the provincial board of health helped forward.

These things are carefully attended to by our neighbours over the border, let us not sit with our hands folded in front of us, we are of the same kith and kin, and the blood that courses through the frames of our cousins, flows in ours, and let it actuate and inspire us to take a good firm grip of this question and give the new act a hearty "send off."

---

Boxes, it is said, govern the world; the cartridge box, the ballot box, the jury box, and last, though not least, the bonnet box.

#### HEALTH COMMISSIONERS.

It is of great importance that in choosing health commissioners under the new act, such persons be selected in every case as have paid attention to questions of public health, and that councils will not merely put the burden on some already over taxed "willing horse."—The act calls for "ratepayers" to be elected and as we understand it, there is no reason why the commissioners should not be distinct from existing councillors, for in the case of ordering the expenditure of money the Council would have to be consulted.

These Commissioners are really an "appendix" to the Council, and from what we know of the working of health boards in other countries there is no reason why they should clash with any existing machinery of government. It is only in special cases, where they may be called on to act summarily, and these it is to be hoped will not arise often. It will be most desirable to have in every case a medical practitioner on the board as there are many questions he only can solve.

If we were asked to suggest any points on which attention should be directed, what a board of health has to do we might take as an instance the inspection of dairies, and treatment and care of the cows. Not that we consider "crummy" is of a very delicate constitution, but her chief product most certainly is, and it is desirable that more attention should be paid to milk supply than to almost any other article of food. We know of numerous cases where sudden outbreaks of sickness, frequently epidemic, have been traced back to the milk supply; and so traced, through the working of a health act and its Commissioners. Measures should be adopted for the regulation, ventilation, &c. of cows sheds, to have them as well as all pans and vessels used for the collection and storing of milk, kept perfectly clean; the excrement has

to be properly collected and disposed of; and the supply of water for the cows examined into, milk can be, and often is, tainted by the cows drinking polluted water.

Then there are many other important questions which can be prudently and successfully dealt with which affect the general health, such as the disposal of all offal, whether from a slaughter house, or other source. Bylaws have to be enacted and carried out for the regulation of the cleansing of privies and cess pools where such are permitted; the cleaning out of wells; and the disposal of sewage.

Large sums of money are annually thrown away in the improper disposal of sewage, which could be turned to useful account; and even if no direct monetary return be made from these improvements the indirect return in increased health would more than repay the expenditure.

We ask from our readers a careful perusal of the new act, and their active co-operation with the energetic and very useful Provincial Board of Health.

#### PEROXIDE OF HYDROGEN.

This substance first discovered by Thénard in 1818, is remarkable for the facility with which it gives up half its oxygen; which property constitutes it a powerful deodorizer and disinfectant. Until within the last few years, it has been but little known, and its great value is only beginning to be understood. It may be prepared from barium peroxide by the action of carbonic acid. "It is a colorless, syrupy liquid, which when poured into water, sinks below its surface before mixing. It has a disagreeable metallic taste, and when taken into the mouth it produces a tingling sensation, increases the flow of saliva and bleaches the tissues with which it comes in contact. It does not solidify at 22° Fahrenheit. It is very unstable, and even in darkness at ordinary temperature is gradually decomposed. The decomposit-

ion takes place rapidly and with effervescence at 212° Fahrenheit. The dilute substance is comparatively stable and may be boiled and even distilled without suffering decomposition." In decomposing it gives off four hundred and seventy-five times its volume of oxygen.

This substance, in the vaporous form, is produced in enormous quantities, by atmospheric oxidation of the essential oils volatilised into the atmosphere from pine and eucalyptus forests. "Its production is accompanied with that of thymol, a soluble camphor, and several other substances which in their collective capacity constitute the active principles to the presence of which substances in the atmosphere is to be attributed the health-giving properties of the said forests." It is generated spontaneously and is given off by many substances in common use, such as the essential oils— as turpentine, lavender, wintergreen, &c. and even the expressed oils and fats, by nearly all perfumes, including those given off by flowers, by gasoline and benzine, and by certain kinds of wood.

In connection with this it is a remarkable and an interesting fact that men and women, from the highest to the lowest, in every part of the world, appear to possess an instinctive desire for the use, in one form or another, of those substances which generate this purifying principle. While Europeans use them in the form of perfumes, Africans appear to prefer them in the form of cocoanut or palm oil. There can hardly be any doubt that the use of such substances is promotive of health.

A solution of peroxide of hydrogen is used in surgical practice as an antiseptic, and the readiness with which it yields oxygen is well represented by its action with pus in ulcerating wounds, completely obliterating the pus cells. The *Medical World* says: "As a disinfectant for the sick-room it probably has no equal. As a bleaching and cleansing agent, and as an article for the toilet, it is very useful."

## GASOLINE.

In a lecture on the disinfecting properties of certain substances in every day use, Dr. Day, of Geelong, Australia, long ago spoke very strongly in favor of gasoline as a disinfectant. It is somewhat singular that this substance has not come into more general use. The following are some extracts from the lecture:

I will now say a few words in favour of gasoline as a disinfectant. Kero-sene and benzine are chemically nearly allied to it, and possess equal powers of generating peroxide of hydrogen, but kerosene is dirty and benzine has an offensive odour. I look on gasoline as being in many respects the best disinfectant with which I am acquainted.

