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PUBLIC HEALTH



MAGAZINE

AND

LITERARY REVIEW.

Edited by GEO. A. BAYNES, M.D., &c., &c.

VOL. I.



Montreal :

JOHN DOUGALL & SON, PRINTERS, ST. JAMES STREET.

1876.

PREFACE.

In closing the 12th number of the PUBLIC HEALTH MAGAZINE, and thereby completing the first annual volume of this series, it is our first duty to return our warmest thanks to the subscribers who have so generously sustained us. There are disadvantages to which every new undertaking is liable, but on the whole we have reason to congratulate ourselves that our effort have been appreciated and our success in every way been equal to our most sanguine expectations. Space prevents our particularizing the course of some continued articles on many useful and important points, but our index is sufficiently full to afford facility for reference. The arrangements that we have been able to make during the year for promoting the important objects of the Magazine, will secure a full share of matter on all the vital subjects of Sanitary Science; and in addition to this a fair portion of our editorial matter will embrace reviews on the leading publications of the day, so that the next volume will contain not only Sanitary but scientific and literary matter, giving to our work the double character of essentially useful and practical information, as well as seeking to cultivate that taste for literary culture and studies, which just and well digested reviews are so eminently adapted to foster. Our negotiations to further this end are nearly matured, and we can confidently assure our subscribers that if the volume now completed has not disappointed them, the next will amply repay their continued patronage. Reiterating our thanks and soliciting our present subscribers and others who may be induced to add their names to our list, to signify their kind intention early, we shall enter upon the next volume with that confidence which a good cause always inspires, and which a generous support is so calculated to establish.

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BY

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INDEX TO No. I.

<p>Abattoirs, by J. J. Dugdale, M. D. C. M., Health Officer 65</p> <p>Academy of Physical Education, (review) 110</p> <p>Adams, C. F., Pat's Criticism, (poetry) 114</p> <p>Adulteration of Soap, by Sapo..... 77</p> <p>Advice Gratis, (poetry)..... 185</p> <p>"Advice to a Wife," by Henry Pye Chevasse, F. R. C. S., (review)...49-80</p> <p>Acrated Beverages..... 30</p> <p>Alcohol, A few facts about, (editorial)..... 155</p> <p>Alcoholic Thirst..... 349</p> <p>Alexander Chas., M. P. P., on Civic Small Pox Hospital 143</p> <p>Anilin-Poisoning by a Hat..... 117</p> <p>Annual Calendar of McGill College, (review) 83</p> <p>Antiquity of Hygiene and its Scope as a Study, (editorial) 21</p> <p>April, Synopsis of Mortality for... 358</p> <p>Arctic, Teetotalism at the..... 92</p> <p>Austin, F. J., M.D., C.M., L.R.C. P.S., on Clairvoyance and Spirit- ualism 98</p> <p>Continued 129</p> <p>Australia, Board of Health..... 109</p> <p>Bacon vs. Shakspeare, (review).... 371</p> <p>Baker Homer on Chemical Fire Extinguishers 170</p> <p>Yarnjum, Mr. Fred. S., on Physi- cal Education..... 68</p> <p>Baths, Public, (editorial)..... 119</p> <p>Baynes, Donald, A. M., M. D., L. R.C.P., Edinburgh, on Hay Fever or Summer Catarrh 353</p> <p>Baynes, Geo. A., M.D., &c., Sug- gestions given to the Local Legis- lature on Hygienic Vital and Mor- tuary Statistics 212</p> <p>Baynes, Geo. A., M. D., &c., ex- tracts from Joint Report submit- ted to the Dominion Government April 10th, 1876..... 321</p> <p>Baynes, Geo. A., M.D., &c., on the Moral and Intellectual Training of Children..... 378</p>	<p>Bell, John, M. D., Convalescent Home at Murray Bay..... 78</p> <p>"Bessemer," The..... 57</p> <p>Black, J. B., M.D., "Taking Cold" 221</p> <p>Blind Use of Drugs..... 128</p> <p>Board of Health, (Australia)..... 109</p> <p>Board of Health, Letter from Dr. A. B. Laroque, Health Officer.. 15</p> <p>Boynton, Capt 63</p> <p>Burial Alive..... 62</p> <p>Buried Alive, (editorial)..... 120</p> <p>Cab Horses, A plea for..... 251</p> <p>Canadian Illustrated News, (review) 211</p> <p>Canadian Mechanics' Magazine, (re- view)..... 238</p> <p>Catalogue of Authors in the McGill College Library, (review)..... 308</p> <p>Caution to Ladies..... 159</p> <p>Citizens' Public Health Association, (editorial) 25</p> <p>Citizens' Public Health Association meetings..... 11-41-44-206-303-330</p> <p>City of Montreal, Mortality of the City and Suburbs of the, for 1875. 232</p> <p>Channel Feat, by Capt. Webb.... 126</p> <p>Chemical Fire Extinguisher, by Ho- mer Baker 170</p> <p>Chevasse, Henry Pye, F. R. C. S., Advice to a Wife, (review)..... 49</p> <p>China Mania..... 349</p> <p>Chloral Hydrate, Mischievous use of 28</p> <p>Chloroform, Deaths from..... 318</p> <p>Cholera, (editorial)..... 30</p> <p>Cholera, Epidemic of, 1873, (re- view)..... 211-237</p> <p>Clairvoyance and Spiritualism, by F. J. Austin, M.D..... 98-129</p> <p>Clergy, the, (editorial)..... 24</p> <p>Convalescent Home at Murray Bay, by John Bell, M. D..... 78</p> <p>Cookery for the Sick..... 191</p> <p>Cookery for the Poor..... 253-282</p> <p style="text-align: center;">CORRESPONDENCE.</p> <p>Board of Health..... 15</p> <p>Sewer Gas..... 48</p> <p>Adulteration of Soap..... 77</p>
--	--

Sewer Ventilation.....	279	R. T. Godfrey, M.D.....	225
Small Pox Hospital.....	280	How to Keep Your Home Healthy, or Sanitary Hints, (editorial)....	215
Health of Ottawa.....	281	Hygiene, A Hand-book of, by Geo. Wilson, A.M., M.D., C.M., (re- view).....	31
Sore Throat.....	310	Hygiene, Its Antiquity and its Scope as a Study, (editorial).....	21
Sanitary Statistics.....	311	Hygiene of the United States Army, (review).....	146
French Protestant Ladies' College at St. Hyacinthe.....	339	Hygienic, Vital and Mortuary Statis- tics, Suggestions given to the Local Legislature, by Geo. A. Haynes, M.D., &c., &c.....	212
Physical Education of Girls.....	342	Infants' Home, Protestant, (review)	82
Our Starving Poor.....	376	Infant Life and the Protection Due to it, (editorial).....	175
The Canada Medical Record on Editorial Ethics.....	377	Infection from Old Rags, (editorial)	180
Edwards, J. Baker, Ph.D. on Filtra- tion of the Public Water Supply.	1	Jenner, Dr. Edward.....	108
Edwards, J. Baker, Ph.D., on Mont- real Water Supply.....	36	Jerusalem, Health of.....	76
Extracts from the Joint Report sub- mitted to the Dominion Govern- ment by Drs. Marsden, Playter, and Baynes, April 10th, 1876.....	321	Jewish Race, Longevity of the....	283
Eyes, Rules for the Care of.....	95	Kindergarten, The, (editorial)....	85
Father of Sanitary Reform.....	252	Ladies, A Caution to.....	159
Few Facts about Alcohol, (editorial)	155	Ladies' College, French Protest- ant, (editorial).....	339
Few Words about the Montreal Drains, by J. Smith, C. E.....	235	Ladies' Sanitary Association, (edito- rial).....	27
Filtration, (editorial).....	26	L'Assurance sur la Vie, by P. La- Ferrière.....	112
Filtration of the Public Water Sup- ply, by J. Baker Edwards, Ph.D..	1	La Ferrière, P., on L'Assurance sur la Vie.....	112
Food, (editorial).....	154	Larocque, A. B., M. D., Health Officer, on the Board of Health..	15
Foot and Mouth Disease.....	268	Legislation on Insurance, by Ed- ward Stark.....	210
Foreign Health Statistics.....	168-209-234- 271-302-363	Liernur's Pneumatic Drainage Sys- tem, by Adam Scott, C.E.....	193
French Protestant Ladies' College, St. Hyacinthe, (editorial).....	339	Life Insurance, Its Uses and Abus- es, by A. H. Dana, Esq.....	313-344
Gas from Crude Petroleum, by Duncan McMartin.....	275	Life Insurance? What is, (editorial)	29
Girls, Physical Education of, (edito- rial).....	343	Longevity of the Jewish Race.....	283
Gleanings for the Curious, from the Harvest Field of Literature.....	173	Loss of Life by Accident, by a sub- scriber.....	145
Godfrey, R. T., M.D., &c., on House and Sewer Ventilation....	225	Manufacture of Liquor Exposed, by Louis A. Greta.....	110
Greta, L. A., on Manufacture of Liquor Exposed.....	110	Marsden, Wm., A.M., M.D., Ex- tract of Joint Report submitted to the Dominion Government April 10th, 1876.....	321
Hay Fever or Summer Catarrh, by Donald Baynes, A. M., M. D., L.R.C.P., Edinburgh.....		McGill College, Annual Calendar, (review).....	83
Hygiene, A Hand-book of, by Geo. Wilson, A. M., M. D., C. M., Edinburgh, (review).....	31	McGill College, Catalogue of Au- thors in Library of.....	308
Health of Jerusalem.....	76	McLaren's, Alderman J. C., Venti- lated House Drainage.....	331
Health of Ottawa, (editorial).....	281		
Health, Tobacco in Relation to....	158		
Hints on the Management of the Individual, (editorial).....	239		
House and Sewer Ventilation, by			

