



Portal, Looking North

car erected the balance of the south half of the crossing as a cantilever from L-12 to L-20. The riveting followed the erection very closely so as to take care of the erection stresses.

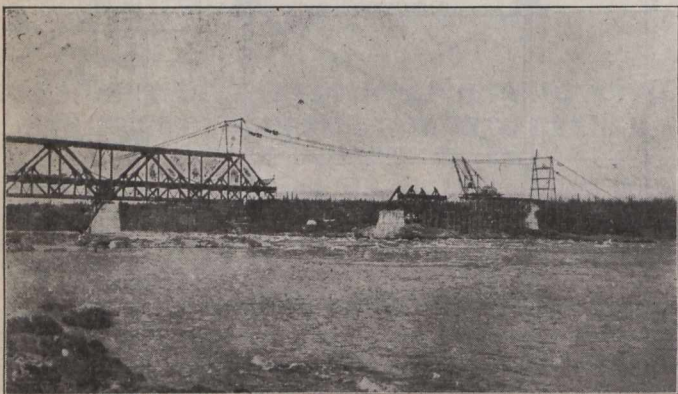
A cableway tower was then erected on the north shore, materials for same being hauled by team over the ice at a point some distance from the crossing. A short cableway bent was also erected on the completed truss at U-18 and a double cableway made of two $2\frac{1}{4}$ -in. diameter cables was erected on these towers and securely anchored at both ends. These two cableways were operated by two



South Flanking Arm in Place; Cantilever Erection

as to bring the trucks level with the top chord of the span, and the balance of the steel for the north anchor arm completed, going forward from U-2 to U-12. After riveting this anchor arm the cantilever portion of the truss between panels 12 and 20 was easily completed with the traveller running out on the top chord.

The whole of the south half of the bridge was then jacked forward on the permanent pier member rollers and a coupling made at L-20. After this joint was riveted jacks were applied at the two extreme ends of the bridge, points L-O north and south ends. These ends were raised

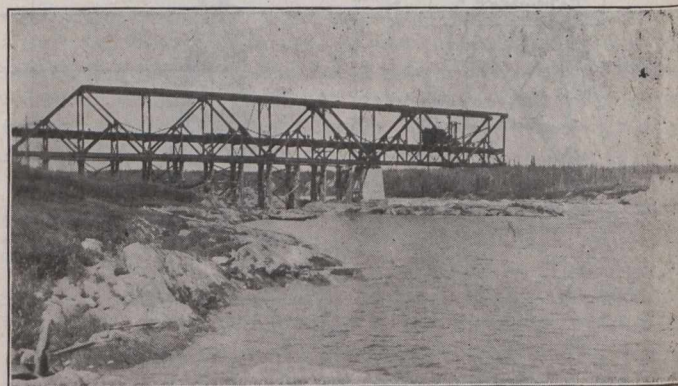


Overhead Cable. Tower is Shown in Distance

double-drum hoisting engines, and carried a flexible equalizer designed for lifting fifteen tons. The materials for the north end were then brought out on cars to the extreme end of the cantilever truss on the south side, and materials transferred by means of this cableway to the north side.

The staging for the north anchor arm was first erected and on this a light double-boom traveller assembled.

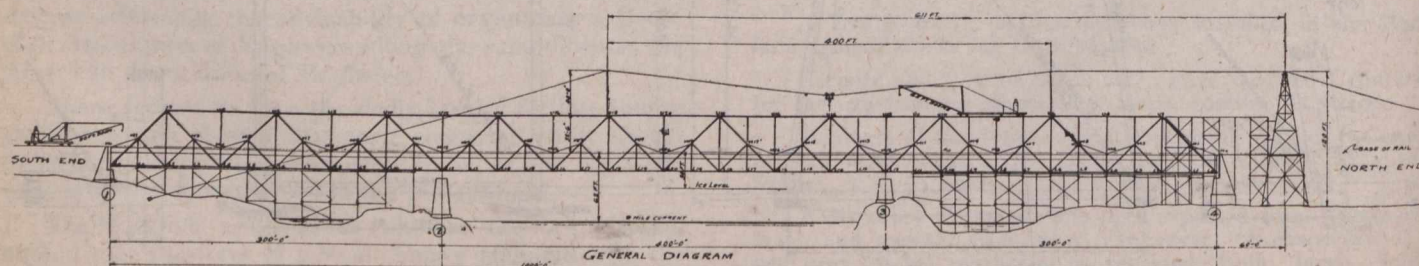
The steel work was then transferred and placed with this traveller, starting at L-12 and erecting the lower half of the anchor truss, backing up with the traveller until L-O was reached. The traveller was then jacked up so



South Half of Bridge Under Way

until the joint at U-20 was closed, after which the four corners were raised simultaneously until a load of $118\frac{1}{2}$ tons was registered on each of the four jacks, which fixed the distribution of the dead load stresses throughout the entire structure.

The entire work was under the general supervision of A. W. Bowden, chief engineer, Department of Railways and Canals, Ottawa. The bridge was designed by W. Chase Thompson, consulting engineer, New Birks Building, Montreal. The superstructure was fabricated and erected by the Canadian Bridge Co., Limited, Walkerville, Ont.



Kettle Rapids Bridge—Erection Diagram