All disinfectants, to be of much value, should be volatile and capable of freely diffusing themselves through the air of a sick or infected room. Now, gasoline, as you all know, is highly volatile, and this property constitutes it a good atmospheric disinfectant, but it possesses another property, the exact nature of which it is very difficult to explain. For long—very long—after all evidence of its presence has passed away, it either continues to generate peroxide of hydrogen, or else it originally forms it and stores it up until it is brought into contact with any of those oxidizable substances for which it has an affinity. I am unable to say which of these two actions takes place, but certain it is that when unglazed paper or any other porous substance is brushed over with gasoline, it will at once give the reactions of peroxide of hydrogen, and continue to do so for a year or more. Therefore, gasoline, unlike all ordinary disinfectants, may be considered to be persistent in its action, and this gives it immense value as a disinfectant.

It is well known that the poison germs of scarlet fever and other infectious diseases are sometimes conveyed in letters, and these papers were prepared for

the purpose of showing that it is quite possible to do away with this source of infection by simply brushing over the paper with gasoline before writing on it in infected houses; or, in case of a letter coming from a suspected source, adopting a similar procedure before reading it. Books, journals and newspapers, which have been used by fever patients, or kept in their apartments, may be disinfected in the same way without being in the slightest degree injured. Here is a proof. This little book has been perfectly saturated with gasoline, and every leaf is capable of oxidizing and destroying any organic poison that may fall on it and yet it is not in the slightest degree soiled or stained. The most delicate wall paper may be brushed over with it without injury, and so may articles of wearing apparel of every description. This property suggests a ready and efficient mode of disinfecting the clothing of doctors and nurses when they are in attendance on persons suffering from infectious diseases. The hands, also, may be disinfected by sponging them over with gasoline and allowing them to dry in the air.

My common plan of using it is to have it exposed in open vessels—saucers—answer very well—in every room in houses in which infectious diseases prevailed. About a wine-glassfull is sufficient to be used at a time, and this may be repeated three or four times in the course of the day. The only precaution that is necessary is to guard against using it near a fire or light, and this, on account of its highly inflammable nature, must never be forgotten. I may say that during the last two years I have had abundant proof that peroxide of hydrogen, when properly applied to the surface of the body, is capable of destroying the poison germs of scarlet fever, and thus arresting the spread of the disease.

## TURPENTINE.

This is another substance which gives off the peroxide of hydrogen freely and there is much evidence of its value as a disinfectant. From the Medical Record we learn that H. Vilandt writes (*Ugesk for Laeg*) concerning the value of oil of turpentine in the prophylaxis and also in the

treatment of diphtheria and the exanthematous diseases as follows: He has never seen any of these diseases spread from a sick child to other members of the family when this remedy was employed. In many of his cases no isolation could be attempted as the mother was the only female in the family and was obliged to take care of both the sick and the well, continually passing back and forth from one to the other. His method was to pour from twenty to forty drops of a mixture of equal parts of turpentine and carbolic acid into a kettle of water, which was kept simmering over a slow fire, so that the air of the sick room was constantly impregnated with the odor of these two substances. He claims also that by this means a favorable influence is exerted upon the exudation in diphtheria, although it is by no means curative of the disease, and should never be relied upon to the exclusion of other remedies."

#### COFFEE AND TEA.

At the Parke's Museum of Hygiene some little time ago, Dr. Poore delivered an address on coffee and tea, which the *Lancet* refers to as the "most brilliant" one delivered since the evening lectures at the Museum were inaugurated. Sir Henry Thompson occupied the chair and Prof. Corfield and other distinguished men were present. Dr. Poore said:

The cup of coffee, provided it were genuine, contained more alkaloidal stimulant than the cup of tea, and owing to the absence of tannin the action of coffee was more rapid than that of tea. The specific gravity of coffee was greater than that of tea—as 1003 to 1009. Tea was more of a pure beverage than coffee, and hence it was possible to use it as a mere luxury, for it required scarcely any digestive effort. The danger of excessive tea-drinking lay mainly in the large amount of astringent matter. This was a most potent cause of dyspepsia among women of the seamstress class, who frequently consumed tea which had been boiled. When the system stood in need of a stimulant, there was nothing equal to a

cup of strong coffee; and if it were desired to wean the drunkard from his spirits a real stimulant must be supplied, and not the sickly, bitter, unwholesome stuff which was called "coffee" in this country. In order to make good coffee the berry must be fresh roasted and ground. There was no difficulty whatever in roasting coffee, and this ought to be part of the daily routine of every well regulated household. If the coffee required for breakfast were put into a common earthenware jug overnight and cold water poured upon it, it might be heated to the boiling point in the morning by being allowed to stand in a saucepan of water over the fire. Violent ebullition was thus avoided, and the aroma was preserved.