Catalogue of Authors.....	308	Health of Jerusalem.....	76
Bacon vs. Shakspeare.....	371	Board of Health, Australia.....	109
Rourk, F., M.D., C.M., on Sewer Ventilation.....	257	Mortuary Statistics for August, 1875, in five Southern Cities.....	142
Royalty and Temperance.....	157	Meteorological Observations.....	299-329-168
Rules for the Care of the Eyes.....	95	Foreign Health Statistics.....	168-209-234
Parke, Dr. E. A., Obituary of....	333	Sanitary Reports.....	—271-302
Pat's Criticism, by C. F. Adams, (poetry).....	114	Mortality of the City and Suburbs of Montreal for the Year 1875....	232
Physical Education, by Fred. S. Barnjum, Esq.....	68	Mortality of the City and Suburbs of Montreal for January, 1876....	269
“ “ (editorial).....	91	—300-327	
“ “ of Girls, (editorial)	342	Synopsis Rain and Snow Fall for 1875.....	272
Physicians' Combined Call Book and Tablet (review).....	277	Sanitary Statistics (editorial).....	311
Playter, E., M.D., Extract from Joint Report submitted to the Dominion Government Apr. 18th, 1876.....	321	Sapo, on Adulteration of Soap.....	77
Plea for Cab Horses.....	257	Scavenging, Proposed Plan by Geo. A. Drummond.....	33
Pneumatic Drainage System (Lier- nur's) by Adam Scott, C.E.....	193	Scavenging, (editorial).....	55
Poisoning by a Hat, (Anilin).....	117	School Punishment, (editorial)....	124
Practical Disinfection, (editorial) ..	53	Schools and School-houses (editorial)	148
Preface, A Few Words of, (edito- rial).....	20	Scott, Adam, C.E., on Capt. Lier- nur's Pneumatic Drainage.....	193
Private Houses, Drainage of, by M.D.....	79	Sewage Utilization at Croydon....	93
Process of Digestion, (editorial)....	181	Sewer Trap, New.....	58
Protestant Infants' Home, (review)..	80	Sewer Ventilation, by Dr. F. Rourk	257
Proudfoot, A., M.D., C. M., &c., Effects of Dust upon the Eyes....	3	Sewer Ventilation, (editorial)....	279
Public Baths, (editorial).....	119	Short Sanitary Papers, by Dr. Alfred J. H. Crespi.....	161-228
Public Meeting, Report of Mayor's	6	Sidewalks, Our (editorial).....	55
Public Scavenging, Proposed Plan by Geo. A. Drummond.....	33	Small-pox (editorial).....	26, 50, 96
Punishments, School, (editorial)....	124	Small-pox Hospital, by Chas. Alex- ander, M.P.P.....	143
Sanitary Association, Ladies', (edi- torial).....	27	Small-pox Hospital, (editorial)....	280
Sanitary Hints; or, How to Keep Your Home Healthy, (editorial)....	215	Smith, Joseph, C.E., on Drainage.	305
Sanitary Household Matters, Notes on, being continuous articles by J. H. Springle, C.E.. 48-71-100-139 —165-204	139	Smith, Joseph, C.E., Few Words about the Montreal Drains.....	235
Sanitary Legislation, by Dr. Alfred H. Crespi.....	199	Smokers, Beware.....	60
Sanitary Reforms, Further of.....	252	Soap, Adulteration of, by Sapo....	77
Sanitary Reports from the Following Cities.....	169	Sore Throat (editorial).....	310
SANITARY REPORTS AND MEETINGS.		Spiritualism and Clairvoyance, by F. J. Austin, M. D.....	98, 129
Mayor's Public Meeting.....	6	Springle, J. H., C.E., D Trap for W. C's. of Dwellings.....	307
Citizens' Public Health Association	11	Springle, J. H., C.E., on Ventilated House Drainage.....	289
—41-44-206-303-330		Springle, J. H., C.E., Notes on Household Sanitary Matters. 48-71-101 —139-155-204	101
The Vestry of St. Mary Abbott's, Kensington.....	74	Statistics, Foreign Health.....	168
		Stark, Edward, Legislation on In- surance.....	210
		Stimulants, Use of by Women....	59
		St. George's Inebriate Home (edi- torial).....	52

St. Mary Abbott's, Vestry of.....	74	Vegetarianism, by Dr. Alfred J. H. Crespi.....	104, 134
Streets, Dusty, (editorial).....	120	Ventilated House Drainage, by Alderman J. C. McLaren.....	331
Suburban Residences, (editorial)..	178	Ventilated House Drainage, by J. H. Springle, C. E.....	289
Synopsis of Rain and Snow Fall for 1875.....	272	Ventilation and Warming, (editorial).....	152
Taking Cold, by J. D. Black, M.D.	221	Vestry of St. Mary Abbott's (Kensington, Eng.)..	74
Tectotalism at the Arctic.....	92	Veterinary College, Montreal, (editorial).....	118
Temperance and Royalty.....	157	Warming and Ventilation, (editorial)	152
Therapeutic Agent, Earthworms as a, (editorial).....	123	Water Supply, Montreal, by Dr. J. Baker Edwards.....	36
"Tippling," Treatment of.....	127	Webb, Capt., after his Channel Feat	126
Tobacco in Relation to Health....	158	Wife, An Economical.....	349
Toronto, Mortuary Statistics of, (editorial).....	247	Winter.....	249
Trapping of Closets—The D Trap, by D. B.	273	Women, Use of Stimulants, by....	59
Uses and Abuses of Life Insurance, by A.H. Dana.....	313, 344		
Vaccino-phobia, (editorial).....	89		

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PUBLIC HEALTH MAGAZINE.

Vol. I.]

JULY, 1875.

[No. 1.

Original Communications.

ON THE FILTRATION OF THE PUBLIC WATER SUPPLY.

BY DR. BAKER EDWARDS, F.C.S.

The waters of the Ottawa, and of the north district generally, which flow past Montreal Island, are remarkable for the sandy or flinty character of their minute animal and vegetable organisms, and for the presence of alkaline silicates, which, when commingled with the waters of the St. Lawrence, become precipitated into gelatinous hydrate of silica. As the result of frequent microscopic examinations of the deposits formed by subsidence of the water supplied to my laboratory, and also the deposits separated by the process of *filtration* in my house filter, I find that the deposits consist of

1. *Angular fragments of sand and flint.*

2. *Gelatinous silicious magma.*

3. *Organic silicious filament of DIATOMS, also spicules and gemmules of fresh water SPONGES and skeletons of algæ.* This deposit resembles in general character the well known "TRIPOLI POWDER," used for the burnishing of metals, the keenness and polishing power of which is due to the presence of similar vegetable sandy fragments, which are scarcely less hard than "EMERY POWDER," and will cut fine scores in the brass work of taps and valves, followed by hard particles of sand, giving rise to continual leakage.

Therefore, I submit that the filtration of the water *before it is pumped into the mains of the city*, would, by removal of this *gritty flinty matter*, accomplish a *saving of waste* alike in

WATER, TAPS, VALVES AND WORKING MACHINERY,

which would *more than repay* the cost of filtration, and prove at the same time a

GREAT SANITARY BENEFIT.

With regard to the *cost of filtration*, I ascertained, when in Liverpool last year, that the cost of filtering 11 millions of gallons per diem, including cleansing and change of filters and interest of capital, involved a comparatively small outlay, and was maintained at a rate of £1,250 sterling per annum, say \$575 per annum for each million gallons per diem. The balance of the Liverpool supply is drawn from well-water naturally filtered through the red sandstone rock.

