

THE Sanitary Review

SEWERAGE, SEWAGE DISPOSAL, WATER SUPPLY AND
WATER PURIFICATION

THE DOMINION GOVERNMENT AND EVIDENCE OF RIVER POLLUTION.

We have before us a report in the shape of a Government blue book, edited by Dr. P. H. Bryce, chief medical officer, Department of the Interior, dealing with the work done last year by the "Standing Committee of the Senate on Public Health."

The subjects taken up were: "Sewage Disposal," "Pollution of Rivers, Streams and Lakes," and "Public Water Supplies."

It is extremely gratifying to find the Canadian Government is now devoting time and energy to collecting evidence with a view to prospective legislation in these matters.

In the preface we find the remark: "It is necessary to get information and evidence from persons who have made a **life study** of the above subjects."

Those who gave evidence consisted of five medical men and one city engineer, viz.; Montizambert, Bryce, Hodgetts, Amyot, and Starkey (medical men), and Mr. Rust, city engineer, Toronto.

In proportion to the number of medical representatives, the engineering profession was not very much to the front, numerically speaking; and some of us may even question the prefatory suggestion that a city engineer has the time and opportunity to make a life study of the above problems.

We are glad, however, to find that with these five medical men and one engineer "a remarkable unanimity existed in the opinions expressed as to the present unsatisfactory status of legislation affecting public health, especially with regard to these several matters related above. Does not the word "remarkable" as applied to this "unanimity" appear slightly unnecessary when we consider that there exists no Dominion legislation whatever with reference to these particular matters?"

The first two or three pages of the report are taken up by Dr. Bryce in discussing the legal aspects of the British North America Act as it affects the Dominion Government in legislating on health matters. Some doubt appears to exist as to whether such matters should be controlled (legally) only by the Provinces, or whether the Dominion Government has any right to interfere.

The pollution of the Ottawa River by the sewage from Ottawa city is taken as an example of inter-provincial complication. The Province of Ontario may do injury to the Province of Quebec and the laws affecting river pollution may differ in these two Provinces.

Whatever the British North America Act says or does not say, it appears that a general Dominion Act is immediately required dealing with such inter-provincial questions, and with the question of pollution of rivers in general. Not only is this an inter-provincial question,

but it is also an international question. American and Canadian waters are polluted by both nations, and until some international agreement can be arrived at little can be done with many of our rivers and lakes to restrict sewage pollution.

On the question of turning crude sewage into large bodies of water, the "engineer" appears to have been left entirely on his lonesome.

The report states: "This, with an almost unanimous voice, is condemned in the evidence; one gentleman (Mr. Rust), however, stating that this method has hitherto prevailed in most of the cities and towns of North America, and he seems to think, when we consider the purifying effects of "oxidation," "sedimentation" and "dilution," that it may be safely carried out into large bodies of water."

How familiar this glorious trinity of words sound to those who remember the agitation to keep Toronto's crude liquid sewage out of Lake Ontario.

The report goes on: "This gentleman does not, however, explain how the neighboring towns are to be protected, and his views were combatted by the following opinions from other evidence."

The "lonesome engineer" is then completely sat upon and vanquished by one of the five medicos, who explains at some length that chemical contamination may come and chemical contamination may go, but microbes go on for ever.

Dr. Starkey states: **These pathogenic organisms unfortunately live so long that they may be carried far.** . . . They may be washed down into streams and lakes, so that **none of these, in inhabited districts, are safe sources of water supply.** What a sweeping, general, inclusive, conclusive, broad, exact and scientific statement this is! The "lonesome engineer" must have felt very lonesome, indeed.

But let us get on. "Assuming the necessity for sewage purification, the methods to be adopted are discussed at length in the evidence. It is stated: "We can devise a scheme to get rid of them all (microbes)."

The above is an exact quotation from the report, including microbes and everything.

Earle Bernard Phelps will open his eyes in astonishment when he reads that these five medicos and one "lonesome engineer" have solved the problem of the sterilization of sewage effluents. "Phelps," the foremost world's expert in disinfecting processes as applied to sewage, spends years in obtaining data and results that point to a possible bacterial removal of 98 to 99 per cent. by chlorine methods. Ten thousand bacteria per c.c. left out of every 1,000,000 per c.c. in the crude sewage. The Canadian Senate Commission at one session by discussion only "get rid of them all."

That's the way to do things.