Data man

about equal them in area. And yet, with all this density and its accompanying poverty, out of both of which you may read disease, the typhoid rate in none of them is as great as is that of Canada.

Is it not time we were alive to our responsibilities and made haste to put our house in sanitary order? This glorious Canada of ours possesses natural advantages in the way of everlasting reservoirs which we should at once take steps to purify and keep pure as long as time will last —a national heritage which it is our duty to hand down to posterity as pure and wholesome as it is possible to make and maintain it. Certain it is we are not doing it by our present methods and laws. It can, however, be done by efficient laws, by better laws than we have as yet seen fit to enact, the enforcement of which should, in the main, rest with some centrally well-organized and wisely administered Federal department, co-operating with each of the various Provincial Departments of Health.

A study of the map* of the watersheds of Canada indicates the interprovincial and international character of some of the more important watersheds of the Dominion. The Provinces of Nova Scotia and Prince Edward Island, by reason of their insular positions, are exceptions to the general rule, while British Columbia is an example where failure to protect its own rivers might be a menace to the States lying to the south. Alberta, on the other hand, is an example where, owing to the flow of the rivers easterly through Saskatchewan, the difficulties are local and interprovincial.

TABLE C-TYPHOID FEVER.

Death Rate of Nine Countries per 100,000 of Population.

		Rate per
		100,000 of
Year Group.	Countries.	Population
1901-1905	Scotland	6.2
	Germany	7.6
1901-1904	England and Wales	11.2
	Belgium	16.8
	Austria	19.9
	Hungary	. 28.3
	Italy	. 35.2
LOOT (census)	Canada	. 35.5
1901-1904	United States	*46.0

* Estimated.

In Saskatchewan and Manitoba the questions are also local and interprovincial; while in Manitoba, owing to the fact that the watersheds of the Assiniboine and Red Rivers lie largely to the south of the international boundary line, chiefly in North Dakota and Minnesota, the problem assumes an international aspect. The pollution of the Great Lakes is to a great extent international, since they receive a portion of their waters from the States of Minnesota, Michigan, Ohio, New York, Vermont, New Hampshire and Maine. The pollution of the Ottawa River, the interprovincial boundary between Ontario and Quebec, makes the question of pollution of the watershed of that river of interprovincial interest, the chief sources of contamination being in the former Province. In New Brunswick the question is local, but chiefly international, owing to the fact that a portion of the watershed of the St. John River lies within the State of Maine.

It is not contended that the dangers at present existing in the various Provinces are identically the same either in degree or in fact, but there exists the same underlying prin-

* Map No. 33 in the Department of the Interior's Atlas of Canada, 1906, is very satisfactory.

ciples in that provincial legislation alone will not solve the difficulties. It requires some other authority, viz., that of the Federal Government, to deal with them, particularly those of an international character. It will be for the Commission of Conservation to investigate the various watersheds, collecting all available data with the assistance of the several provincial and local health authorities, in order correctly to estimate the character, quantity and variety of the various pollutions at present existing, and to ascertain their exact point of discharge and their bearing upon the present sources of water supply of towns and cities, both near and remote from the point of discharge; and further, to consider and recommend ways and means for the abatement of these nuisances, having always in mind that the health of the citizens of this country is paramount, but ever remembering the necessity for the fostering of agriculture and the development of manufactures.

DOUBLE TRACKING THE C.P.R. ST. LAW-RENCE RIVER BRIDGE.

This bridge was built in 1886 under the direction of R. Alexander Peterson, Chief Engineer of the Canadian Pacific Railway and C. Shaler Smith, St. Louis, consulting engineer. The contractors for the substructure were Reid & Fleming, and the Dominion Bridge Co. for the superstructure. It was a single track structure about 3,500 ft. long, supported on 13 river piers, 2 land piers and 2 abutments. It contained about 4,000 tons cf steel.

In the 24 years that have elapsed since its inception, the traffic and the weight of locomotives have increased so tremendously that a bridge of greater capacity is required.



View showing Material Track.

This is to be accomplished by extending to twice their present length, all of the existing piers and abutments, as well as building 4 new piers between five of the old ones on the Highlands side of the river. On these will be supported the steel work for the new double track bridge.

The contract for the substructure was awarded to The Foundation Company, Limited, of Montreal, P.Q., who started work in July 1910. A skilled organization and a large amount of plant was immediately placed upon the work by the contractors, and the work has been moving ahead rapidly ever since. The work was planned to be executed during the open weather of 1910 and 1911. That portion for this year included, extending 5 of the existing river piers, 2 land piers and one abutment, as well as build-