The recent engineering experience of Liverpool adds much to the interest, and establishes the practicability of this question, and indicates the solution of a difficulty now existing in Montreal. A thorough investigation as to the cause and locality of

WATER WASTE

has lately been made in Liverpool, already famous for its advance in sanitary matters, and the result obtained by the use of district meters and a proper system of INSPECTION has shown that a very large amount of waste is preventable, that a great deal occurs during the night from carelessness, and during the day from imperfect fittings.

Under the intermittent system the consumption in Liverpool was on the whole average $33\frac{1}{2}$ gallons per head per day; in certain districts 58 to 60 gallons per head per day. Under the constant service system this fell to $19\frac{1}{2}$ gallons per head per day. Under the system of district meters and inspection, this is now reduced to 12 gallons per head per day, with a constant, more uniform and ample supply. Now a consumption of $33\frac{1}{2}$ gallons per head per day indicates a WASTE of 21 gallons per head per day, and this saving is effected at a cost of one farthing per 1,000 gallons, whilst an additional supply must be reckoned to cost from 5d to 6d per 1,000 gallons.

I venture to think that the adoption of the Liverpool district plan in Montreal, of which filtration is the first element, would
istly. Double the available supply.

2ndly. Afford also a *spare head of water for flushing sewers and cleansing streets.*

3rdly. *Improve the sanitary condition* of the city by the supply of *filtrated water* and thus guard against prevailing endemic and threatened epidemic disease, reduce the rate of infant mortality, and promote the general health and sobriety of the citizens at large.

The state of the water supply for the past three or four weeks has been unusually foul, and the water delivered to the city is in a state quite unfit for human consumption. I have satisfied myself that mere settling tanks would be of little avail, as I find the water still turbid after standing for ten days. Nothing but complete sand filtration can render the water fit for drinking purposes, and the position of the newly excavated reservoir appears to be well adapted for a filter bed, at a moderate cost. Like other "Montreal improvements," the cost will be enormously enhanced by postponement, and from every point of view it appears desirable, nay, imperative, that a well considered plan of filtration should be adopted without further delay.

Laboratory of Bishop's College, Montreal, May 15th, 1875.

THE INJURIOUS EFFECTS OF DUST UPON THE EYE.

BY A. PROUDFOOT, M.D., LATE HOUSE SURGEON TO THE CITY HOSPITAL, BOSTON.

Much has been said of late about the filthy condition of our streets, in which we are at one time obliged to wade ankle deep in mud, and again through clouds of dust, consisting largely of organic matter, which, being drawn into the lungs during inspiration, becomes a great source of irritation to the strongest among us; but to those who are unfortunately predisposed to tubercular diseases, it kindles the latent spark which only too often proves fatal. It may be interesting to some of our citizens to know that dust, or a minute foreign body, lodging in the eye, is perhaps one of the most common causes of disease in that organ. It is easy for anyone who has had the misfortune to get a

few grains of sand, coal-dust, or any such substance, into the eye, by the amount of pain and inconvenience he experiences, to form some idea of the injury that delicate organ may sustain from their being allowed to remain in it for a short time. These cases are so suddenly followed by pain, that the person is forced either himself to remove the offending substance, or to apply to some skilful person to do so for him. There are but few persons who have not suffered from this cause more or less frequently. And here allow me to remark that I have often seen an eye more seriously injured by the bungling attempts of unskilful friends to remove a foreign body, than it would have been if left to itself. I therefore recommend my readers to go at once to some doctor in whom they have confidence; by so doing they will save themselves much pain and inconvenience.

It is not to these exceptional cases that I wish to call the attention of the public, but to the effect of the clouds of dust which rise from our streets, and which enter the eyes in such minute particles as not immediately to give rise to urgent symptoms, but which are none the less certain in their action. A person walking in the streets gets a little fine dust blown into his eyes, and takes little notice of it. The eyes are at first slightly reddened, and little inconvenience is felt. Unfortunately, however, the irritation is kept up from day to day; the eyes become permanently bloodshot; they are heavy, and a burning or itching sensation is felt; the tears are more abundantly secreted, and mucus collects in the angles of the eyes or on the margin of the lids. We now have the mildest form of ophthalmia, "Simple Conjunctivitis." The eyes becoming thus affected, a slight exposure to dust, changes of temperature, cold winds, &c., is required to produce more severe forms of disease, viz., Catarrhal and Purulent Ophthalmia, the latter being not only very destructive to the eye, but extremely contagious, sometimes affecting whole families. It not unfrequently becomes epidemic in favorable localities, and it is by no means uncommon in Montreal at the present moment, especially among the poorer classes, although I have lately had some cases among persons who were by no means poor. They attributed the trouble entirely to their having got dust into their eyes in rather more allopathic doses than usual. While I was living in Boston, an epidemic of ophthalmia broke out among the

children of one of the charitable institutions of the city, and although the cases were immediately isolated, and the most vigorous measures to prevent contagion adopted by Dr. H. W. Williams, who was in attendance, the disease continued to increase until the Dr. discovered that the floor of the room in which the children were allowed to play was sprinkled from time to time with sand, which became powdered beneath their feet and filled the air while they were at play. It was not until the floor of this room was swept and scrubbed that the disease was checked. This form of disease is usually known as "Egyptian Ophthalmia," from its prevalence in that country. It is extremely common on the western prairies of America, among the Indians and settlers. I have even seen the dogs and cattle affected with it, and it is no doubt due to the dryness of that climate, and the prevalence of wind and sand storms, which resemble the sand-storms of the desert.

It is so easily propagated, that in the army, or on board ship, the greatest precautions are necessary to stamp it out on its first appearance. Dr. Frank, in his *Army Medical Reports* for 1860, p. 406, says, "It has originated spontaneously from overcrowding and foul barrack atmosphere, and from defective arrangements for ablution." Dr. Parkes says that "it is quite enough for us to know, first, that it is contagious—that is, transmissible; and, secondly, that if not produced, its transmissibility is singularly aided by bad accommodation." It is transmitted by the dried particles of pus and epithelium. The evolution of ammonia from decomposing sewage has also been assigned as a cause, so that it is absolutely necessary to have good ventilation and purity of air. Mr. Welch's facts show that impure atmosphere is the great cause, and contagion a secondary one. Careful and constant use of water should never be forgotten. The same linen and toweling should never be used by those who are not affected, and as careful arrangements in regard to isolation should be practised if the disease has broken out as we use in any epidemic disease. Another important matter to be remembered is that relapses are very frequent. A man once affected has no security against a recurrence of the disorder.

If our citizens would avoid an epidemic of ophthalmia, we would recommend that water-carts be more generally used on all our streets, and that the mud be scraped up and immediately removed, instead of being left in heaps to be dried by the sun and redistributed.

Sanitary Reports.

PUBLIC MEETING.

A Public Meeting was convened by MAYOR HINGSTON, at the request of a numerously signed petition, at the Mechanics' Hall, last month. On the meeting being called to order, Dr. BAYNES was requested to act as Secretary, and Mr. MERCER then moved the first resolution, viz. :

"That, notwithstanding all the exertions of the City Council to improve the public health, the present condition of the city calls for special and immediate action to remove the causes of disease, and to diminish the death rate."

And went on to say :

"The question which we are met to consider is a most important one to every citizen, and yet it is one to which we always give but little attention, unless some terrible fatality brings the matter to our own door. So long as our own families and our immediate neighbors enjoy good health, we are content

"Montreal is the most unhealthy city in the Dominion, and yet we live on never thinking that we are responsible for its condition." He then mentioned a case in point that occurred to him that very afternoon :

"I was returning from a visit to the house of a friend in whose family not many months ago five members were stricken down with typhoid fever, on account of bad sewage. As I was passing that lane which runs west of Beaver Hall Terrace, between Dorchester street and Belmont Avenue, I was arrested by a most offensive odor, and looking round to discover the cause, I found that lane heaped with manure, in a word, all filth lying gaseous and poisonous."

He said he did not bring this case forward as an extreme one, on the contrary he feared that it was but one out of many; but it was brought under his notice accidentally. What can we expect when there is so much filth lying about the houses of some of the most clever medical men in the city?

"The question of the sanitary health of the city is a very diffi-

cult one, but not so difficult as it was some years ago, when sanitary science was in its infancy and was not so well understood. We have here now some of the most able medical men this side of the Atlantic.

The time was when London and Paris, the two largest, were also the two unhealthiest cities in Europe; but although they have in the midst of them that which would give rise to many contagious diseases, yet we know that such means have been taken to thoroughly cleanse and purify them, that they are now the two most healthy cities in Europe.

Liverpool, some years ago, was another most unhealthy city; but its death rate has been reduced greatly by closing and doing away with all cesspools, by removing all offensive matter at once, by increasing the water supply, and by filtration, and by preventing garbage from being allowed to lie in the back lanes, and by seeing that the tax which was specially levied to improve the health of the city was devoted to that purpose, and to no other. These systematic arrangements have had their effect.

