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LONDON AND PORT STANLEY RAILWAY

THE FIRST RADIAL LINE OF THE HYDRO-ELECTRIC POWER COMMISSION OFFICIALLY OPENED ON JULY 22ND—A 24.46-MILE ELECTRIC RAILWAY CONNECTING LONDON AND ST. THOMAS WITH LAKE ERIE AND OPERATING UNDER NIAGARA POWER.

ON Thursday of last week the first hydro-radial railway of the province of Ontario was formally opened to traffic by Sir Adam Beck, chairman of the Hydro-Electric Power Commission. All the municipalities of the province were represented at the opening. The line has been under electrical operation since the first of the month and during the three weeks prior to the official event, it had carried 40,000 passengers in addition to its freight traffic.

It is not a new line of railway, being, in fact, one of the earliest built in the province. The project came under consideration, and a company was incorporated to construct and operate it under its present name, in 1853. It was originally provided with 56-pound iron rails placed at 5 ft. 6 ins. gauge. This gauge was changed shortly afterwards to standard 4-ft. 8½-inch gauge to facilitate connections with other railways.

Fig. 1.—Concreting Outfit for Pole Footings.

In 1874 the Great Western Railway leased the London and Port Stanley line for a term of 20 years. It was then that the change of gauge was effected. In 1882 the Grand Trunk Railway System absorbed the Great Western Railway and operated the line under consideration until the completion of the lease in 1894. Then the Lake Erie and Detroit River Railway leased the line and operated it until 1906, when the L. E. & D. R. itself was leased by the Pere Marquette Railway. When the London and Port Stanley lease expired on January 1st, 1914, a temporary arrangement for the operation of the line was made with the Pere Marquette pending the electrification of the line, which the city of London had in contemplation at that time. In fact, the city already had power to equip and operate it as an electric road, and proposed using Niagara power for the purpose. The London Railway Commission was formed to control it. Sir Adam Beck is chairman of this Commission.

An exhaustive study of systems of interurban electrification resulted in the selection of a 1,500-volt direct current system. The overhead system of power supply was adopted, the cables being supported by galvanized structural steel poles, as illustrated. These poles are of triangular design, about 35 ft. in height and are bedded in triangular concrete bases, which are 7 ft. deep and project 1 ft. above the ground. The general type of pole is made up of three 60-degree angles with flanges 3/16 in. thick and tied together by batton plates 4½ ins. wide and 3/16 in. thick at about 30-inch centres. The cross-arm used is a 5¼-pound 4-inch channel shape with suitable bracing and extends horizontally from the pole at a distance of 26 ft. above rail level. The poles are at 140 and 160-ft. centres on the curves and 180-ft. centres on tangents. They are designed to resist 2,500 pounds tension. As indicated in several of the illustrations, catenary suspension of power cables is employed on the main line. The trolley wire which is at a height of 23 ft. 2 ins. above the top of rail is a 0000 grooved copper wire suspended at 20-ft. centres from a copper catenary cable.

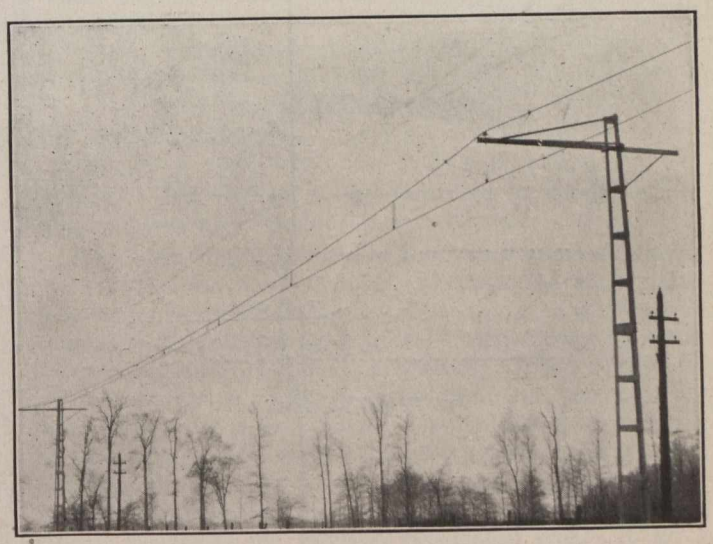

Fig. 2.—Illustration of Arm Support on a Main Line Tangent.