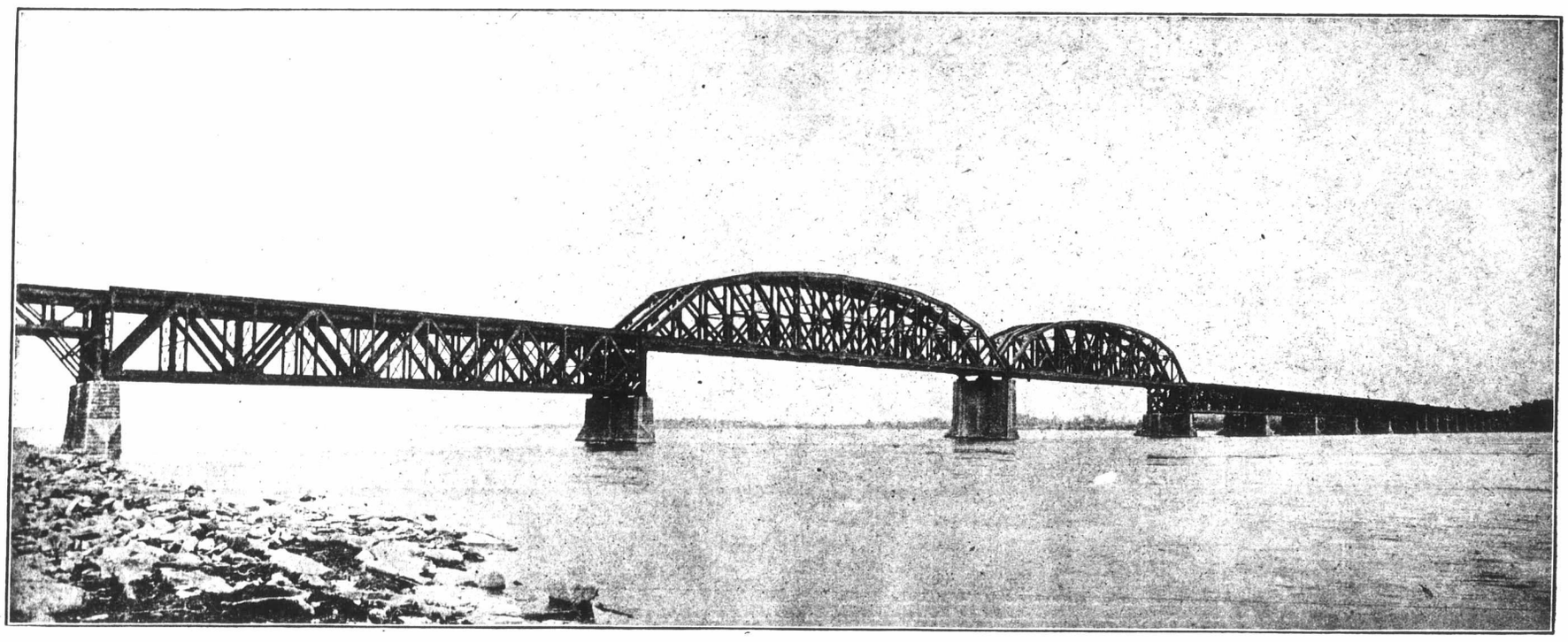
Bridges in Quebec

The Province of Quebec boasts of some of the biggest bridges in the world. The largest include the Lachine Bridge, crossing the St. Lawrence at a point near Montreal; the Quebec Bridge, crossing the same river near Quebec City, and the Victoria Jubilee Bridge, crossing the St. Lawrence to St. Lambert.

The Victoria bridge was opened in 1898, replacing the old tubular bridge, which was known as the Vivtoria Tubular Bridge. The new bridge was constructed around the old bridge, with little interference of traffic. It is one of the largest in the world, being a mile and a quarter in length, with 25 spans, 242 feet in length (centre span 330 feet), resting on 24 piers. The bridge is 65 feet wide with double railway tracks, electric trolley tracks and a broad driveway. Its cost was two million dollars.

The Quebec Bridge, in its general dimensions, as well as in the enormous size and weight of the structural members composing it, surpasses any other structure of the kind ever erected. The one bridge structure in the world that approaches it in magnitude is the famous Firth of Forth Bridge in Scotland, the main channel span of which is nearly 100 feet shorter than that of the Quebec Bridge. Both structures are of the cantilever type. The channel span of the Quebec Bridge, measured between centres of towers is 1,800 feet. The design and fabrication of the steel for the structure therefore presented engineering problems for which no precedents existed, and the first attempt to build the bridge, made by a private company, resulted in 1907 in a collapse of the structure in which many lives were lost. Following that catastrophe, the Dominion Government took over the work, and a year later undertook the construction of the bridge.

The present bridge is on the same site as the original structure, but owing to an increase of 21 feet in the width between trusses and to a considerable increase in the weight of the superstructure, new piers were necessary, and these were built immediately south of and adjacent to the original piers. The two main piers alone contain approximately 60,000 cubic yards of masonry, and cost in the neighborhood of $1,500,000. One of these piers goes to a depth of 60 feet below the bed of the river, and the other to a depth of 80 feet. In the erection of the bridge the anchor arms, which lie between the main piers and the shore, were constructed on steel false work, while the cantilever arms are being built out over the river without falsework by the cantilever method. Completion is being hastened despite the second accident which occured a few weeks ago.



THE LACHINE BRIDGE.