

TRAIN CONTROL DEVICE TESTED ON RARITAN RIVER RAILROAD

A train control device of the latest design was demonstrated on the Raritan River Railroad yesterday afternoon. It was a rundown, non-contact type, made by the Burrows Train Control Company of Newark, N. J. Induction magnets of special type were placed as signal locations near the South River draw bridge at South River. A small box under the tender contained the mechanism which stopped, slowed down or permitted the train to proceed, and below the box a receiving armature which passed over the track magnets about four inches above them. The design of the device is the work of a number of engineers, under the guidance of Charles W. Burrows, Ph. D., who was head of the magnetic division of the U. S. Bureau of Standards.

The device shown depends on two magnets placed at the entrance of each block of track. If the track ahead was clear, these magnets by induction communicated this fact to the locomotive apparatus as it passed over. A small light was flashed, and the train continued without change. When the track ahead was not clear, the light failed to flash, and the train was brought to a stop automatically, unless the engineer did so himself immediately. There was no sudden shock at the stop, as in the emergency application usually used, but a quick and easy stop. The track circuits are so designed to show stop, if the block ahead is occupied by a train, a bridge open, a rail broken, a switch open or any other dangerous condition exists.

A test of the highway grade crossing protection offered the greatest

thrill of the day. Four times the train had proceeded through a clear block and attempted to enter a dangerous block, but was stopped. On the next trip east, the highway crossing gate, specially built, at the Gillespie station crossing was left open, and the train was stopped before the crossing. While this part of the device is but an optional adjunct to the train control system, the opinions expressed by many on the scene were that a vast number of tragic accidents could be averted by such a system. After this test more were made of the other features, and at 5 o'clock, after four hours of demonstration, the train and passengers returned to the shops at South Amboy.

The test was the first demonstration of the finished device. It took place on a piece of track, partly double and partly single track, with highway grade crossings, sidings, one draw bridge and some heavy grades. It is protected now by Hall color light signals, using alternating current, and the magnets protecting each piece of track were controlled directly by this signal circuit.

A number of units of this device are now being made, and will be installed as soon as possible on other railroads. The Interstate Commerce Commission has ordered forty-nine of the railroads of the country to be equipped with train control by July, 1926, and state commissioners are also anxious to have it installed. The New Jersey Utilities Commission has taken a firm stand for the installation of train control equipment on all passenger roads in this state. This work will now be rushed.

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