

\$1,500,000 ; but later calculations indicate a reduction in this amount. In any event however the magnitude of the loss both in human lives and property, as well as the importance of the undertaking to the industrial development of the country, have given to the disaster the aspect of a national calamity. It was expected that the bridge would be open to traffic in about two years' time, but it is now estimated that in consequence of this event four years will be required to complete the work, which will be proceeded with.

The bridge has been in process of construction since 1900, in October of which year the corner stone of the masonry substructure was laid. The need of a bridge to cross the St. Lawrence in the vicinity of Quebec has been felt for many years past, and in 1897 a company was re-organized under the name of 'The Quebec Bridge Company' to undertake the work, substantial aid to the enterprise being granted by the Dominion and provincial Governments. The masonry having been completed at a cost of about \$1,400,000, work on the steel superstructure was begun in 1904. The total cost of the bridge when finished has been estimated at between \$7,500,000 and \$8,000,000. Up to March 31, 1907, the total expenditures amounted to \$4,415,598.

When completed the bridge will be in many respects the most remarkable structure of its kind ever erected. The cantilever span will be the longest in the world, viz., 1,800 feet, while the total length of the bridge will be 3,300 feet. The main span will be at a height of 150 feet above the water, while the tops of the cantilever will be over 400 feet high. The bridge is designed to carry two lines of railway, two trolley lines, two highways and two sidewalks for foot passengers¹.

On August 30 a Royal Commission of engineering experts (see page lv) was appointed to inquire into the causes of the disaster. The commissioners commenced taking evidence at Quebec on September 9, and they held subsequent sittings at Ottawa, New York, Phoenixville and Philadelphia. In their report, issued on March 9, 1908, they discussed exhaustively the circumstances connected with the designing and construction of the bridge, and their conclusions are expressed in a series of fifteen findings. The essence of these findings is that the collapse was due to errors of design on the part of the two chief engineers engaged in the building of the bridge, errors however which cannot be attributed to lack of common professional knowledge, neglect of duty or a desire to economize. They state that the ability of the two engineers was tried in one of the most difficult professional problems of the day and proved to be insufficient for the task. The commissioners also find that the work of construction was carried on with inefficient engineering supervision at the bridge itself, and that the loss of life on August 29 might have been prevented by the exercise of better judgment on the

Quebec Bridge Company.

Description of the bridge as completed.

Report of Royal Commission.

Cause of the collapse.

¹ From the Labour Gazette, September, 1907, pp. 317-318.