What has been done for Liverpool we may do for Montreal, if we but try. He believed there was no other city in the Dominion so well adapted for hygienic improvement, but the streams of pure water which trickle down from the hills are changed into filthy water. The endless number of streets, the lofty buildings, and the numerous population, these all turn the ways of nature upside down, unless due precautions are taken.

In this city, in the winter months, typhoid and other prevalent diseases exist to an alarming extent at a season which should be most destructive to all those kinds of infections; but we know that all these diseases are worse in winter than in summer, and why? Because the garbage is left lying upon the streets, and with every rain that comes is washed into the earth, until the earth is perfectly saturated with it, then it rises again and fills our houses with foul air, and then up go the double-windows and doors are kept closed to keep out the piercing cold and keep in malarious gases."

Mr. MERCER then concluded with the remark that he hoped this meeting would not be like many he had attended, where every motion was carried unanimously, but nothing more thought of them after leaving the room.

The Rev. Mr. STEVENSON then rose and seconded the motion, saying: "It seems to me we are situated very favorably indeed for sanitary measures. We have a beautiful mountain on one side and a fast-flowing river on the other, and I cannot help believing if it be true that our death rate is so high, it is our own fault. If we only took what nature has given us and made use of it as we ought, we should render our sense of safety much greater than it is. Our health is perfectly within our own control. I say that our system of drainage should be improved; that our water supply should receive proper attention. I do believe the time has come when the water supply ought to be filtered. I do not intend to reflect on any body. I would, therefore, without blaming any one for the past or present, call attention to the state of things as they exist. The water supply is not filtered, and at some seasons unfiltered water from a river is very unhealthy; we should have a very carefully conducted method of filtration. In Liverpool the results of such a course tally paid in many ways for the outlay."

Ald. McCORD then rose and remarked that "we want all the assistance we can get." He touched upon the difficulties of getting a bill passed in Parliament, and continued, saying: "Last year nearly one thousand deaths from small-pox occurred in Montreal; the death-rate is thirty-four and a fraction per thousand, and this death-rate requires an explanation. It is amongst the French people that these deaths from small-pox occur. It is to our French fellow-citizens that attention should be directed. Liverpool has a death-rate of only twenty-nine per thousand, Glasgow twenty-five per hundred, Edinburgh the same. These facts have been represented to the Council, and the French members of the Council are willing to assist in passing a by-law to reduce this high rate. He mentioned the designs that were on the table for the improvement of the Craig Street tunnel, and stated that they intended to make the outlet at Colborne Avenue or the Ruisseau Monjeon. He spoke of the exertions that were being made to obtain public baths—recommending the women to use them also. He then spoke of the precautions necessary to prevent the spread of small-pox, typhoid, and other fevers, by isolation; scavenging should be very well performed, and the filth should not be allowed to lie as it does at present."

The Rev. Mr. CARMICHAEL then proposed the second resolution, viz.:

"That this meeting urges on the City Council to spare no expense necessary for dealing with the present emergency, and regrets that the Council has been unable to provide all the funds required by the Health Committee. It also recommends that if found necessary a special health tax be levied on the rate-payers, and placed at the disposal of the Board of Health."

He then said this was one of the most unhealthy cities in the world. He then recited the case of his own drain. He had applied in vain to the Corporation, and at last his landlord (Bishop Bourget) removed the evil at his own expense. He offered to assist in the Society with a will.

M. P. RYAN stated that that bugbear the Craig Street drain was the same as twenty-five years ago—all talk and no action for its change. He then advocated the expenditure of money to remove the disease from out of the city, and then we might talk about laying out a Mountain Park—but what good would a Park be to us after disease had carried us off? He did not know what good a Park would be to dead men.

His Lordship the METROPOLITAN then moved:

"That a 'Citizens' Public Health Association' be formed to aid the constituted authorities, and to educate public opinion in matters connected with sanitary reform."

Mr. WHITE, in seconding the motion, said, he believed in doing everything in a practical manner—not bringing theory before the public and never acting upon it. He said the Quebec Gate Barracks were used for our immigrants, but the building was not fit for habitation; that there had been a case of black small-pox there, and that no measures had been taken for its proper removal or disinfection; but, on the contrary, the neighbors had been called in to see how much the "dear child's face was swollen." He then proposed the following gentlemen as a Provisional Committee, with power to add to their number, to form a Citizens' Health Association:

PRINCIPAL DAWSON, LL.D.,	J. BAKER EDWARDS, PH.D.,
REV. CANON BALDWIN,	P. P. CARPENTER, PH.D.,
REV. JAMES CARMICHAEL,	DRS. G. P. GIRDWOOD,
REV. MR. STEVENSON,	" THOMPSON,

MESSRS. NATHAN MERCER,	DRS. PROUDFOOT,
“ M. P. RYAN,	“ RICARD,
“ THOS. WHITE,	“ GRENIER,
“ C. O. PERRAULT,	“ LUSSIER,
“ EDWARD MURPHY,	“ MAJOR,
“ SPRINGLE,	MESSRS. HENRY LYMAN,
“ DOUTRE,	“ SAUNDERS,
“ PETER REDPATH,	“ RADFORD.

Mr C. O. PERRAULT then spoke in French in support of the motion, and said that Montreal was behind all European cities of any pretensions, and that he was willing to co-operate with this proposed Society or Association.

Principal DAWSON, LL.D., then moved :

“That the best thanks of this meeting be hereby presented to His Worship the Mayor for his courtesy in presiding, and for the interest he is taking in improving the health of the city.” He said we wanted clean streets, clean houses, clean yards, clean garments, clean pure air to breathe—in fact clean everything. We did not have sufficient space round our houses.

Rev. Canon BALDWIN, in seconding the resolution, spoke in flattering terms of His Worship.

Mr. DOUTRE said he wanted Craig Street tunnel large enough for a pony and carriage to drive in.

HIS WORSHIP said, “I have to thank you for the complimentary remarks from you all, and I think after the abuse the Corporation came in for, you could not do less; but I do not take it to myself, as I have only been in office six weeks. I must say when I took office I entered chaos; but now we have got things into some sort of shape, and I hope we will be able to carry out some of our proposed reforms. We can compel the removal of offal from a man's house, but he can harbor double-distilled death within doors, and we have not the power to cross his threshold. The Local Legislature is far in advance of the Dominion in sanitary knowledge. It has not only the power but it shows the disposition to favor sanitary measures. The Quebec authorities are willing to grant us all the powers we require for the asking. We have not the authority to make a man put in the best drain for the purpose—he can use wood if he is so disposed. The difficulties are really more legal than medical or

chemical. He then said that the education of the people as to vaccination would have to be constant, and that to talk of compulsory vaccination was nonsense, for if the Police Force of Montreal were one hundred times greater it could not enforce it. The public mind must be constantly educated in this matter and must be coaxed into it. He expressed joy at the formation of a new Sanitary Society, and said that the Board of Health would be only too glad to receive any practical suggestions that would be laid before them. The meeting then adjourned to Saturday evening, the 15th inst., at eight o'clock, at the Natural History Society Rooms.

CITIZENS' PUBLIC HEALTH ASSOCIATION.

A full meeting of members was held at the Natural History Rooms on Saturday evening, to organize this society. Letters were read from the Bishop and Principal Dawson, explaining their necessary absence. During the temporary absence of Mr. H. Lyman, Mr. Thomas White was voted to the chair. Among those present we noticed Prof. Johnson, LL.D., Rev. James Carmichael, Mr. Chas. Alexander, M.P.P., Messrs. P. Redpath, Mercer, Springle, Ackland, Radford, Jones, Drs. Edwards, Thompson, Proudfoot, Baynes, Lussier, LaRocque, Austin, Osler, and other gentlemen. The Treasurer received various subscriptions from those who were also giving very valuable time to the public service. The minutes of the previous meeting having been confirmed, and the report of the Constitution Committee read, its articles were taken up *seriatim*, and after some little friendly discussion, the following rules were agreed upon with remarkable unanimity:

1. This Society shall be called the "Citizens' Public Health Association." Its objects shall be to increase and diffuse knowledge on all subjects relating to the public health, by the discussion of sanitary subjects, by the exposure of sanitary evils, and by promoting sanitary legislation.

2. All members shall pay an annual subscription of two dollars, due on May 1st, for the year ensuing.

3. The affairs of the Association shall be conducted by a President, two Vice-Presidents, a Recording and Corresponding Secretary, a Treasurer, and a Council of twelve members, who shall be elected by ballot at the Annual Meeting, and shall hold office for one year, or until their successors are appointed.

