

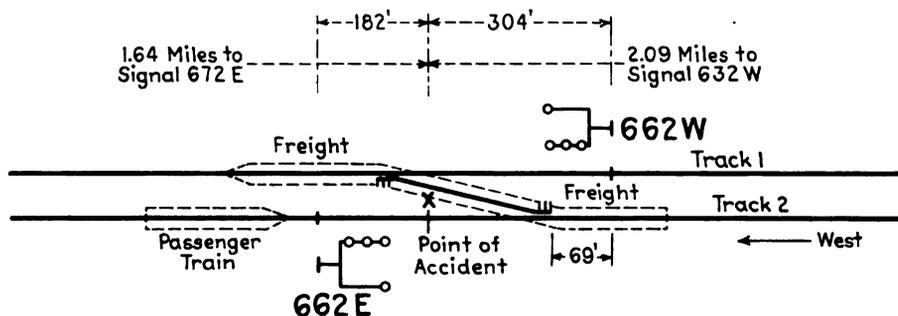
ICC Reports on NYC Wreck

The Interstate Commerce Commission has found that the February 8 accident on the New York Central near Ripley, N. Y., was caused by failure to operate the involved passenger train in accordance with signal indications.

Failure of the automatic train-stop system, resulting from a defective inductor, was held to be a contributory factor in the cause of the accident. Another commission finding was that

a passing locomotive will be actuated to cause an automatic application of the brakes unless the engineman operates an acknowledging lever as the locomotive passes the inductor. A whistle in the control compartment sounds each time an automatic brake application is forestalled by use of the acknowledging lever. This carrier's operating rules read in part as follows:

When forestalling whistle fails to



all involved signals were operating properly.

The accident was a side collision between the passenger train (east-bound No. 74), and a westbound freight (Extra 1704 West). It resulted in the death of the passenger-train engineman and the injury of one passenger.

Four signals were involved, two governing movements of each train. Those governing the freight train, and found by the commission to have been observed, were semiautomatic signals located 2.09 miles and 304 ft east of the point of collision. Those governing the passenger train were an automatic signal, 672E, and a semi-automatic signal, 662E, located, respectively, 1.64 miles and 182 ft west of the point of accident. These signals are of the color-light type and are approach lighted. They form part of the new traffic-control system which, except for a short distance in the vicinity of Erie, Pa., extends between a point about nine miles west of Buffalo to a point about 15 miles east of Cleveland, Ohio. Control machines are located at Erie.

The train-stop system consists of wayside inductors, which are interconnected with the signal system, and of receivers, relays, and related apparatus on the locomotives. The inductor is a U-shaped device with a laminated magnetic core fitted with pole pieces. The core is wound with a coil which is connected to a relay of the signal system.

When the signal displays a restricted aspect the circuit of the coil is open, and the train-stop apparatus of

sound while forestalling, engineman will reduce to and operate at speed specified in Paragraph C (Not exceeding 35 mph.) until he has occasion to again forestall as prescribed by the rules, and the whistle sounds; normal speed may then be resumed.

Signal 672E indicated proceed-preparing-to-stop-at-next-signal when it first became visible to the engineman of the passenger train. The commission's report said the engineman then made a service application of the brakes. It went on to say that the fireman could not see the acknowledging lever of the train-stop equipment, but, from the engineman's movements the fireman "assumed that he pulled the lever into forestalling position" as the locomotive was closely approaching signal 672E.

The fireman also testified that immediately before the front end of the locomotive passed the signal, its aspect changed to proceed. Meanwhile, the forestalling whistle did not sound, and the engineman commented on that. The fireman answered that the reason was the change in the signal's aspect to proceed. The engineman was also reported to have thought the signal's aspect had changed, and to have released the brakes to increase the speed of his train.

The commission's determination was that signal 672E's aspect did not change from its proceed-preparing-to-stop-at-next-signal aspect, and that signal 662E thus indicated Stop when it was passed by No. 74. As to the latter, however, the report had this to say: "The sun was low in the sky (the accident occurred at 4:29 p.m.), and

because of the rays of the sun on the face of signal 662E the employees on the locomotive could not determine the indication of the signal at a distance."

It was only when they saw the freight train about one-half mile ahead of them that the engineman made an emergency application of the brakes. After this occurred, the fireman said he did not notice the indication of signal 662E. The emergency brake application reduced the speed of the passenger train to about 28 mph when the collision occurred. The freight train was moving through the crossover at 50 mph.

The defective inductor was located at signal 672E, and its defect was found to be such that the automatic train-stop apparatus on a locomotive passing it would not be actuated. "The condition of an inductor has no effect on the operation of the signal system," the commission noted, adding that "with the exception of the defective inductor no condition was found which would have caused an improper operation of the automatic train-stop system."

No. 74's recording tape indicated that the system had been actuated and a brake application forestalled by the engineman at a point about 15½ miles west of signal 672E, and by signal 662E's stop aspect. But it was not actuated when the locomotive passed 672E, the commission reported. As to the fireman's impressions, the commission had this to say:

"Apparently the fireman of No. 74 was mistaken as to the indication of signal 672E, and the fact that the forestalling whistle did not sound as the locomotive passed the defective inductor undoubtedly confirmed his impression that the indication of the signal had changed to proceed."

The defective inductor was dismantled for inspection, its coil unwound. Separations were found between turns in the windings, and there were rust stains resulting from moisture which had seeped through the windings. This, the commission said, caused the insulation to deteriorate "to the point where a sufficient number of turns of the windings were short-circuited to result in failure of the train-stop apparatus on a locomotive to be actuated regardless of the indication of the signal."

Central records showed that the inductor was given a "complete electrical test" prior to its installation at signal 672E on October 17, 1956. On November 12, 1956, during the semi-annual tests of all inductors in this territory, no defective condition in this inductor was recorded by the instruments of the automatic train-stop test car as it passed signal 672E.