

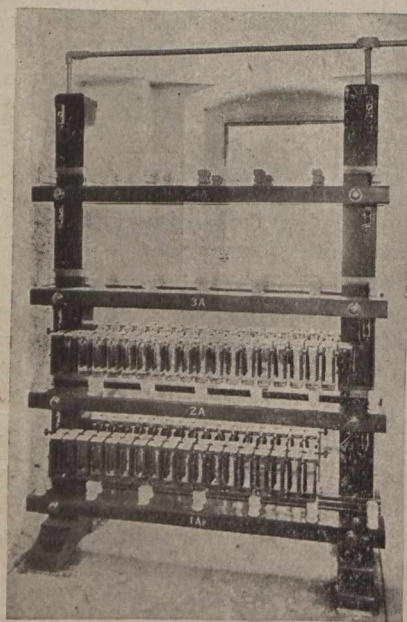
polluted by raw sewage. The use of water filters should be only an additional factor of safety in an operation which should begin with the proper treatment of sewage. A well-known Canadian authority on municipal engineering has advanced the statement that, 'if the domestic sewage, which now discharges, by means of underground sewers, directly into streams, rivers and lakes, without any form of treatment, were treated to the extent of the elimination and destruction of the sewage bacteria, at least fifteen hundred lives could be saved annually in Canada from death by typhoid alone.' "

The accompanying table shows the number and type of sewerage systems in Canada.

LACHINE'S FIRE ALARM SYSTEM.

THE city of Lachine, P.Q., has just completed the installation of a new storage battery central office equipment for use in connection with their fire alarm service. The new office, although not as large as some, is one of the best that has ever been installed in Canada.

The office contains the following apparatus: One 2-circuit storage battery switchboard; one motor-generator set; one specially insulated storage battery rack; eighty cells of storage battery, 6 ampere-hour capacity.



The switchboard is a combination board having facilities for both charging and discharging on the same set of panels, and is so designed that should it ever be necessary to add additional circuits to the present fire alarm system, this could be done by simply adding another panel to the present set of two. In other words, the switchboard is built on the unit principle, the main charging panel being designed to

take care of as many as four unit panels of two circuits each.

The storage battery rack is designed to give the greatest insulation possible, both between jars and between jars and shelf, the well-known principle of using glass rails and two-piece porcelain insulators being employed. This rack is shown in the above illustration.

The storage battery jars used are of special design, in that they are arranged with special grooved bottoms so that they can be set and held securely on the glass rails and that they have lugs cast on their sides for the purpose of holding the jars apart and preventing any acid, which might possibly creep over, getting between the jars and short-circuiting them.

Mr. Gadbois, the city electrician, has also employed a specially designed porcelain cover which will effectually prevent the acid boiling over the jar when charging.

The equipment was manufactured by the Northern Electric Company, Limited, Montreal.

LETTER TO THE EDITOR.

International Joint Commission.

Sir,—On my return from Buffalo and Detroit, where the International Joint Commission has been engaged since June 21st, hearing representatives from the various cities along the Niagara Frontier and the Detroit and St. Clair rivers, on remedies for the pollution of these international waters, recommended to the commission by our consulting sanitary engineers, I find *The Canadian Engineer*, June issue, containing your review of Professor Phelps' report. I have carefully read the review of this report and congratulate *The Canadian Engineer* on its eminent fairness and intelligent comprehension of the subject, shown in the article; and as a member of the Commission I also wish to thank *The Canadian Engineer* for this and for previous articles published on the work of the International Joint Commission.

In this connection, permit me to say that as a member of the commission, constituted as we are by the Treaty, judges for both countries, our work (like that of the work of the civil courts of the respective countries) is not sensational and therefore receives little or no attention from the press, especially in the United States. The attention, therefore, which *The Canadian Engineer* has paid to the commission and its work has been very helpful in calling to the attention, especially of scientific and technical men, the importance of the fact that these two countries have a tribunal that is dealing with and determining international questions peacefully, successfully and in perfect harmony.

Recently the commission has had to deal with the extraordinary international situation growing out of the unprecedented flood conditions in the Lake of the Woods and Rainy Lake watersheds. The regulating works at the outlet of the lakes and rivers in this watershed, with the exception of the Norman Dam at Kenora, are owned and controlled by private interests. Although the precipitation in the drainage area of these waters (26,750 square miles—about equally divided between Canada and the United States) since the first of November last, to May 1st, was greater than in any year since 1873, it is the opinion of many that had these dams and other controlling works, including the dam at Kenora, been under international control, much of the loss and damage incident to the extraordinary high water might have been avoided.

JAMES A. TAWNEY,

Member, United States Section,
International Joint Commission.

Winona, Minn., June 29, 1916.

The International Paper Co., of New York, has plans made for a 200-ton newsprint mill, to be erected in Canada.

According to statistics compiled jointly by the American Wood-Preservers' Association and the Forest Service at Washington, D.C., there was treated at 102 plants in the year 1915 a total of 141,858,963 cu. ft. of timber. To treat the 141,858,963 cu. ft. of timber shown for 1915 required 80,859,442 gal. of creosote, 33,269,604 lb. of zinc chloride and 4,899,107 gal. of all other preservatives, which included crude oil, coke-oven tar, refined coal-tar, carbolineum oils, etc. Of the creosote used in 1915, 54 per cent., or 43,358,435 gal. (41,333,890 gal. coal-tar creosote and 2,024,545 gal. water-gas-tar) was domestic, and 46 per cent. or 37,501,007 gal., German and English oil. In 1914 the larger consumption of creosote was met by imports, the falling off in 1915 being explained by the scarcity of foreign supplies due to the European war. The imports of creosote into the United States in 1915 (37,501,007 gal.) were 13,806,720 gal., or nearly 27 per cent. less than the previous year.