4. The Council shall have power to make by-laws, providing they are not inconsistent with the Constitution of the Society, including the number to form a quorum, and also to appoint, from among the members of the Association, such Committees as may be found desirable.

5. An Annual meeting shall be held during the month of May in each year, when the report of the Council and the Treasurer's accounts shall be submitted, and a Council and officers elected for the ensuing year.

6. The Council shall call meetings of the Association, for the reading and discussion of papers on sanitary subjects, to which the public shall be invited; a copy of all such papers to be preserved with the minutes of the Association.

7. The President, or either of the Vice-Presidents, shall, on the requisition of at least ten members, call a special meeting of the Association.

8. All motions submitted to the meeting shall be in writing, and decided by a show of hands; but the Chairman, or any member of the Council, shall have power to adjourn to the next meeting any motion of which notice has not been given to the members, by the Secretary, in writing, at least a week previously.

9. All interim documents issued in the name of the Association must be signed by one of the presiding officers and the Secretary.

The meeting then proceeded to the election of officers—a difficult thing when so many excellent names presented themselves for choice. Mr. Henry Lyman was first proposed, but declined from press of other engagements. Mr. Alexander declined for the same reason. After a ballot, Mr. N. Mercer was elected by acclamation, and, being called upon for his opening address, spoke substantially as follows:

“GENTLEMEN,—I confess I had hoped to escape this nomination by the election either of Mr. Lyman or Mr. Alexander. But as the work must be done, and you have honored me with

your desire that I should direct its operations, I do not think myself at liberty to decline. Unfortunately I shall be living out of town during the summer months, but I will attend to the duties of my office in the city. There is a vast amount of work to be done, and I don't know what portion of it this Association is going to undertake, or to what extent they will be able to influence the authorities in improving the health of the city. At present I am somewhat disheartened at the little public interest shown. The condition of the back streets is perfectly appalling. Many of the front streets are bad enough. This very day I have been inspecting some of the streets at the East End. They are such as to increase all our sickness, and prepare for terrible infantile mortality in the summer. He was glad to say that Alderman McCord spoke in a sanguine manner, and promised a wholesale summoning at the beginning of June. I have been threatened with a summons for the wretched state of our back lane; but I showed that it was my neighbors, and not I, who kept the horses and were at fault; and they have been compelled to clear. I spoke of a similar nuisance at the Mayor's meeting. I am glad Messrs. White and Lyman are here present to explain. The meeting was duly convened on an influential requisition. In England such a meeting would have been attended by hundreds instead of tens, the Press would have fully reported it, and the Editors would have commented on it one way or the other. Unfortunately, Mr. Lyman was holding another meeting at the same time and place; it only related to an assessment in one particular ward; yet that was well attended and fully reported in all the papers. How was it with the Mayor's meeting, which affected the whole community in their lives—not merely in their pockets? The report in Mr. White's paper was the worst of all; while in the *Star*, on the contrary, there was a very good report. At the beginning of that meeting I made a statement which, were some great disease attacking the city, would, I don't hesitate to say, have created a great deal of excitement. I fixed upon one particular street. We *must* bring the responsibility of these things home to particular streets and particular men. I chose the lane to the west of Beaver Hall Terrace. Why? Because there were some of the chief M.D.'s of the city, including professors at McGill

College; men we should go to for advice on sanitary matters. How these gentlemen could live for one single day without making attempts to improve it is a perfect marvel. A few days after a friend of mine in that terrace had diphtheria, and the two doctors in attendance discussed the propriety of making a presentment on the condition of the place. Such a fact should not have been overlooked by the Press. If Dr. A., Dr. B. and Dr. C. are allowed to create such nuisance, what can we expect from the general public? Gentlemen, we must be practical, not contenting ourselves with reading and discussing papers and holding meetings. We must divide the city into districts, and appoint two or three to report on each. It may take many months to do this work, and you have, perhaps, no idea how much labor lies before us all.

Mr. White explained that the reporters were often obliged to accommodate one another. On this occasion they appear to have considered that the taxation meeting would be most interesting to the outside public, and only one of them had remained in the lower room.

Mr. Lyman was in a position to state decidedly that at the time the St. Antoine meeting was fixed for 3 p.m., the Mayor's meeting had been announced for 4 o'clock. It was the latter which had been altered, and caused the unfortunate collision.

Messrs. M. P. Ryan and Ovide Perrault were then unanimously elected Vice-Presidents, thus representing the Irish and French portions of the citizens.

Mr. Peter Redpath, being unanimously elected Treasurer, promised to discharge its duties as well as possible, and hoped to enroll a large number of members to support the operations of the society.

Dr. G. A. Baynes was then elected Recording, and Dr. P. P. Carpenter Corresponding Secretary. Dr. Carpenter stated in the name of both gentlemen that he felt sure they would work harmoniously together, and they would each spare no labor to advance the interests of the Association.

The following gentlemen were then named as the Council for the current year: Rev. J. Carmichael, Judge Coursol, ex-Alderman Alexander, M.P.P., and J. Kennedy; Drs. Edwards, Thompson and Proudfoot; Messrs. Lyman, Weaver, Springle, T. White and C. Jones.

Correspondence.

LETTER FROM DR. LAROCQUE, HEALTH OFFICER OF MONTREAL.

MY DEAR DOCTOR,—At your request I give you with great pleasure a synopsis of what has been done in Montreal towards the organization of a Board of Health since I had the honor of being appointed one of the health officers in 1869. I shall also say a word on what has been done by the Federal and Provincial Legislatures in relation to public health matters, especially to sanitary legislation. The first year of office was employed in visiting, and in making to the Board of Health reports containing suggestions to ameliorate the sanitary state of the city; vital statistics were also compiled and published. During that year the health officers were not present at the meetings, either of the Health Committee or Board of Health. When Judge Coursol came into office, being apprised of that fact, he gave instructions to the City Clerk to have the health officers present at the meetings of the Board of Health. To that time there was no special health department; all sanitary business was transacted in the Central Police Station. An application was made to the Local Government, and acquiesced in, for the use of part of the building now occupied by the Health Department.

The duty of the Sanitary Police consists in visiting yards, privies, cellars, lanes, &c., &c. They daily record their work in books. Complaints received at the department are entered in a book, and attended to by the Sanitary Police. Public vaccination has been performed at the office three times a week. The object was to institute arm to arm vaccination, had the children been brought in greater number. Statistical tables are compiled from the weekly death-lists received from the Catholic and Protestant Cemeteries.

We must say that from want of power the many suggestions included in the different reports of the health officers were not

carried through. Last autumn a series of sanitary clauses to be inserted as amendments to the City Charter were handed to the City Attorney, and put in legal form and presented to the Council, which decided, however, to ask for general power in health matters.

The Quebec Legislature has given the Council power to pass mostly any by-law to enable the Health Department to enforce vaccination, carry out necessary sanitary measures, and to regulate contagious diseases. The following section is that which was adopted :

“ Besides the purposes for which the said city may, by section 123 of the said Act, 37 Vict., Chap 51, pass by-laws, the Council of the said city is hereby authorized to pass by-laws for the following purposes, that is to say, to enforce a complete and efficient system of vaccination, to establish offices for that purpose, to appoint officers, to authorize them to make domiciliary visits to destroy the linen, clothing, and any other article infected with small-pox or any other contagious disease, to isolate patients laboring under such diseases whensoever the said officers shall deem it necessary for the welfare of such patients, or of the public at large, to cause any person who shall have died of any of the said diseases to be buried within a short delay, and generally to take such measures as the Council of the said city may deem necessary to regulate, control, prevent, or arrest the progress of small-pox, or other contagious, endemic, or infectious disease in the said city, any law now in force to the contrary notwithstanding.”

A code of sanitary by-laws has passed the Board of Health and is to be presented next Monday to the Council.

A sub-committee of the Board of Health meets every Wednesday, in order to organize and put in working order the different departments of the Board of Health. A statistical table of deaths is about to be printed weekly and distributed. Records of the death-rate, especially by zymotic and diarrhoeal diseases, and by consumption, according to street, ward, age, nationality, are to be kept. The inspection of yards, privies, cellars, lanes, drains, location of houses, reports of small-pox and typhoid cases are to be registered according to headings, in order to be able to know at any time the exact sanitary state of the different wards, even street, in relation to zymotic, diarrhoeal diseases, and consumption. This manner of sanitary book-keep-

ing will enable the Health Department to ameliorate the most unhealthy portions of the city.

The sub-committee is determined to pay most particular attention to public and private drainage. Before 1865 no record of the drainage of the city was kept. The system of drainage is so obscure that in too many cases it is an impossibility to have right information concerning the condition of certain sewers. Many of the main sewers seem to be in the worst state, or else not all at the proper level. For instance, on St. Catherine street, from St. Lawrence to St. Denis street, proprietors cannot drain their ground on account of the main sewer not being at a sufficient depth.

