

States and the Dominion of Canada. Through the powers conferred upon this Commission by the treaty with Great Britain of 1909 the representatives of the United States and those of Canada may take up questions relating to the development and use of the waterways between the two countries.

The primary work of the Commission is in relation to the water boundary, not as to its location, but as to its uses. There are many plans for the use of these international waters other than for navigation, but there has been no competent authority for granting permits and at the same time properly protecting the rights of the people on either side of the international line.

There are pending schemes for developing water power in the St. Johns River, which forms the international boundary between Maine and New Brunswick; for the development of the Richelieu River; for the improvement of navigation and the development of water power in the St. Lawrence River between New York and Ontario; for the sanitary canal around the Niagara Falls on the American side; for the development of water power in the Rainy River between Minnesota and Canada; also for the development of water power in the Lake of the Woods, and uses of the water in the St. Mary River and Milk River in Montana and Saskatchewan for irrigation purposes.

There are smaller projects, but these larger schemes will furnish ample work for the Commission, and, if settled, ample justification for the creation of such an international court of arbitration.

This Commission provides for direct negotiations between Canada and the United States on all questions relating to the water boundary, and opens a way for the settlement of all other questions that may arise by the reference of these questions to that Commission.

The personnel of the Commission is as follows: The Canadian branch, Sir George Gibbons, of London; Aime Geoffrion, K.C., of Montreal, and A. P. Bornhill, St. John, N.B.; the American branch, former United States Senator Thomas H. Carter, of Montana; ex-Representative James A. Tawney, of Minnesota, and Frank S. Streeter, of New Hampshire.

It seems rather a pity that the engineering profession have not been represented on the Commission, as many of the matters with which they will deal will be matters in which engineering knowledge will be requisite. However, the work of the Commission should be very beneficial to both countries.

THE ENGINEER AS A SANITARIAN.

The idea that the engineer has responsibilities other than economic considerations in work submitted to him by clients is one that does not often strike us. In a paper read before the Cincinnati Engineers' Club Mr. Paul Hansen endeavors to show that higher aims than utilitarian consideration and desire to please one's clients should govern the engineer's designs. His paper deals only with the civil engineer, but his deductions apply equally well to other branches.

Water supply development, the installation of sewerage and sewage purification, city wastes disposal and

street cleaning, the improvement of general health conditions by swamp drainage and other engineering work, and the sanitation of construction camps are a few of the different classes of work which demand the judgment of the engineer as a sanitarian.

Naturally, problems on water supply development take first place, for the reason that water supplies are of prime importance to communities of even moderate size, and because they generally involve the expenditure of very large sums of money. Again, of all engineering projects involving sanitation, water supplies are of the greatest significance to the health of communities, and, therefore, call for the staunchest attitude on the part of the engineer in the matter of insuring the purity of the water as delivered to the consumers.

No water supply system should be installed or undertaken without the most thorough and painstaking preliminary investigation, and, if the entire feasibility of the project is not fully demonstrated by such investigation, no engineer is warranted in sanctioning its installation.

With the increasing density of population, water supplies are becoming harder to control and provide. With the consideration of sewerage and sewage disposal the engineer must consider the matter of preventing objectionable contamination of streams. It in time becomes out of the question to maintain streams in their original purity, but it must be the constant care of the engineer that no stream should be so polluted as to render it unfit for a public water supply.

The matter of city wastes disposal and street cleaning has developed into a new field for the activities of engineers in which sanitary considerations are involved. The time will come soon when no large city will consider the adoption of methods of city wastes disposal and street cleaning without first securing engineering advice. Here are involved some of the most complex problems with which an engineer is likely to come in contact. All of the important developments along this line have been brought about primarily by an engineer, and it is within their province to use their influence to prevent the continuous use of primitive methods of disposal—methods which will lead to the spread of disease and contamination of air and water.

Another problem which engineers are solving in their capacity as sanitarians is the proper conduct of construction camps. A little foresight and intelligent planning, with the expenditure of very little additional money, will render construction camps both sanitary and attractive. For that reason, even on small contracts, the engineer should insert such clauses in his specifications as will insure the provision on the part of the contractor of proper sanitary conveniences for his laborers.

Along the above lines there are broad opportunities for the activities of engineers in dealing with problems that have special sanitary significance, and it may be said that the engineer here has a responsibility on himself other than the mere utilitarian ideal of economical design, for he must also consult the humanitarian aspect of each individual problem if he is to follow the highest principles of his profession and the moral dictates of his own conscience.