#### ON MAKING TEA,

General Keer, of Toronto, importer of Keer's Himalayan tea, and who has had much experience in tea making, gives the following:

It is impossible to make good tea if the water is not absolutely boiling at the moment it comes in contact with the tea leaves. Nothing short of boiling water will draw out the virtues of the tea. Immediately before the boiling point is reached the kettle makes a noise and there is some steam issuing from the spout, but as the water is not then boiling tea infused with it is utterly spoiled. If the mistress of the house will see to the infusing of the tea herself she will be amply repaid for her trouble in the pleasure and refreshment given her whole household.

Boiling water is the great secret of good tea making. Water that has boiled, but is not actually boiling when poured on the leaves, is as bad as unboiled water. Tea will taste insipid if the water has boiled too long.

To make a perfect cup of tea, use one teaspoonful to each person; allow the infusion to stand only from five to seven minutes before pouring out first cups; while pouring these out add enough hot

water for second cups. Long infusion spoils good tea. On no account should the teapot be placed on a stove.

If economy be an object, little more than half a teaspoonful to each person will suffice to make very good refreshing tea, but the infusion must be allowed to stand ten or fifteen minutes before first cups are poured out.

Keer's tea makes a most delicious beverage and is very economical. We know of many who have tried it and all much prefer it to any other.

#### HOME-MADE BREAD.

A correspondent sends to the *Scientific American* the following receipt for making that almost universally relished and economical article, home-made bread :

For the benefit of the numerous readers of your paper I send you an account of the manner of bread making as practised by my cook for nearly ten years. The bread so made I have eaten ever since 1876, and find it the sweetest and most palatable bread I have ever tasted. It is made as follows :

Take a tin pail or earthen pitcher holding half a gallon: put in one teaspoonful of sugar heaped up, one-quarter teaspoonful fine salt, one-quarter teaspoonful bicarbonate of soda, or sal soda will answer if no other is at hand; on these pour one pint of boiling water; when this has cooled so as not to scald the flour, add flour enough to make a rather stiff batter. This must be beaten up well for at least *five minutes*. Place the pitcher or pail in a larger pail containing hot water, as hot as you can bear your hand in, but not scalding, and put it somewhere on the stove or other convenient place to keep hot; in six to eight hours it will have risen to the top of the pail. Make a sponge with *hot* water, add the yeast made above, keep sponge *hot*, and in one hour it will be ready to knead and mould into loaves, which if kept *hot* will

rise quickly and can be baked as ordinary bread.

Keep everything hot if you desire success, but not so hot as to scald. My apparatus is on the glue kettle principle and kept hot by *jacketing* the outside pail with felt and applying a small "Evening Star" night lamp under it. A tablespoonful of oil lasts all night. Set the yeast at 10 P. M., and it will be ready at 5 or 5.30 A. M. next morning. Brown bread made as above is excellent, and white, is as white as snow.

**PRACTICAL SANITATION AND THE BACILLUS.**—The discovery of micro-organisms in connection with infectious disease, says a London Medical Exchange, "is an affair of yesterday, but the gradual extinction of epidemic disease has been steadily progressing for centuries; and although the more complete knowledge of the laws which govern them must aid in their more rapid extermination, still the fact is as obvious now as formerly, that true progress lies in the improvement of the hygienic conditions under which crowded populations have to live, rather than in the destruction of this or that bacillus. The teachings of previous experience are more powerful even than the startling revelations of the present."

**CIDER AND CALCULI.**—As showing the effects of what may appear to be but a small matter in relation to diet, we give the following from an exchange. "A writer in the *Gaz. Med. de l'Algerie* calls attention to the investigations of Dr. Denis-Dumont, surgeon-in-chief of the Hotel-Dieu, of Caen, who was struck with the almost complete absence of patients affected with stone. He entered into correspondence with a large number of the medical practitioners of Normandy, who practiced in localities where cider was almost the sole beverage, some of whom were of forty years' experience and longer, none had treated a case of stone. As a consequence, he has collected a mass of valuable observations which support him in the proposition that cider is not only a prophylactic against the formation of stone and other affections of the bladder, but also that it is an energetic curative agent, when in the condition to be absorbed, like any ordinary drink, and brewed in the best manner."

## Matters Recent and Current.

## SANITARY STATE OF THE CAPITAL.—

Certainly this is far from being as it should be—far from satisfactory, as is also the general appearance of the city. Ottawa cannot be a very unhealthy place. The mortality proper to the city is not high, and it only contains about half as many Medical practitioners proportionately as Toronto and some other cities; but this it owes to its natural advantages and not to its health department. Given a reasonable amount of money to spend judiciously, we do not doubt that the medical health officer and the city engineer would soon improve things very much,—or so if such improvements were made as they would suggest. Sanitary improvements cannot be accomplished without money, but no investment pays so well as money judiciously invested in Sanitary proceedings. Perhaps Mr. Devlins recent truth "telling" advertisements may help to arouse the "city fathers" and the people to a livelier appreciation of the absolute necessity for a complete change by way of a general cleaning and fitting up.

