

*By the Chairman:*

Q. If you purified the sewage in the first place before going into the water, would not that aid in getting pure water?—A. In that case you would have to treat a great quantity. There are cases where that should be done, but, generally speaking, it would not be necessary. It is cheaper, more direct as a practical proposition, and more effective to take the water that is wanted for domestic purposes and thoroughly filter and sterilize it than to treat the whole sewage.

Q. Take the City of Ottawa, for example. Your argument would be that the city could safely and more cheaply provide proper treatment for the water by filtration. What would you say about the municipalities along the river?—A. Take Hawkesbury and Ottawa and add them together. It would be cheaper for Ottawa to pay for the filtration of Hawkesbury if it is responsible for it. The quantity of sewage is so small, and the dilution so tremendous that it would be cheaper for them to do their own filtration. That is looking at it in a broad way. It would have to be settled in each place, and, speaking in a general way, it would be cheaper and safer for these different places to filter their water.

*By Mr. Murphy:*

Q. Cheaper than what?—A. Cheaper than to compel Ottawa to completely sterilize its sewage for the benefit of these small towns. As to who should bear the cost, that is another matter, but as a practical proposition it is vastly cheaper and safer to the country that each place should do its own filtration.

*By the Chairman:*

Q. I gather from what you say that we can still continue to deposit the sewage of our great cities into the rivers and lakes and depend for pure water entirely upon filtration?—A. Broadly speaking, yes. In the case of Lake Ontario, the St. Lawrence and Ottawa Rivers, certainly.

*By Mr. Northrup:*

Q. Can we do that in the case of the Thames in Ontario?—A. The water below the waterworks in London is pretty bad. That is a case that would have to be considered. The Thames is a flat river, with very little fall. There may be cases where it would be proper to require some purification of the sewage to at least get rid of the sludge.

Q. In other words, each watershed would require its own peculiar treatment. A. Precisely. It would depend on the locality. I might say that we had very little time to study this question with relation to the question that you might put to us, as it was not until a day or two ago that we had any idea we should be required to come here. What has been clear in my mind for a long time is that we should have some Federal authority to control this matter. Our conditions are so complicated. For instance, the Ottawa river is an interprovincial one and the St. Lawrence is an international river, and it seems to me that we should have some body created by the Federal government to deal with the whole matter, just as the railway commission deals with transportation problems. There should be some body of that sort and then perhaps some sub-division whereby the local bodies could deal with their own matters in a more detailed way, but surely the first thing would be to see that the water supply taken into the waterworks is of the right sort, and that no waterworks should be made or continued to be used without the sanction of some board of health which should be created for that purpose, with strong powers. Such a board ought to be very carefully constructed, because conditions are such that it would be largely a matter of discussion as to the application of their powers. For instance, McGill University has a professor of hygiene, whose business it is to study scientific questions of bacteriology, and such a man ought to be on the board, associated with the engineers. The duties of the