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LACHINE CANAL DOUBLE TRACK SWING BRIDGE

THE LONGEST PLATE GIRDER SWING SPAN OF ITS KIND RECENTLY COMPLETED FOR THE C.P.R. NEAR HIGHLANDS, P.Q. — NOTEWORTHY RAPIDITY OF CONSTRUCTION—SOME UNUSUAL ENGINEERING FEATURES.

[NOTE:—In *The Canadian Engineer* for April 29th, 1915, a brief description appeared of the new C.P.R. bridge opened for traffic over the Lachine Canal on April 16th. Several photographic views of the bridge showing it in its open and closed positions were also given. The following article, prepared for this journal by Mr. P. B. Motley, Engineer of Bridges for the Canadian Pacific Railway Company, deals more in detail with its design and erection.—EDITOR.]

THE new double-track bridge which has been recently completed, replaces the old single-track bridge built in 1887. The original bridge consisted of one 240-ft. through truss span, and a 40-ft. deck plate girder span on the south end, to accommodate the highway,

double-track bridge and the double track work between Montreal and Brigham Junction a year or so ago, however, left this bridge as the last remaining single-track structure, thus necessitating what is known as a "gullet track" or "gauntlet" over it, and slight consequent delay to trains owing to the converging tracks at both ends of the structure.

Last autumn, the Canadian Pacific Railway management decided on the replacement of the structure with a double-track bridge suitable for modern requirements, and the plans which were prepared embody some features which are considered to be unique in bridge engineering.

It was found possible to design a double-track swing bridge in such a manner as to utilize the old pivot pier,

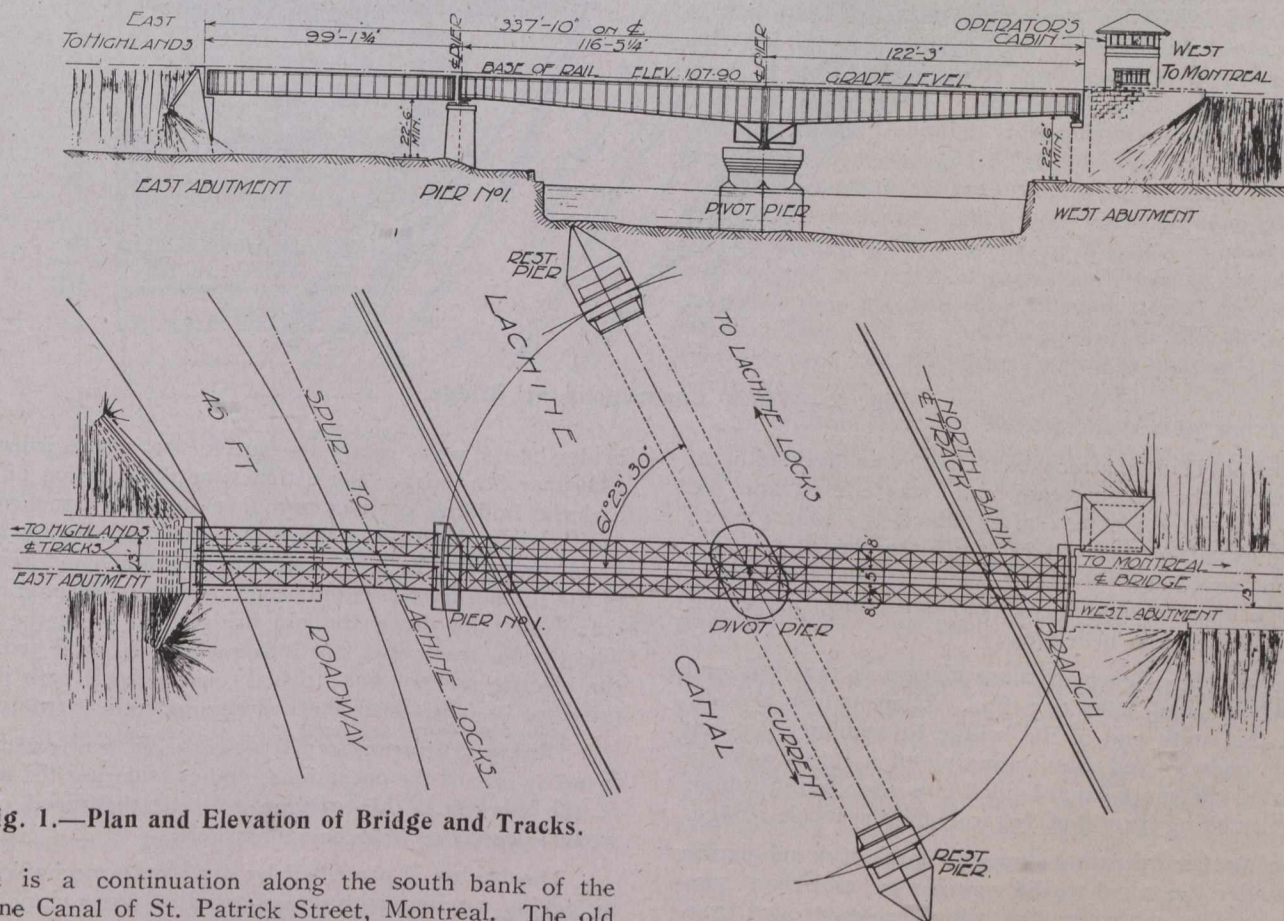


Fig. 1.—Plan and Elevation of Bridge and Tracks.

which is a continuation along the south bank of the Lachine Canal of St. Patrick Street, Montreal. The old bridge was built by the Atlantic & North Western Railway Company to carry its extension into Montreal over the canal, and has since served its purpose without trouble of any kind. The completion of the St. Lawrence River

without decreasing the waterway for traffic on the canal. This is considered interesting as an engineering achievement, in view of the fact that two tracks are accommodated on the bridge instead of one as formerly. This has