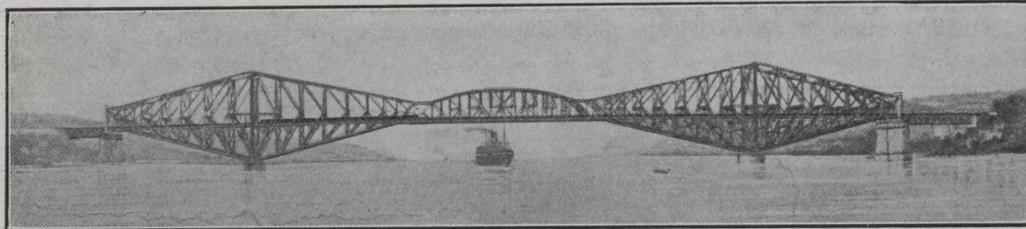


In case of break-down on the power line the contractor has provided a complete generator plant located on the compressor house. It is equipped with a 30-kilowatt General Electric Company generator capable of operating 16 arc lights and 100 sixteen-candle-power incandescent lights.

The concrete masonry plant is situated at the foot of

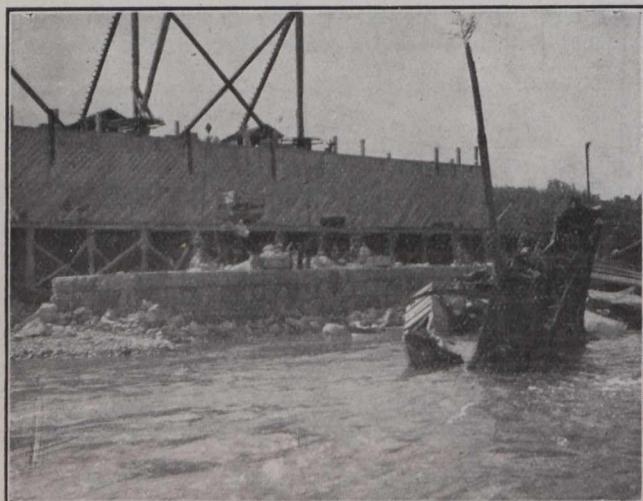


Sketch of New Quebec Bridge
as it will appear when finished).

cliff which rises almost perpendicular for 125 feet. Half way up the cliff a No. 5 and No. 8 rock crusher is situated. The stone is quarried directly on the brow of the cliff, and is so situated that one derrick can pick up the buckets of stone from the quarry and dump it into the chute leading to the crushers. Coming from the crushers the broken stone is led through a revolving screen, thence through another chute to a hopper opening onto the mixing platform. Two Smith mixers are used, each having a capacity of $1\frac{1}{2}$ cubic yards. The sand is brought to the brow of the cliff in cars and dumped into a large hopper. A chute leads from this hopper directly to the mixing platform. The coal is brought to the lower level in the same manner and is carried to the boiler house in side dump cars.

For the convenience of the "sand hogs" the contractor has erected a bunk-house adjacent to the work with sleeping accommodation for about 100 men. A dining-room is run in connection, which will accommodate about as many more.

The south main pier, when completed, will contain about 35,000 cubic yards of masonry. For a height of 75 feet above rock, or some 6 feet below low water, it will



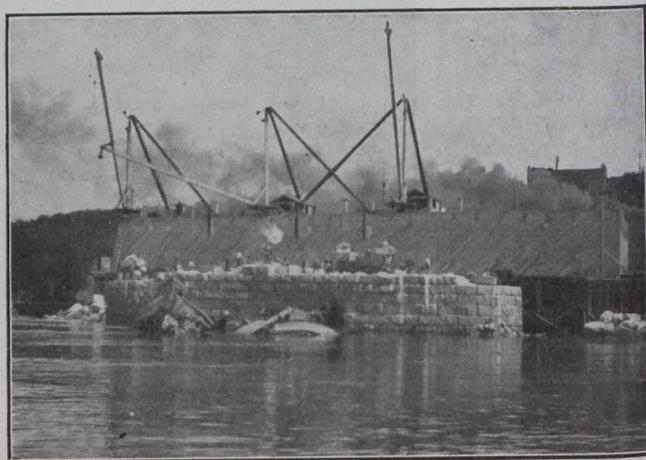
The Work of Demolishing the Old Main South Pier.
(A portion of the wreck of the fallen structure is seen in the foreground).
August 25th, 1911.

consist of a solid mass of concrete the full size of the caisson.

From this point the shaft of the pier will start having a solid granite face and backing of concrete. The upper 18 feet will be of solid granite.

The concrete used for the main body of the caisson is composed of one part cement, two and one-half of sand, and five of broken stone. For sealing the working chamber a somewhat richer mixture is specified, viz., one of cement, two and one-half of sand, and four of stone. Displacer stones one-half a cubic yard and over are used in the concrete, no two stones to be closer than 9 inches vertically or 12 inches horizontally.

The work is under the supervision of a board of engineers, appointed by the government, of which Mr. C. N. Monsarrat is chairman, having associated with him Mr. Ralph Modjeski, of Chicago, and Mr. C. C. Schneider, of Philadelphia. Mr. J. D. Wilkins is resident engineer for the board at Quebec, and has charge of all inspection. Messrs. M. P. and J. T. Davis, of Quebec, have the con-



The South Caisson in Place, Behind the Old South Main Pier.
August 10th, 1911.

tract for the masonry, Mr. S. H. Woodard, of Noble and Woodard, consulting engineers, New York, being superintending engineer for the contractors in charge of the entire work.

NICOL HALL, A NEW ADDITION TO QUEEN'S UNIVERSITY.

On Wednesday, October 16th last, there was formally opened for inspection an addition to the many handsome buildings of the University that will in future be known as Nicol Hall in recognition of the many philanthropic deeds of Prof. William Nicol.

This building will be occupied by the mining and metallurgical departments and the basement of the building is given over to the fire laboratories, gasoline furnaces, gold and silver work, balance-room with chemical laboratories, metallurgical laboratory, equipped with roasting furnaces, blast furnaces and accessory appliances, etc.

On the main floor there is a large classroom, with accommodation for eighty students; there are research laboratories, and Prof. S. F. Kirkpatrick's room. The halls are very bright and it is the intention to use them for a museum.

The second floor contains a drafting-room, lecture-room, with the office and library of Prof. John Gwillim.

The third floor has not been fitted up as yet.