**MICROCOCCI OF CEREBRO-SPINAL MENINGITIS.**—Micrococci had already been found by Klebs, and again by Eborth, in cases of meningitis, complicating pneumonia, and in traumatic meningitis, whilst Leyden had described numerous micrococci, generally united in pairs, but often in chains of three, as occurring in a case of cerebrospinal meningitis. Marchiafava and Celli have now been able to follow up this line of research by utilising cases of an epidemic of cerebro-spinal meningitis, in the Spital S. Spirito. In two cases, they were enabled to make the autopsies, and examine the exudation and the pia matter a few hours after death. In all their preparations made from the exudations, oval cocci were found either occurring singly or united in pairs.

**THE ONTARIO BOARD OF HEALTH.** We congratulate Dr. C. W. Covernton, of Toronto, on his appointment to the Chairmanship of the Provincial board of health, while we also congratulate the board and province. It is not that we think the chair has not been ably filled in the past, for any one who has observed the efforts of the late chairman, Dr. Oldright, to advance the interests of the public health, could not but recognise his ability and the deep interest he manifested in the work of the board. While the board cannot suffer from the change, the late chairman still being a member of it, the change will doubtless give general satisfaction, and doubtless Dr. Oldright will feel the better for the relief from its arduous duties, which he was not one to neglect. It appears the retiring members have all been reappointed, we believe no one desired any change, and that there will be general satisfaction with the reappointments. We take this opportunity to also congratulate the other members who seem to have taken much interest in the work, including the secretary, which officer we have always thought should be a member of the board.

**BACK YARDS,** about which we hear a good deal in this city and elsewhere, are too often disease breeding relics of a past age, which, as ordinarily understood, ought not to be tolerated. Why have "back yards"—in the ordinary sense, at all? Why not have all the ground behind and around the dwelling the same as in front, covered with grass and cultivated with flowers? Let strong protests be entered against all "back yards."

**VACCINATION IN SCOTLAND.**—The Registrar General for Scotland *Med. Times* notes in his annual report the steadily increasing number of instances of infant vaccination being postponed on medical authority. No explanation, is suggested of this "noticeable feature" although in 1882 the cases were as many as 495 above the average of the previous ten years. It is satisfactory to observe that the deaths from small pox in 1882 were only four, being the lowest recorded since the outbreak of 1872, when 2,446 lives were sacrificed in Scotland to his terrible disease.



**BEEF PEPTONIDS.**—A recent improvement has been made in this most valuable preparation, in the addition of the solids of milk. It is composed of dry lean of beef, solids of milk, and gluten of wheat, one-third each; all of which are *partially digested* or peptonised. Prof. Atfield of London, Eng., says the *Canada Lancet*, has recently made a careful analysis of this preparation and states that it contains the substances and quantities above given, and that it is easily and wholly digested when taken into the stomach. He says: "It is by far the most nutritious and concentrated food I have ever met with. Indeed, a palatable, assimilable and in every way acceptable article of food, containing nearly 70 per cent. of truly nutritive nitrogenous material partially peptonized has never before, to my knowledge, been offered to the medical profession or to the public." Dr. Stutzer of Bonn, who has also examined this preparation, bears similar testimony as to its value. As we have before stated, a little of it added to soups or broths greatly increases their nutritive value. It is not only for the convalescent but for those in health and vigor that it is useful. We write from experience. Ask any druggist for the preparation and don't be put off with "fluid beef" or "beef extract."

FROM DR. KOCH'S SEVENTH REPORT on cholera it appears that numerous cases of this disease and 17 deaths had occurred in a locality in which was a water tank that supplied those around it with water. It was proved by the Commission that the dwellers around the tank used it for bathing and drew from it their drinking water, and that the linen of the first fatal case, had been washed in the tanks. In several specimens of water taken from the tank, cholera bacilli were found in comparatively large numbers. Dr. Koch says: "It may be said that chance has thus provided an experiment on the human subject, which makes up for our want of success in the experiments on animals, and which may be regarded as providing further confirmation of the truth of the view, that the specific cholera-bacilli are the actual cause of the disease."

**HISTOGENESIS OF TUBERCLES.**—According to Professor Baumgarten, of Königsberg (Med. Times.—Cent. für Klin. Med.), the development of specific tubercles can be studied most easily and accurately in the changes which take place in the iris of albinó rabbits after tubercular matter has been introduced into the anterior chamber of the eye. The first stage is migration of the bacilli from the particles introduced into the iris tissue which at this period is perfectly healthy. The free bacilli themselves enter the iris, they are not conveyed into it by wandering cells, and when there they multiply and spread in the tissues. On the tenth or eleventh day after inoculation the iris still looks healthy, although bacilli can be found all over it, both in the intercellular substance and in the cells. In those spots where the bacilli begin to group themselves into nests, changes take place which always lead to the production of typical tubercles.

A MAIN SEWER IN DETROIT, according to the *Sanitary News*, was recently found to contain a deposit in places, seven feet in depth, of decomposing organic matter. This accumulation extended back more than a mile from the mouth of the sewer. *The Medical Age* says, in reference to this matter: "While diphtheria has been endemic in this city for upwards of two years last past, it has been particularly prevalent in that part drained by the sewer in question. These are the facts. The other sewers have not, as yet, been systematically investigated, but when this is done it will not surprise us to learn that 'the visitation of God' in the form of diphtheria, will be found to be singularly closely associated with the delinquencies of man throughout."

