CPR
SCHREIBER
DIVISION

Chapleau Locomotive House Fire

On January 16, the Canadian Pacific Ry. locomotive house at Chapleau, Ont., was damaged by fire, and several locomotives which were in the house at the time were also damaged to some extent. The blaze was discovered at 10.27 a.m., and the town fire department and the C.P.R. fire fighting organization combined to extinguish it by 12.45 p.m. The adjoining machine shop, bunkhouse and Y.M.C.A. building were saved. E. S. McCracken, General Superintendent, Algoma District, C.P.R., proceeded to the scene by special train. Immediately after the fire, E. D. Cotterell, General Manager, Eastern Lines, C.P.R., issued the following statement:—"At 10.27 a.m. today, a fire was discovered in the roof of the company's engine house at Chapleau, Ont. The company's fire fighting apparatus and crew, combining with the town's fire brigade, extinguished the blaze at 12.45 p.m. The entire roof of the engine house was destroyed, but there was no damage to the boiler room, machine shop or stores. At the time the fire broke out, there were several engines in the shop, which were only slightly damaged. The extent of the damage to the locomotives should not exceed six thousand or seven thousand dollars, and the damage to the roof will not exceed thirty thousand dollars. The origin of the fire has not yet been determined. There was no delay or interruption in the handling of traffic as the result of the fire."

Journal Box Packing

February 1944

Automatic Block Signals, C.P.R. Schreiber Division

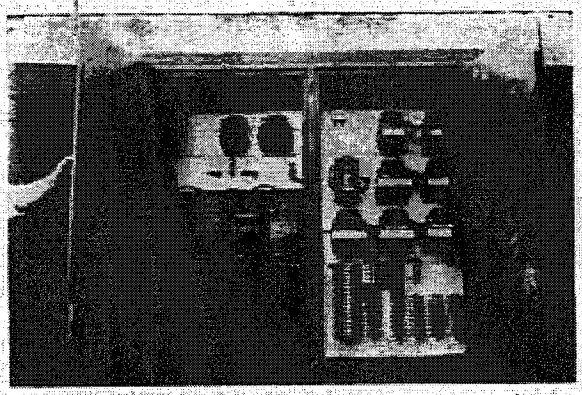
Employing both General Railway Signal Co. and Union Switch and Signal Co equipment, the 250-mile installation of absolute-permissive signalling between Chapleau and Schreiber is expediting operation, as well as providing a large measure of safety.

A PRELIMINARY reference to the installation of an absolute-permissive system of automatic block signalling on the Canadian Pacific Ry. Schreiber Division, extending over the white River Subdivision, from Chapleau to White River, 129.9 miles, and over the Heron Bay Subdivision, from White River to Schreiber, 118.3 miles, appeared in Canadian Transportation for March, pg. 122, where it was pointed out that this installation, made at cost of over $1,100,000, is the longest one of its kind completed in North America for several years.

In announcing plans for the signalling of this portion of the C.P.R. main line, H. J. Humphrey, Vice President, Eastern Lines, specified that the system would be of the absolute-permissive type, whereby opposing trains are held as between passing tracks, while following trains are enabled to be relatively closely spaced. This arrangement facilitates the flow of traffic without sacrificing any of the safety of the absolute block system. The signals operate by color light indication, three colors being employed, viz., red for "stop", yellow for "stop at next signal", and green for "proceed". The installation differs from other absolute-permissive block signal installations, in that the signals are arranged differently at the ends of the passing tracks, to further facilitate the meeting of trains.

Equipment and Materials—Union Switch and Signal Co. equipment was used in the White River Subdivision portion of the installation (from Chapleau to White River), and General Railway Signal Co. equipment in the Heron Bay Subdivision portion (from White River to Schreiber). In view of the fact that the installation called for the use of a great deal of critical material, [illegible] before materials could be arranged for. Copper was one critical material which had to be used in considerable amount; the installation includes about 140 tons of copper wire. Other materials used included about 10,000 lb. of rubber (for wire insulation); 468,000 lb. of iron and steel (chiefly in the signal supports); 2,400 bags of cement (for the signal mast and pole foundations), and 93,000 lb. of lead (for storage batteries), together with some 541 signal light units and large numbers of crossarms, insulators, etc. The base castings, ladders and ladder platforms for the signals were made at the C.P.R. Angus Shops, Montreal, and the signals were assembled at White River, the construction headquarters for the installation job. Authority to proceed with the project was received on February 4, 1943; the priority application for government permission to purchase the necessary materials, which involved much detail, was completed on March 1, and approval of this application was then placed for the materials required, and work was begun at White River in a small way on April 12.

Carrying Out of Work—The work train employed in the installation is shown in one of the accompanying illustrations. The concrete foundations were all poured from this work train, employing a gasoline engine-driven concrete mixer mounted on a flat car, coupled to a locomotive tender carrying the water supply for the mixer, as shown in the illustration. All signal masts, light units, relay cases, etc., were distributed by work train as required, and operations proceeded smoothly, and, in spite of difficulty in securing labor, and also of the late delivery of much of the material, six signals in the Chapleau yard were placed in service on Sept. 13; the 22 miles on the Heron Bay Subdivision between White River and Mobert was completed by Oct. 21; the signals on the entire Heron Bay Subdivision were in service by Dec. 11, and those be-



Relay Case, with Apparatus.