Mr. Deom, confectioner, occupies a house corner of St. Catherine and Elizabeth streets. The basement used as a workshop is damp, in some places muddy. His men, after a few days' employment, generally complain of sickness and leave. He has lost, within the year, four children. One died last Monday, 24th inst. Two died of lung affections, and two of scarlet fever, with bronchial symptoms. His medical attendant has certified that the state of the cellar contributed to their deaths. Opposite, sickness has prevailed for some months in M. Letondais' family, who gives me authority to publish this statement.

A proprietor owning a tenement house at the corner of St. Elizabeth and Dorchester streets, wanted to pass a drain through a passage leading to Dorchester street sewer. He went to enquire at the Inspector's Department about the sewer, when he was told that there was no sewer there. He was obliged to pass the drain under the house, contrary to sanitary rules. Vaccination is going to be actively pursued. Three vaccinating bureaus have been established—East, Centre, and West. The Sanitary Police are to visit from house to house, and require from parents certificates of vaccination.

If a sufficient number of children are brought to the bureaus we shall be able to furnish lymph to the medical men of the city and of the country.

The questions of milk, liquor, meat inspection, abattoirs, public baths, sanitary construction of houses, utilization of the contents of privies, measures to stamp out small-pox, hospital for contagious diseases, are all to be grasped by the sub-committee.

In order to be able to compare the sanitary condition of our city with that of others and direct usefully the operations of the Board of Health, a system of vital statistics is absolutely necessary, which can only be got by a correct registration of births, deaths, and marriages.

Several attempts have been made in vain to induce the Federal Government to legislate on vital statistics. Knowing the great advantage that vital statistics would have been to our Board of Health, two years ago I went to Ottawa to confer with members desirous of bringing in a bill of registration. The measure was not brought forward. However, a committee of hygiene, composed of all the medical men of the Legislature, was formed; a report (copy of which I address you) was adopted. The principal object, as you can see, is to form Boards of Health in the principal cities of the Dominion and to establish a Bureau of Sanitary Science at Ottawa. Several members of the Federal Legislature regretted that the question of public health was excluded when the Dominion Constitution was drafted in 1867. Federal sanitary legislation encounters obstacles from local and provincial interests. I know, however, from a good source, that the Local Legislature would aid the Federal Government in passing any sanitary measure which would conduce to the sanitary welfare of the Dominion.

A permanent committee of hygiene now exists in Quebec. A law to regulate burials in the Province of Quebec has been passed, and a report recommending compulsory vaccination, has been adopted. This is certainly a proof that the Quebec Legislature is determined to adopt sanitary measures.

A fourth attempt to organize a health association has been made. The names of the citizens who are at the head of this movement are a guarantee of success, if they are determined to work.

We all know pretty well what is required for the healthy state of Montreal, and even of the whole country. The greatest difficulty is in sanitary legislation. I would, therefore, kindly request the Health Association to take up the very important question of sanitary legislation, and especially of vital statistics. If, by a correct system of vital statistics, we could show that the high death-rate of the country is due to diseases the most part of which are

preventable, statesmen could probably be persuaded to attend to sanitary legislation. Our present legislation has a tendency to ameliorate the material state of our country without reference to the health of the people.

You have undertaken the publication of a "Public Health Magazine" in order to diffuse amongst the people useful information on public and private hygiene—a science considered the greatest conquest of medicine, but, unfortunately, too much ignored. It is to be hoped that the intelligent portion of our population will appreciate the value of a sanitary leaf by enregistering their names as subscribers. In our present state of civilization a sanitary journal, based on sound principles of physiology, psychology and pathology, cannot but tend to ameliorate the condition of our society, which seems to ignore the elementary principles and laws of hygiene, the object of which is not only to ward off disease, but also to give development to man, physically, intellectually and morally. Whatever social position man occupies, he ought to know how to put himself in connection with the different stimulants of life, air, water, light, food, &c.

Everything which militates against mind or body ought to be brought before the bar of health. Gentlemen in every profession and calling should have an intimate knowledge of practical hygiene. Every householder should know how to regulate his house in sanitary measures. Every architect should be careful in his construction, &c. All of which I am sure we will find in your excellent publication.

I remain, dear Doctor,
Your devoted confrere,

A. B. LA ROCQUE, M.D.
Health Officer.

MONTREAL, June 3rd, 1875.

PUBLIC HEALTH MAGAZINE,

JULY, 1875.

A FEW WORDS OF PREFACE.

THE spirit of enquiry as to the sanitary condition of Montreal and its neighborhood has given rise to the formation of a new sanitary society, the object of which has been briefly set forth in the resolutions moved and ably supported at the public meeting on the 8th of May at Mechanics' Hall. It has been felt by many that the time is also come when sufficient interest in the subject has been manifested to lead to the publishing of a monthly magazine, in which all the most important local information on the subject will be gathered, and interesting matter upon the same subject collected from abroad. To this end the publication of a monthly magazine of sanitary science, devoted to general information upon subjects affecting the health of the community, entitled "Public Health," is commended to your notice and patronage. The Editor is in communication with Editors of other similar publications, and is, therefore, in a position to afford reliable intelligence on the subject of health in other parts of the world. Original matter upon the most interesting questions of the day will be published, and articles on useful and practical subjects will have their due place. Reports of societies formed for sanitary objects will be condensed and become matters of record. Every beneficial hint that can aid the family in securing the easiest modes of preserving healthy dwellings and households will have its due attention. Articles upon the preparation of food, its qualities and nutritive properties, will be part of the useful information it is proposed to furnish. The magazine will be both instructive and interesting, and every pains will be taken to secure its usefulness.

REMARKS ON THE ANTIQUITY OF HYGIENE AND ITS SCOPE AS A STUDY.

It is not to be wondered at that the ancients, ignorant of the Living and True God, "in whom we live and move and have our being," should conjecture that there existed supernatural beings that controlled the laws of nature, either in their beneficent or injurious effects; and as the one Supreme Being was unknown, the conclusion arose of "Gods many and Lords many," appropriating to a presiding deity the cause and effect of every known phenomenon that came under their observation either in the heavens above or on the earth beneath. Every element, therefore, of nature had its gods; fire and water, winds and waves, summer and winter, day and night, the fruits of the earth, and the blessings and misfortunes of mankind—each had its superintending genius, who became the personification of the good to be desired, or of the evil to be deprecated. Among these tutelary deities none had greater honors paid to her than Hygeia, the daughter of Æsculapius, the Goddess of Health—indeed the veneration held for this divinity was surpassed by none. Nor is this to be attributed to any other cause than self-preservation as the first law of nature, and the consequent maxim that "health is the greatest of blessings."

It is no modern notion, therefore, the intimate relationship of hygiene to medicine, as being that part whose subject is the preservation of health, while medicine, from its root, "*medeor*," to cure, is applicable to all substances that possess any property capable of mitigating or curing disease.

There is a trite adage handed down from our fathers, "Prevention is better than cure," from which we may fairly deduce that the study of Hygiene precedes, as an initiative, the study of medicine, and can at any rate claim never to be separate from it. What is Hygiene then? Briefly it is the art of preserving health, that is of obtaining the most perfect action of body and mind during as long a period as is consistent with the laws of life. In other words it aims at rendering growth more perfect, decay less rapid, life more vigorous, death more remote. To this end Herodicus, who flourished before Hippocrates, and who went by the surname of "Gymnastic" was the first to introduce medical

gymnastics for the improvement of health and the cure of disease.

Hippocrates devoted himself to the study of hygiene, while following physic under the guidance of his grandfather, Nebrus, an eminent physician. It was the custom of Hippocrates to study the tablets in the temples of the gods where individuals had written down the diseases under which they labored, and the means by which they recovered. It was his proficiency in sanitary precautions that enabled him to deliver Athens from a dreadful pestilence in the beginning of the Peloponnesian war, for which he was publicly rewarded with a golden crown.

Galen, or, more properly, Claudius Galenus, the intimate friend of the Emperor Marcus Aurelius, and who is said to have written three hundred volumes, a large part of which were lost in the destruction of the Temple of Peace at Rome, where they had been deposited for safety, acknowledges his indebtedness to Hippocrates, and it may be truly confessed that to the writings of these two eminent men, the moderns are debtors for many useful discoveries. His celebrated tripartite epochs of a human being, on which he descants with great perspicuity and clearness, are noted expressly as

First, of Growth, (including infancy and youth).

Second, of Maturity, when, for many years, the body remains apparently stationary.

Third, of Decay, when, without actual disease, though doubtless in consequence of some chemical changes, molecular feebleness and death commence in some part or other, forewarning us of general decay.