THE DETROIT *Medical Age* says, the water whence this city (Detroit) derives its drinking-supply receives between its source and our water-works the refuse matter and dejecta of nearly a million people. At this point it receives the excreta of upwards of one hundred and fifty thousand more, and then passes on and is drunk by the cities between us and the sea board.

**THE CREMATION QUESTION.**—On the whole, says a London Exchange, the lay press sympathize with Mr. Cameron's unsuccessful attempt to secure State regulation for cremation in England. The *Standard* gives full weight not only to the poison-detection difficulty, but also to the "sentimental obstacles." The *Morning Post* thinks the "sentimental objections to cremation are very powerful, not to mention those based on the facilities which might thereby be afforded to the poisoner." Nevertheless it confesses that if no stronger arguments can be found against it than were supplied in the speeches of Sir William Haughton and Sir Richard Cross, a crematorium will at no distant day be added to the national institutions. The *Daily Telegraph* differs from the *Standard* in thinking that popular opinion has already undergone a change in regard to cremation, but it holds that "the feelings which circle round the disposal of the dead are very deep and tender, and that it would be folly to attempt legislation tending to shock or outrage these tender sentiments." As to the poison difficulty, it is sure that "some device can be invented to checkmate the vile purposes of the secret poisoner."

**THE CATTLE BYRES IN TORONTO.**—A compromise had been effected between the plaintiffs, certain parties in Toronto, and defendants in the suit for removal of Gooderham & Wort's cattle byres. The byres are to be allowed to remain on certain sanitary conditions being fulfilled. With proper sanitary regulations carried out all the objectionable features of these byres may be done away with.

**THE LATEST USE OF TOBACCO,** is that of a local poultice in inflammations from injuries, strains &c., and inflamed eyes. A writer in the *Port Chester N. Y. Health and home* gives many instances of its wonderfully efficacious effects. Doubtless this is the best use to which it could be put and it ought to be limited to this.

**PREVENTING CONSUMPTION.**—The hygienic section of the Viennese Medical "Doctoren-Collegium" has lately issued an elaborate series of regulations, framed with the view of stamping out the infectious disease generally known as tubercular phthisis, and familiarly termed in the Austrian capital, from its local ravages, "the disease of Vienna." The measures proposed in this document include the isolation from their relatives of all those in whom pulmonary cavities or intestinal ulcers have become developed: the prohibition of marriage under certain circumstances, and a timely caution against the use of milk derived from cows which may be suffering from tuberculosis! Precautions in the way of disinfection, especially of tubercular sputa, are detailed with great minuteness. The result of these regulations in checking the development of Vienna's arch-enemy, the tubercle bacillus, will be watched with much interest.

"HEALTH RESORTS" are not always *healthy* resorts. It has been found that in Great Britain and in the United States many of the "watering places" to which people go, when they do not go simply because it is fashionable, go with the view of improving their health, are in a very unsanitary condition and give rise to sickness rather than to improved health. This is the season at which many are considering where they shall go in order to improve their health, or for a few weeks during the "heated term." Let the first consideration be in regard to the general sanitary condition of the town, village or dwelling to which they think of going. And let all bear in mind that in a naturally healthy locality, an hotel or a boarding house may be in an unsafe condition as regards the health of the inmates; as by reason of an impure water supply, or milk supply, especially in case of children; by reason of imperfect removal of excreta, bad drainage, bad plumbing, bad ventilation, and such like.

## INDIVIDUAL HYGIENE.

### ITS IMPORTANCE.

It seems that Sanitarians and those working in the interests of the "public health," commonly and properly so-called, appalled as it were by the destruction of life by past epidemics of infectious disease, and while devising means for preventing the origin and spread of such diseases and epidemics, overlook causes of disease which give rise to many more premature deaths than do epidemics or endemics of infectious disease. These causes—often it may be they are only predisposing causes, are operating continually around us, and not only do they give rise to serious diseases which cut short many most valuable lives, but they cause a vast deal of lingering suffering through derangements of one sort or another of the human organism. These causes are most intimately associated with individual personal habits of life; with exercise or labor, with bathing and clothing and the functions of the skin, and more than all perhaps, with the habits relating to diet.

Doubtless more can be accomplished at the present time in the way of preventing sickness and death in the line of "public health" proceedings. Drainage and sewerage and the removal of excreta and refuse matters, the regulation of the water supply and even the isolation of the infected, do not interfere in so great a degree with individual habits, with the so-called liberty of the subject, as does any action bearing directly upon the habits of life. Nevertheless, by a system of education—and by example and persuasion—a great deal can be accomplished, much sickness and consequent suffering and loss of time and money saved, and many premature deaths prevented.

In future number of this journal we shall therefore devote space for a special department on the subject of individual hygiene, as distinguished from that relating more directly to public health.

