

Manilla rope on traveller, 13 miles of 1-inch, 1½-inch, 1¾-inch, and 2-inch.

Grade of one per cent. on each end, connected at centre by vertical curve, 1,125 feet long.

Main piers were built of concrete, faced with massive rock-faced granite, were sunk with pneumatic caissons 150 by 49 feet, and 25 feet high. The tops of these piers measured 133 by 30 feet, and contained 35,000 cubic yards of masonry.

Anchor piers, built of concrete, faced with granite, were 30 by 111 feet at the base, 56 feet high from bottom

examine the fallen structure and to make a report thereon. The gentlemen comprising this body were Henry Holgate, Prof. J. G. G. Kerry, of McGill, and the late Dr. Galbraith, of Toronto University.

Following this report, the government decided to reconstruct the bridge, and in 1908 appointed a board of three engineers for that purpose. The commission named was composed of H. E. Vautelet, chairman, of Montreal; Ralph Modjeski, Chicago, and Maurice Fitzmaurice, chief engineer of the County Council of London, England. Each of these was a very strong man, both in his per-

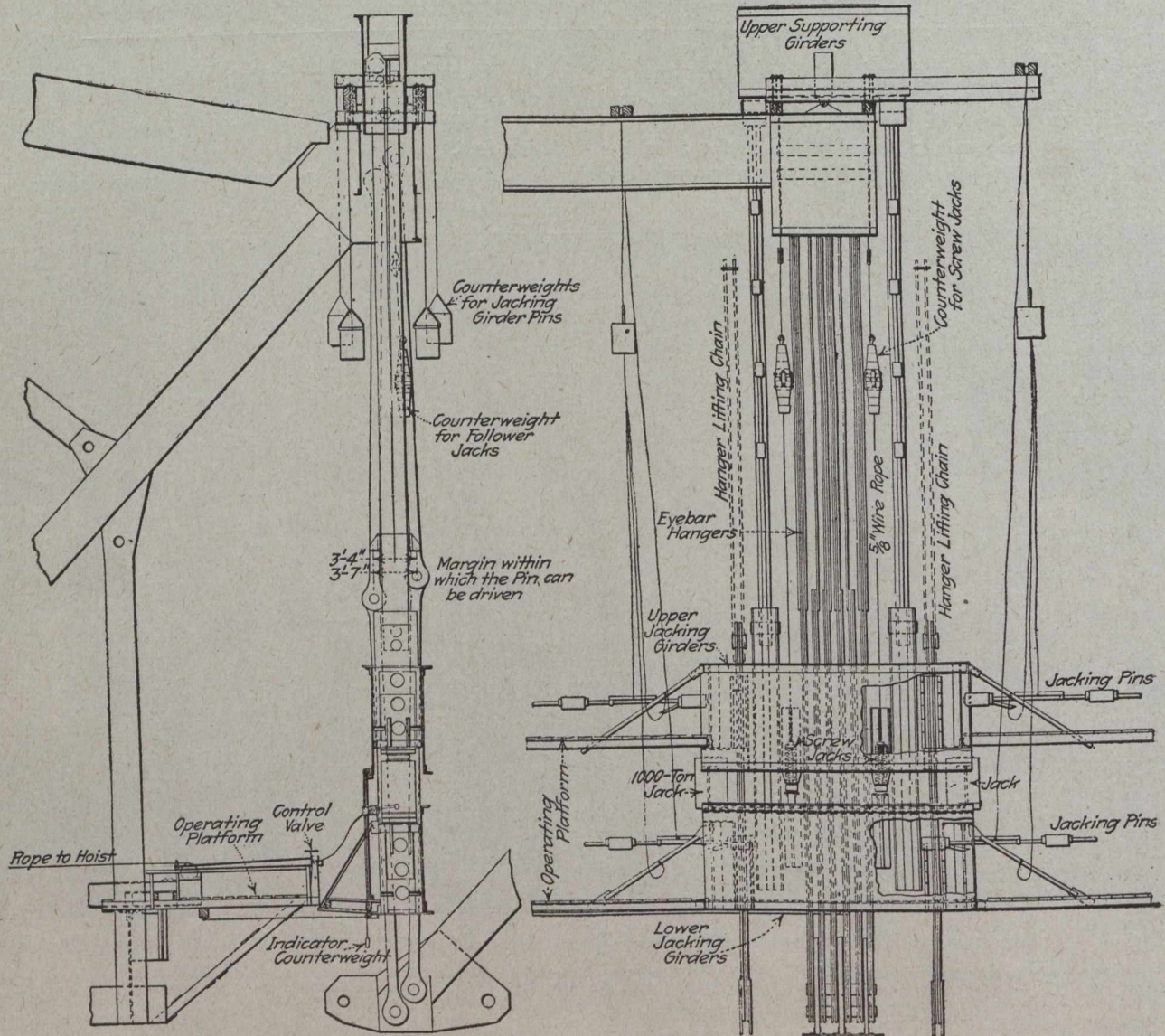


Fig. 2.—Jacking Equipment Used for Hoisting Span into Position, Showing Counterweights for Jacking Pins, etc.

of anchorage metal, measured 24 feet by 105 feet at the coping, and contained 14,400 cubic yards of masonry.

This location is at the narrowest point on the St. Lawrence River between Montreal and Quebec, the width at mean water level being about 2,000 feet. The water at this point has a maximum depth of about 200 feet and a current at ebb tide of about 7 miles per hour. The Bridge and Railway Company awarded contracts in 1900 for a bridge of the cantilever type, having a main span of 1,800 feet. Work was started and proceeded until the year 1907, when about half the superstructure then collapsed.

The Present Bridge.—After the accident which destroyed the first bridge a commission was appointed to

sonality and in his profession. After studies lasting about a year, Mr. Fitzmaurice resigned.

This board made very exhaustive studies of various designs, including suspension and cantilever bridges, and finally decided, for good and sufficient reasons, that the cantilever type of bridge was the most satisfactory and economical kind of structure for such a crossing. It also decided that the bridge should be much wider and designed for heavier loading than the former bridge, that the same length of main span should be retained and that it should be built at the same site.

Tenders were received from one company in Germany, one in England, two in the United States and from the St. Lawrence Bridge Company. In addition to