These epochs of life must be before us while we are studying the various circumstances that incidentally arise to disturb the natural course of the health and vigor of the human organization under the vicissitudes of these several changes.

Now Hygiene is that part of medicine whose subject is the preservation of health and necessitates an acquaintance with those laws which are conducive to the maintenance of the normal condition of health. It embraces not only a knowledge of healthy man, regarded individually or in society, but an acquaintance also with the objects used and employed by him, with their respective influence on his constitution and organs. Thus, by

the knowledge of the two, the student may lay down certain fixed laws of Hygiene, a departure from which cannot fail to produce evil consequences, while adherence thereto must ever be attended with beneficial results and secure the most rational expectation for the continuance of health.

Systematically, therefore, we may classify our subject under three distinct heads, according to Dr. Parkes .

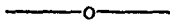
1st. In relation to the natural conditions which surround man, and which are essential for life, such as air, water, food, sunlight, &c., &c.,—in short, relatively to nature at large.

2nd. Man in his social and corporate relations as a member of the community, with the effect upon him arising from certain customs, trades, conditions of dwellings, clothing, &c.

3rd. In his capacity as an independent being, having within himself sources of action in thoughts, feelings, desires, personal habits, all of which affect health, and which require self-regulation and control.

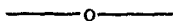
You will see, therefore, that if so large a field properly comes under the study of hygiene, it may be said to embrace all laws that have for their aim the most perfect culture both of mind and body, for the two are inseparable, as is manifest from the fact that the body is affected by every mental and moral action, while the mind is equally sensible to the influences arising from bodily conditions. A perfect system, therefore, of hygiene must combine the knowledge of *physical, mental and moral culture*, and must train the body, the intellect and the moral soul, with a just regard to the necessities of each in a well-balanced order. If we may credit Rabbinical theories, sanitary rules were blended intimately and woven into the divinely appointed order of their ceremonial observances, and a due regard to hygiene, or the preservation of the health of the people, was secured under the law of Moses. The elaborate detail of things clean and unclean, compassing, as it did, that which might be eaten or not eaten, carefully excluding every animal and bird as a subject of food whose habits and propensities led it to indulge in filthy and gross substances, established the rule that nothing could be considered wholesome for man that had not avoided all putrescent matter and the grosser form of aliment. Hence every carnivorous beast or bird was rejected from the list of the proper food

of man. Every animal that had not certain marks or habits that constituted it of the species of ruminating and cloven-hoofed combined, was excluded from the class of clean and wholesome. The rigid rules enforced on the subject of cleanliness, embracing the *removal* of all *filth* from their camps; the *covering with earth* of all *fetid matter*; the great attention to ablutions; the stringent regulations as to contact with diseased or unclean persons, or with dead bodies—while they excluded persons for times long or short from the congregation in its religious aspect, secured likewise the wise precaution of separating such persons from the community while in absolute contact with what was unhealthy and unclean; and, added to all this, the wisest legislation on the all important matter of the alliance of the sexes, prohibited unions of too close consanguinity, and established the highest order of moral obligations. We may fairly assert, therefore, that the subject of hygiene stands foremost in moral obligations to man, individually and in community, and boasts of the most ancient and divinely ordered rules to secure its observance and establish its blessings. If we consider the reality of the fact that the divine law stooped down and took hold of man by the ordinary infirmities of flesh, and dealt with special regard to the lowest element of which he was moulded, we shall not easily overrate the sacredness attached by the Creator to the human body, which He constituted the dwelling of the Spirit, nor shall we wonder at the superintending care that could say “the very hairs of your head are all numbered,” “and in his book were all your members written when as yet there were none of them.”



WHEN it was proposed to publish this Magazine of Hygiene and Public Health, these two thoughts naturally suggested themselves: First, was the subject one which could fairly demand that attention and study which it claimed; and, secondly, was there not a special class of gentlemen invited to subscribe who should devote their serious consideration to acquiring some knowledge of it (I mean the Ministry)? To the first there was this plain answer, that what the necessity of the day was peremptorily calling for information upon, and for measures to secure, had even on this

ground a title to every honest effort to promote, and a right to the quota that every man could add to the general stock, and that as the study was at the root of existence itself, it would be difficult to over-estimate its value. To the second the reply was equally clear. That what demanded the joint co-operation of all men to secure, undoubtedly claimed the special assistance of a class of men, whose everyday life would bring them in contact with those forms of evil which the study of our subject could alone qualify them to alleviate or prevent. I trust, therefore, that the effort to lay before you what the great principles of Hygiene have established will be accepted in the spirit in which it is offered: an earnest desire to promote your individual usefulness in the great cause of our duty towards man.



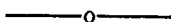
PARTICULARS concerning the formation of "The Citizens' Public Health Association" will be found elsewhere in this number. We heartily congratulate the energetic gentlemen who have brought their scheme to a successful issue. A society of the kind was much needed, and by the names that we see enrolled upon its list we are happy to say that it will be an influential association. Its constitution is short, but very liberal and desirable. The Council of the Association consists of twelve gentlemen; but the President, two Vice-Presidents, Treasurer, Recording and Corresponding Secretaries are *ex-officio* members of the Council, making a strong company of eighteen men, who are determined to work for their fellow-citizens, gratuitously, in obtaining reformation in matters affecting the public health. We wish them every success in their undertaking. There will be much to contend with, and many times there may be a feeling of despondency as apparently insurmountable obstacles present themselves. But we promise all the help in our power, and feel happy in enrolling ourselves under such a banner and in such a cause. In a future number we shall be happy to give some practical suggestions, which we hope will be received in the liberal spirit in which they are offered.

IN an article on the filtration of the public water, by Dr. J. Baker Edwards, which will be found in another place, he puts the importance of the subject before us in a most lucid manner. He says that by adopting the Liverpool district plan in Montreal, of which filtration is the first element, it would "1stly. *Double the available supply*, 2ndly. *Afford, also, a spare head of water for flushing sewers and cleansing streets*; 3rdly. *Improve the sanitary condition of the city by the supply of filtered water*, and thus guard against prevailing endemic and threatened epidemic disease, reduce the rate of infant mortality, and promote the general health and sobriety of the citizens at large." As we can not hope to have this great improvement for some little time yet, it behoves us to protect ourselves to the best of our ability, and we advise all our readers most earnestly to procure a house filter without delay. There is no means of purification equal to a good filter. The silicated carbon filters entirely deprive water of organic impurity, and are so constructed as to prevent the passage of the most minute bodies. Water passed through them is for all practical purposes as pure as can be.



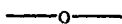
DISGRACEFUL.—We were called to see a patient last week in St. Andre street, suffering from all the symptoms of an impending fever, and we enquired if she had been exposed to the contagion of small-pox. She related the following outrageous particulars: On the 1st of May, she, with her husband and four children, moved to the new tenement house they were at present occupying. After they had been located for forty-eight hours, and got all the furniture and carpets in, a neighbor called to see them, who lived on the same flat, having a common stairway between them. Having entered into conversation, he coolly remarked he was glad they were come, for it was very lonely for him to sit in a sick room all day, mentioning that he was nursing his wife and two children with small-pox. When they found this out, the husband ordered him out of his apartment and locked the door, immediately procured disinfecting powder, and used everything in his power to prevent infection to his own family, using for himself the back yard stair for ingress and egress. When he taxed the landlord with his shameful conduct in allow-

ing him to come into his house when he knew it was infected with small-pox, he merely laughed, and told him it was not "ketching." Is there no punishment for such *flagrant criminality*? Are we at the mercy of sordid landlords, who, rather than lose a couple of months' rent, will sacrifice the lives of their fellow beings? The poor mother was sent to the Montreal General Hospital suffering with a severe attack of small-pox, from which she has since died. Symptoms have shown themselves in one of the children since. What have our city fathers been about to allow a city like Montreal to be decimated year after year, without even stirring a finger to help us? We hail with delight Alderman McCord's new by-laws. We have had the pleasure of looking them over, and we must say that they are a step in the right direction. Let the Board of Health join with the experienced members of the Citizens' Public Health Association, many of whom have for years studied sanitary measures.

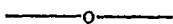


WE see by a late number of London *Public Health* that "The Ladies' Sanitary Association" is still as vigorous as it was 10 years ago. In their last report, read by the Secretary, Miss Rose Adams, the average yearly receipts of the Association reached £350. The Association has devoted much of its time and money in the issuing of tracts on sanitary reform. These little books are written in simple language, and revised by some eminent medical gentlemen, among whom we noticed Drs. Sutherland, John Brown Sieveking, Arthur Farre, Edward Smith, Richardson and others, which guarantee their sound principles. Their titles explain sufficiently the important work they are intended to perform: "The Health of Mothers," "How to Manage a Baby," "How to Feed a Baby," "Word about Fresh Air," "The Use of Pure Water," "The Worth of Fresh Air," "The Advantage of Warm Clothing," "The Value of Good Food," "How to Nurse the Sick," "Why don't Women Swim?" "The Evils of Wet Nursing," and many others too numerous to mention. There are branch associations in France, Germany, Holland, Italy, Hungary, and other countries. Why cannot some of *our* earnest women be impressed with a sense of the needless suffering and wide-spread ignorance concerning the laws of health, and determine to make an effort to mitigate these evils? If such an association were formed here, we promise all the assistance in our power to further their good purpose.