### THE LUNGS AND HOW TO PRESERVE AND STRENGTHEN THEM.

Many more deaths are caused in this country by lung disease than by any other, and it will be most important to educate the people more clearly in regard to these organs and their function and how they may be strengthened and preserved. In the London "Science Monthly", an excellent publication, in an article in the March number on "how to preserve sound lungs," is the following: "The mortality from acute pneumonia (inflammation of the lungs), seems to bear a direct ratio to the respiratory capacity; in young subjects, the breathing powers have not been fully developed; while, in the aged, the respiratory volume has been diminished by the stiffening of the chest walls and of the lungs themselves by the senile changes incident to the decline of life. Therefore, we assert that the most preventive measure that can be adopted against attacks of acute pneumonia is to keep the breathing up to the full requirements of the system. The effectiveness of other preventive hygienic measures depends largely on the care expended in this direction.

"A few minutes spent each day in simple but effective exercises adapted to expand the chest will, in the course of a few weeks, render the lungs much more permeable to air. The volume of each respiration may thus be readily increased by two or even three cubic inches of air; but if we assume that the gain is but one cubic inch, the aggregate increase in the volume of air breathed in the course of twenty-four hours would amount to about as many cubic feet. An augmentation of respiratory volume to that extent would quickly clear the blood of effete matter, and notably diminish, if not entirely abolish, the liability to attacks of acute pneumonia in any one who practises such effective preventive measures."

From a pamphlet on "the lungs and how to preserve and strengthen them" by the Editor of this journal, Dr. Playter, we give the following extracts:

From imperfect nervous development or derangement of the nervous system;

from habit or want of active exercise, many persons do not commonly and perhaps never fill and distend their lungs to the fullest extent. In such circumstances not only is the whole function of respiration imperfectly performed but the almost unused parts of the lungs—the distant parts—the extreme upper—(especially) and lower edges, become weak and delicate and eventually diseased, like any part of the body, as an arm for example, would if it were not used for a long time. The remedy is obvious, and in their own hands.

In the structure of almost every one there is from hereditary and other influences, a want, small or greater, of due relative proportion in the various organs of the body; some organs not being so well developed as others. It may be the lungs or the stomach, or the heart or the brain, which is defective, and hence the weaker organ. It is very desirable for every one to know the weaker parts in his constitution.

As regards the lungs, the dimensions given in the following table show the normal circumference of the chest of well developed vigorous persons of the respective height and weight. The size of the chest furnishes a correct index of the size of the lungs, as these organs with the heart and its large vessels just fill this cavity.

Height of Individual.	Weight.	Circumference of Chest on 1 level with Nipple.
5 feet 1 inches.	120 lbs.	34.06 inches.
5 " 2 "	125 "	35.13 "
5 " 3 "	130 "	35.70 "
5 " 4 "	135 "	36.26 "
5 " 5 "	140 "	38.83 "
5 " 6 "	143 "	37.50 "
5 " 7 "	145 "	38.16 "
5 " 8 "	148 "	38.53 "
5 " 9 "	155 "	39.10 "
5 " 10 "	160 "	39.66 "
5 " 11 "	165 "	40.23 "
6 " 0 "	170 "	40.80 "

With the lungs proportioned about as above indicated, habitually exercised to their full capacity, and taking in only good pure air, the function of respiration is sure to be perfectly performed.

It may be concluded that for persons born with proportionately small lungs there is no remedy; but such a conclusion

would be erroneous. The size of the lungs may be very materially increased, just as an extremity—the arm or leg, may be increased, by judicious exercise. While one with relatively very small lungs could not probably increase the size of these organs to the full capacity demanded by a vigorous constitution, he (or she) could so enlarge them as that their function would be performed in a much more satisfactory manner, and greater constitutional vigor and less proneness to disease would be the consequence.

The Eminent Professor Jaccoud, in a lecture on the bacillus of consumption recently delivered at the Pitié, and in referring to the fact that Koch's discovery had not lead to any curative agent attached great importance to the mechanical effects of repeated inspirations of compressed air, which leads to an increase of respiratory capacity. "It leads to the disappearance of the inertia of the upper portion of the lungs, ensures pulmonary ventilation and circulation, and thus prevents those stases, the consequence of inertia, which are so favourable to productions of a low order, like tubercle. The best preservative against such imperfect formations is circulatory and functional activity."

Ordinary pure air answers every purpose, in increasing the lung capacity. In the next number of the *Journal* we purpose giving some hints on the method of developing the chest and lungs, with illustrations.

#### WATER DRINKING—THE HOT WATER CRAZE.

There are now but few who do not recognise the value of the bath, externally—the washing and purifying of the skin. It seems very probable that an internal bath—a washing out of the alimentary canal, may be of equal importance and in not a few cases as necessary as the ordinary bath, externally. When we consider what goes into this tract in some people—the quality and superabundance of the foods consumed, it is not difficult to understand this. It does not seem possible that the drinking of abundance of water, in ordinary circumstances and with

ordinary precautions, at regular intervals, can do any harm, and it is very likely to do a vast amount of good, in washing out and carrying off waste excrete matters from the system in which there are too often damaging accumulations of such waste products.

