

THE Sanitary Review

SEWERAGE, SEWAGE DISPOSAL, WATER SUPPLY AND
WATER PURIFICATION

MONTREAL AND ITS PERENNIAL TYPHOID EPIDEMIC.

In the spring of last year we wrote of Montreal as a "Hygienic Disgrace to Civilization."* The article was inspired by data statistics relating to typhoid and other zymotic diseases as published in the annual report of the Provincial Board of Health. Montreal had only just recovered from a winter outbreak of typhoid, resulting in the death of several hundred of its citizens.

Again our attention is called to Montreal by a similar winter typhoid epidemic, but of greater magnitude. This week minimum reports give the number of cases at 3,000 and maximum reports as per the Montreal "Standard" at 6,000.

In order to try to gain some useful information with reference to these annual typhoid outbreaks we thought a personal visit at the time to Montreal might be advisable. We are, therefore, writing these notes from the Island City itself, after having made several enquiries into the cause and degree of the epidemic.

Montreal has two distinct supplies of water, the one the city supply, and the other, the Montreal Water and Power Company supply. The city supply serves about four-fifths of the population, and the company about one-fifth.

Both supplies are direct pumping from the St. Lawrence River, the city intake being above the falls, and the company's below the falls, between the shore and Nun's Island. In both cases the water is delivered direct to the people without any provision whatever for purification.

The St. Lawrence and the Ottawa River receive most of the sewage of Ontario and part of Quebec and the United States, and this is the water that the citizens of Montreal must drink, unless they buy their water by the bottle as represented by spring water retailed in the city.

At the commencement of each winter, when the ice begins to cover the river, shutting out free oxygen, thus providing anærobic conditions in the water, typhoid shows itself in the form of an epidemic. This is just what any reasoning person would expect, and, upon our word, it is just what the people of Montreal appear to expect also. They say: "Oh, yes; there is a lot of typhoid. We have it every year this time. It is, perhaps, worse this year than usual. It's the water, you know," and there the matter appears to end as far as the ordinary citizen cares.

On calling on Mr. Geo. Janin, the superintendent of the city supply, we asked him what his opinion was as to the relation between the outbreak and the St. Law-

rence water. Of course, he put the blame upon the private company, explained that the city had spent a large sum in covering in the aqueduct, and were going to spend more in extending the intake further into the river; and that, if epidemics still continued even after that, then they might consider the problem of filtration. Mr. Janin was very proud of the fact (given to us) that only .95 per cent. of the typhoid cases had occurred among drinkers of the city water, whereas 4.6 per cent. were among drinkers of the company's water. He is inclined to blame not so much the St. Lawrence water as the position of the company's intake.

Mr. F. H. Pitcher, chief engineer and manager of the Water and Power Company, considers that their new intake takes pure St. Lawrence water, and that much of the outbreak is due to general unsanitary conditions throughout the city. The company are, however, prepared to install a mechanical filter plant in the near future.

Dr. La Chapelle, the chairman of the Quebec Provincial Board of Health, appears to us to have arrived at the only reasonable and scientific conclusion possible, viz., that the typhoid is due simply to drinking St. Lawrence water which is sewage polluted; and that typhoid will continue in Montreal until the water is delivered purified or some other source of supply is laid on.

We have been laboring at this question for years, said the Doctor, but we cannot set a movement on foot. At the present time we have recommended the city and the company as a temporary preventive measure to disinfect the water with chloride of lime (calcium hypochloride). Temporary disinfecting plant is being installed, and will be working in about fifteen days.

Montreal and its water supply condition may be summed up fairly as the direct product of communal ignorance and easy-going lassitude. The people outside Montreal who read of the typhoid epidemic think more seriously of it than those in the city. The citizens take the outbreak as a New Year's gift. The chairman of the Health Department even won't allow that there is an epidemic.

The newspapers, especially the "Standard," are inclined to view the matter from its serious side as affecting the fair name of the city, and are doing their best to rouse public attention. The "Standard" asks that a commission of experts be formed to report upon the whole position, and especially upon the feasibility of obtaining a good and pure supply from the Laurentian formation by gravitation. We wish every success to those papers which are attempting to raise a spirit of civic responsibility in the people, as until that spirit shows itself manifest we must conclude that Montreal must continue to remain a "Hygienic Disgrace to Civilization."

* Vol. XVI., page 527; Vol. XVII., page 31.