Miscellaneous Selections.



THE MISCHIEVOUS USE OF CHLORAL HYDRATE.—There is much reason to fear that the use of chloral hydrate is becoming indiscriminate and mischievous. Medical men everywhere would do well to strongly discountenance its consumption except under professional advice. Even in the most experienced hands it has proved fatal, and it may be remembered that twenty grains once given by a well known physician—now dead—as a hypnotic produced sleep from which there was no awakening. An inquest was held at Bedhill last week on the body of a lady, when the verdict of “Died from an overdose of chloral” was given. She appears to have taken the drug regularly for a long time, receiving supplies from a local chemist. Mr. F. B. Hallowes, who made the *post-mortem* examination of the body, concluded that she must have died from an overdose, although there was unmistakable evidence of diseased heart and lungs.—*Lancet*.



DOMESTIC MEDICINE.—The *Sanitary Record*, of London gives another instance of that pernicious habit of domestic drugging which need only be mentioned to be condemned. It says: “Another death in consequence of the culpable manner in which narcotics are administered to children occurred recently at Holloway. The child having been restless, the mother bought some syrup of poppies, and gave it a spoonful. On the following morning the child was found to be unconscious, and died shortly after. Dr. Shehy, who made the *post-mortem*, pronounced the cause of death to be opium poisoning; and, in answer to a question, stated that laudanum was sometimes mixed with treacle as a substitute for syrup of poppies. A verdict of death from narcotic poisoning was returned. The coroner, in his summing up, remarked that he believed the fault mainly lay with the public, who were utterly ignorant, or not very particular, as to what they bought for their children.”

WHAT IS LIFE INSURANCE ?

1. It is the exercise of Prudence and Benevolence.
2. It secures independence, domestic happiness to the widow and orphan.
3. It is more efficacious in its operation, as regards the moral and domestic comfort of the people, and in its tendency to reduce taxation, by its reduction of pauperism, and possibly of crime, than the legislation of our wisest statesmen, and, if universally adopted, would be a national blessing.
4. It affords to persons of every class, and in every station of life, the means to avoid much future misery to their families, and to render them independent of public or private charity.
5. It is a scheme by which any sum of money may be secured at death (whenever that event may take place), or be received at any age of the life assured.

It is truly impossible to overestimate the value of life insurance. When we look upon those scenes of misery and suffering, which promise a long continuance, and know that by one simple act of self-denial all these might have been prevented, we cannot fail to recognize the power for good which lies in a life insurance policy. The reasons which were valid when a man first secures this policy are always valid. Why, then, debate about continuing the insurance as long as life lasts? If it be a question of economy, we should begin with sacrificing our luxuries, not our necessities. The life insurance policy is one of the necessary things of life. It may be compared to bread, fuel, clothing; for, hereafter, it becomes all these things. The annual insurance premiums purchase these necessaries of life to be used in distant years,—supplying our home then with what our hands are supplying now.

The charity of life insurance is the worthiest of all. It is mainly devoted to widows and orphans, often left, otherwise, entirely destitute and penniless, and it not only provides affluently for them, but, at the same time, preserves inviolate their independence and respectability of character. It relieves and sustains, but never humiliates or degrades.

The wisdom of life insurance is emphatically indorsed by

authors, divines, and statesmen; its security is approved by financiers and business men; and its benefits are daily realized by all classes.

CREMATION.—At Dresden the technical solution only of the cremation question has been arrived at. Its legality has yet to receive authoritative sanction. The cases in which corpses were subjected to the process were purely experimental; but, now that science has vindicated cremation, the society for promulgating it, which includes many of the leading citizens of Dresden, has memorialized the authorities for permission to put the process in practice in a "Cremation Hall," specially built, and specially provided with a furnace. The request, it is thought, will be granted.

CHOLERA.—Cholera has broken out in various parts of Ceylon. In Colombo and Galle especially the disease has violently attacked the population. In the former town 405 cases were reported in a short time, of which 288 proved fatal. The Cingalese are not distinguished for cleanliness, and it will require all the efforts of the European medical practitioners and authorities to subdue the outbreak.—*Lancet*.

MESSRS. BLACKWOOD & BIRKS, successors to Chas. Wilson, who for many years studied the comfort of the general public in preparing aerated beverages for summer use especially. We have tested them all—have seen the manner of their preparation in their factory, 99 St. Urbain street, and can recommend them to our readers as free from any injurious ingredients. Messrs. B. & B. are also sole agents for the celebrated "Yamachiche" Mineral Springs.

Reviews.

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A HANDBOOK OF HYGIENE: By George Wilson, A.M., M.D., and C. M., (Edin.), Medical Officer of Health for the Warwick Union of Sanitary Authorities; formerly Medical Officer H. M. Convict Prison, Portsmouth. London: J. & A. Churchill, 1873.

We are indebted to Dawson Bros. for the above book. This is the second edition of the work, and it seems to have met with general favor from the public of England. We have reviewed it very carefully, and we must say that Dr. Wilson has certainly paid great attention to the study of Hygiene.

He has written a book which gives a summary of the *whole* subject. It is well adapted to health officers, and likely to be of considerable use to the general public. It contains a short introductory chapter on "Public Hygiene and Preventable Disease," and then takes up *seriatim* the functions and constituents of food, air, ventilation and warming, water, dwellings, sewage, disinfection, and the duties of health officers; and in an appendix an epitome is given of the various health acts and the powers and obligations contained in them. All gentlemen who are interested in sanitary matters will find a fund of information entirely free from medical technicalities. The author makes one remark among many that we must not omit to bring before the public notice. He says, in speaking of the causes of deterioration and disease in *genus homo*, that "These may be divided into two classes, namely, *Social* and *Material*." By the material he means impure air, impure water, insufficient or unwholesome food, dampness of soil, deficiency of warmth, &c., &c., which he says properly belong to "Legislative enactments. The social causes of deterioration and disease, on the other hand, are little, if at all controlled by State interference." But the greater part must be remedied by constant animadversion through the Press, the Pulpit and the Platform, as well as by general instruction to family circles and schools by the physician, the minister, and journalist, or any other philanthropic persons who will carry due weight with them. Sanitary works can never, by themselves, make a community healthy; they must be aided by social virtue. The whole nation must earnestly strive by continuous efforts at self-improvement to cultivate good personal habits, for, as Dr. Wilson truly says, "public virtue is essential to public health, and both tonational prosperity." Such books as this will, we trust, aid in that general education in sanitary matters which must be the first step towards a satisfactory public health. We should advise all those who are interested in such matters to buy it—if for no other reason but their own household regulation,

Editorial Notices and Answers to Correspondents.

The editor begs to state that PUBLIC HEALTH magazine is not a publication of party or of prejudice, but of progress, and as such its pages are thrown open to all who wish to contribute to the common stock of sanitary knowledge. We must not be considered as holding the same views as every article not from our own pen. We would esteem it a favor if all who wish to further sanitary science would forward us, as early as possible, reports, pamphlets and newspapers containing information on sanitary subjects. Contributions are invited upon any subject allied to hygiene or public health. Gentlemen sending newspapers are requested to mark any matter that they wish our attention drawn to.

SMOKERS, BEWARE.—We have received your communication, and will notice it in our next number.

KINDERGARTEN.—We will answer your communication upon the opening of the September term of schooling.

A. B.—We have received your letter on a small-pox hospital, and will bring the matter before the public next issue.

SICK NURSE.—The nicest preparation for the extract of beef is that recommended by Dr. Tanner. "Take one pound of rump steak, mince it like sausage meat, and mix it with one pint of cold water. Place it in a pot by the side of the fire, to heat very slowly. It may stand for two or three hours before it is allowed to simmer, and then let it boil gently for fifteen minutes. Skim and serve. The addition of a small tablespoonful of cream to a teacupful of this beef tea renders it richer and more nourishing. Sometimes it is preferred when thickened by a little flour or arrowroot."

THE amount of the subscription to this Magazine will be \$2 00 per annum, post-paid. Remittances are only to be made to the EDITOR PUBLIC HEALTH MAGAZINE, P. O. Drawer 25, Montreal Clubs, Reading Rooms, &c., supplied at a liberal discount, if more than one copy is required.