April 1944

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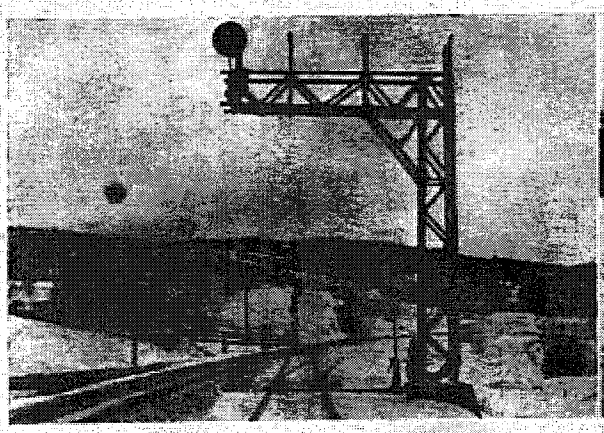
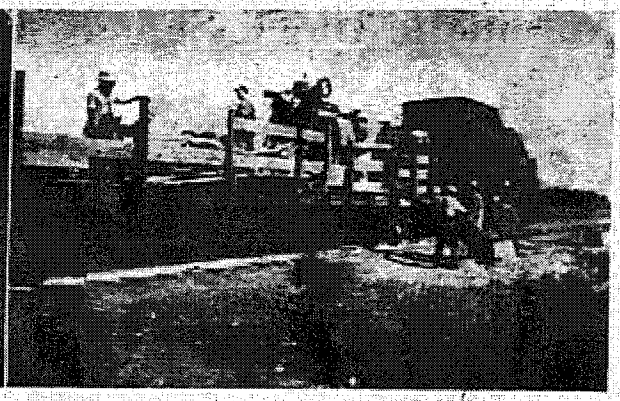


Left, Signals of Bridge Type, Leaving Passing Track; Right, Signals of Ground Type, Entering Passing Track.

April 1944



Left, the Work Train Employed in the Signal Installation Work. Right, Pouring Concrete from Gasoline Engine-driven Mixer Mounted on Flat Car, with the Water Supply Carried in the Locomotive Tender.

White River Subdivision, 48.5 miles, by Dec. 20. This made a total of 170 miles signalled by Christmas, and that much of the installation facilitated the handling of the heavy holiday passenger traffic.

A feature of the job was the use of a parlor car which had been converted at the Angus Shops to provide an office, sleeping accommodation for seven and dining accommodation for eight persons, and a shower bath. This car was moved along the line as required by the progress of the work, and was of material assistance in carrying it on.

Electric Power for System—In this signal installation, alternating current power is employed to charge storage batteries by use of rectifiers, and the signals are operated from the batteries. In the event of power failure, the batteries will operate the signals for two or three days. There are various sources of power for the system. Power from Chapleau is employed to operate the system between Chapleau and Pardee, 13.5 miles, while power from Schreiber is used to operate it from Schreiber to Black, 8.1 miles. Power purchased from the Great Lakes Power Co. at Lochalsh, a point 68.1 miles west of Chapleau, is employed to operate the system between Pardee and Mobert, a point 22.3 miles west of White River. Diesel-generated power, produced at three points, looks after the system's requirements between Mobert and Black. Outside of Schreiber and Chapleau, Lochalsh was the only point at which a.c. power was obtainable. There, power at 4,600 volts was obtained from the Great Lakes Power Co., and a new pole line was built at the north side of the tracks, to carry the power eastward to Wayland (27.5 miles west of Chapleau) and westward to White River. The construction of the pole line and the stringing of line wires were most efficiently carried out by the C.P.R. Communications Department. Power is carried at 4,600 volts, three phase, between White River and Missanabie (57.9 miles west of Chapleau), and 4,600 volts, single phase, between Missanabie and Wayland. At both White River and Wayland, this power is stepped down to 575 volts, being carried at that voltage to Mobert and Pardee. The wires carrying the 575-volt current are supported on the signal cross arm on the communication pole line. In addition to supplying power to the signals, the new line operates a coaling plant and an electric pump at Missanabie and electric pumps at Franz and Amyot. The three pumps, which furnish water for locomotives, were formerly operated by steam. Also, five kva. is supplied to the Communications Department, for its repeater station at White River. The new pole line also carries the low voltage signal control wires.

Diesel-Generated Power—As stated, power to operate the signals between Mobert and Black, on the Heron Bay Subdivision, is generated by Diesel engines. Diesel-electric sets, in duplicate, have been installed at Hemlo (39.7 miles west of White River), Coldwell

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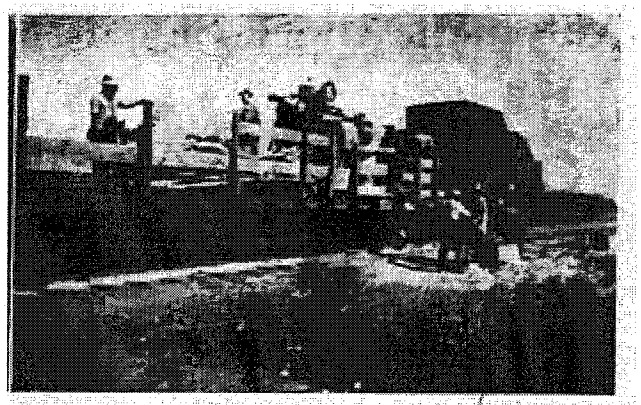

Pouring Concrete from Gasoline Engine-driven Mixer Mounted on Flat Car, ...ed in the Locomotive Tender.

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