The drinking of abundance of water and its flow throughout the body may be regarded as, or compared to, a miniature "water carriage system in" a great city, carrying away all excreta and refuse. The often beneficial effects of water drinking at the various reputable "Springs" are well known. There are those who believe that the good is more owing to the water drinking, *per se*, than to the effects of the saline substances or mineral salts contained in these waters. Probably they are right. The value of certain waters is doubtless greatly enhanced from containing certain ingredients which enable individuals to drink more of the water than they could drink of ordinary water—the waters being more acceptable to the stomach and not oppressing this organ, or perhaps from containing some ingredients which tend to prevent chilliness after drinking them; and many people are unable to drink and warm so to speak large quantities of ordinary water.

The drinking of large quantities of hot water is becoming a very common practice. We have been surprised of late with the numbers we have found who are in the habit of drinking once or twice a day large drafts of hot water. Though we have not yet learned of any bad effects, but on the contrary of a great deal of good resulting, drinking too freely, especially at first, and drinking it too hot, is not free from risk of harmful results or from danger. In any derangements of the digestive organs, or especially of the stomach, before commencing the habit of the free drinking of either hot or cold water, the family physician should be consulted. Sudden and extreme changes in the habits are always attended with risk, little or great, according to the vigor of the constitution.

### Seasonable Hints.

**PREVENTION OF SEA-SICKNESS**—Dr. Henry Bennet, in the *British Medical Journal*, highly recommends a good, easily digested meal, four hours before embarking. Just long enough before embarking to secure its absorption a cup of strong black coffee should be taken. The stomach should be entirely empty; a full stomach rather promotes seasickness.—The influence of the coffee on the nervous system lasts eight or ten hours, during which time the body may get accustomed to the motion of the ship. It is better to take no food nor drink till hunger or thirst shows itself. To allay hunger, simple food as coffee and bread and butter are recommended.

**NOW IS THE TIME** to put up rules for the prevention of drowning—how to keep above water or from sinking and how to restore the apparently drowned.

**TO KEEP FROM SINKING** when accidentally submerged in water all that is necessary, it is said, is to do as the brutes do, to tread or walk in the water. It is most desirable to make a great effort at self control and exercise "presence of mind."

**IS VIOLENT MUSCULAR EXERCISE JUDICIOUS?** the *Detroit Lancet* ask. "Every physiologist would at once answer this question in the negative. So also would every wise observing physician. And yet as a matter of fact, games are being constantly played in which some are killed, some are crippled, some contract injuries that impair their comfort and usefulness during an entire life." This is the season for violent games. Young people should take warning.

**FOOT BALL AND BOATING** often leave serious results, and it seems that lacrosse cannot be free from danger. Recently have been reported (*Brit. Med. Jr.*) a death from heart disease, one from injury to the brain and one from injury to the spinal cord. All produced by playing

at foot ball. Many chronic diseases have also been reported by physicians as being caused by this same game. A physician writes: I have had under observation several young men whose general health has been undermined by long severe pulls at boating. "A word from the trusted family physician" will do much to prevent too severe exercise in these games.

**ROPE JUMPING.**—This in moderation is a good exercise, and is a favorite one amongst school girls. There is danger however of its being carried to excess, and the little rope "skippers" should be warned of the danger. At Lima, Ohio, recently, a girl fourteen years of age is reported to have jumped the rope 255 times without interruption. In about twenty minutes after she fell into an unconscious condition, and died in a little less than three weeks. Some might do themselves much injury with fewer jumps than 255.

### Personal.

**SIR CHARLES TUPPER'S** withdrawal from the Government and from Canada has caused many regrets amongst members of the profession to which he is an honor. We regret very much the loss, from amongst those working here in the interests of the public health, of one who was ever ready to help on the good cause. There are too few of such; and we trust his absence may not be of long duration.

**DR. O. S. WINSTENLEY**, we are pleased to learn, has returned to Toronto from his trip to California. We trust his health is much improved.

**DR. V. H. MOORE** of Brockville has been nominated representative of Queen's College at the Ont. Med. Council in place of Dr. McCommon resigned.

**DR. STRANGE** having been appointed surgeon to the Infantry School in Toronto, has resigned his position as surgeon to the Queen's Own Rifles.

The **NEW TORONTO CITY BOARD OF HEALTH** is composed of Dr. Pyne, Mr. Allan Macdougall, associate editor of this journal, Dr. Carroll, Mr. A. R. Denison, architect, Mr. Meredith and Aldermen Blevins, Defoe and Irwin.

**DR. NORMAN BETHUNE**, in his great affliction, in the loss of his son with the destruction of the "State of Florida" and of his wife, suddenly, by apoplexy, so soon after, has our deepest sympathy.

### Questions and Answers.

**J. A., M. D., Toronto** Regarding the "new steam heater," we cannot yet give any further information than appeared in our April issue, but we are endeavoring to learn more about it, and trust soon to be able to give the readers of the *JOURNAL* the benefit of the knowledge.

**C. N., Montreal.** In this number we give from a correspondent in the *Scientific American* what we believe to be an excellent process for home-made bread about which you made enquiry last month.

**J. McD.** Yes, perfumes used in moderation are believed to be beneficial to health. Principally on account of your question is given in this number the article "Binoxide of Hydrogen" relating to this subject. The value of perfumes is believed to be due to this Binoxide, which they give off.

### Publisher's Notices.

**TRAVELLERS AND EXCURSIONISTS** wanting trunks or valises would do well before purchasing to see the large and varied stock of these at *Borbridge's*, 88 and 90 Rideau St., or 186 Sparks St.

THE **TORONTO LIFE AND ACCIDENT ASSOCIATION** is a new society well worthy the confidence of those desiring to secure a weekly allowance in case of accident or a fixed sum for a family in case of death, at rates much lower than ordinary life insurance.

**FOUR RECEIPTS** for washing blue.—Dissolve indigo sulphate in cold water and filter. Dissolve good cotton blue (aniline blue 6 B) in cold water. Dissolve Prussian blue in cold water, adding one-eighth part oxalic acid in water. Dissolve Tiemann's soluble blue in water with 2 per cent of oxalic acid. A receipt for a disinfecting washing blue will probably be given in the next number of this journal.

## Literary.

### SUPREMACY OF THE ENGLISH LANGUAGE.

Few doubt the supremacy of the English language. We have long believed and urged that this language should hold the foremost place in the curriculum of schools and colleges, and we are pleased to observe that this view is taken by President Eliot, of Harvard. He discusses the question "What is a Liberal Education?" in a paper in the *JUNE CENTURY*, advance sheets of which we have received. The importance of the paper lies in the fact that so prominent a scholar and educator should take such strong ground in favor of making the sciences and the English language leading branches in the college course. While admitting that Latin and Greek are valuable studies, he says of English: The first subject which, as I conceive, is entitled to recognition as of equal academic value or rank with any subject now most honored is the English language and literature. When Greek began to revive in Europe, English was just acquiring a literary form; but when Greek had won its present rank among the liberal arts, Shakspeare had risen, the English language was formed, and English literature was soon to become the greatest of modern literatures. How does it stand now, with its immense array of poets, philosophers, historians, commentators, critics, satirists, dramatists, novelists, and orators? It cannot be doubted that English literature is beyond all comparison the amplest, most various, and most splendid literature which the world has seen; and it is enough to say of the English language that it is the language of that literature. Greek literature compares with English as Homer compares with Shakspeare, that is, as infantile with adult civilization. It may further be said of the English language that it is the native tongue of nations which are preeminent in the world by force of character, enterprise, and wealth, and whose political and social institutions have a higher moral interest and greater promise than any which mankind has hitherto invented. To the original creations of English genius are to be added translations into English of all the masterpieces of other literatures, sacred and profane. It is a very rare scholar who has not learned much more about the Jews, the Greeks, or the Romans through English than through Hebrew, Greek or Latin.

And now, with all this wonderful treasure within reach of our youth, what is the position of American schools and colleges in regard to teaching English? Has English literature the foremost place in the programmes of schools? By no means; at best only a subordinate place, and in many schools no place at all. Does English take equal rank with Greek or Latin in our colleges? By no

means. . . Shall we be told, as usual, that the best way to learn English is to study Latin and Greek? The answer is, that the facts do not corroborate this improbable hypothesis. American youth in large numbers study Latin and Greek, but do not thereby learn English. Moreover, this hypothesis is obviously inapplicable to the literatures. Shall we also be told, as usual, that no Hinguistic discipline can be got out of the study of the native language? How, then, was the Greek mind trained in language? Shall we be told that knowledge of English literature should be picked up without systematic effort? The answer is, first, that as a matter of fact this knowledge is not picked up by American youth, and, secondly, that there never was any good reason to suppose that it would be. The acquisition of a competent knowledge of English literature being not an easy but a laborious undertaking for an average youth—not a matter of entertaining reading, but of serious study. Indeed, there is no subject in which competent guidance and systematic instruction are of greater value." We regret we have not space for more of this valuable paper.

"THE SUN" has risen in Ottawa, since our last issue, in the form of a sprightly, independent, evening paper. There is a "ring" about the articles in the Sun, for the most part, which is generally admired. On city matters and on the temperance question it speaks out admirably. Thinks if "Mayor Bate" were "worth his salt" he would have resisted the appointment of a police inspector, and that Ottawa "might as well have a stoupton bottle for Mayor." The Sun will not support prohibition but will help in "educating the people" to abandon intemperate habits. Long may "The Sun" shine in Ottawa.

### Books and Pamphlets Received.

*JOURNAL D'HYGIÈNE POPULAIRE*, the official organ of the "Société d'Hygiène" of the Province of Quebec, Dr. Severin Lachapelle, editor, Montreal. We have received the first number of this new journal. It has a neat appearance and contains much useful, practical information. Besides the chief editor and the manager there is a long list of able collaborateurs. We have no doubt this society and its journal will prove very valuable educators of the people of Quebec in matters relating health.

*MEDICAL EDUCATION* and the regulation of the practice of medicine in the United States and Canada; a volume of nearly 200 pages issued by the Illinois state board of health.

*PUBLIC HEALTH* a working man's question, an address to the working classes by Alfred Carpenter, M. D. Lond., C. S. S. Camb., issued by the Sanitary Institute of Great Britain, E. Wallis, F. S. S., F. M. S., Secretary.