April 2, 1912.

IN RE INVESTIGATION OF ACCIDENT ON THE PENNSYLVANIA LINES WEST OF PITTSBURGH, NFAR LARWILL, IND., February 17, 1912.

On February 17, 1912, there was a rear-end collision on the Pennsylvania Lines West of Pittsburgh, near Larwill, Ind., between a wrecking train and a passenger train, resulting in the death of four employes and injuries to eleven others, all of whom were connected with the wrecking train.

This accident was reported by telegraph by the Penusylvania Reilroad Company on the date of its occurrence, and after investigation the Chief Inspector of Safety Appliances reports as follows:

This accident was caused by the failure of the crew of the wrecking train properly to protect their train and by the failure of the engineman of the passenger train to observe and obey signal indications.

This division of the 'chasylvania Lines West is double-track road, equipped with automatic block signals which are operated with a full block overlap. Under this system a train approaching an occupied block would receive a green signal, indicating caution, at the entrance to the second block from the occupied block; a red signal, indicating danger, at the entrance to the next block; and a red signal, also indicating danger, at the entrance to the occupied block.

On the date of the 'ccident, the wrecking train, consisting of an engine, a derrick car, a truck car, a maintenance of way car, a block car, a commissary and tool car, and a cabin

car, left Fort Wayne, Ind., at 4:27 A. M., with Conductor Spencer in charge, bound for a point some distance beyond Larwill, Ind., which is 27 miles west of Fort Wayne. When the wrecking train was near Larwill, it broke in two, and Flagman Killian, in resconse to a signal from the engineers, went back to protect the train. When he came in he did not leave a fusee or put down any torpedoes. After the train had been coupled up, it proceeded about three-quarters of a sile and was then flagged by a trackwalker who had found a broken rail. The train again proceeded slowly, and stopped about 900 feet beyond a block signal while a search was being made for the broken rail. Both the engineman and conductor of the freeking train saw the flagman on the ground at the reer of the train; but the flagman was not signaled or ordered to go back to protect the train, and it is evident that he did not go back very far, although sufficient time must have claused while the search for the rail was in orogress to permit als to go back far enough properly to protect the train. "lagran testified that he started to walk back after the train stopped, and had gone but a short distance when he heard the passenger train coming. He started to run, and swang his lanterns us the train approached, but his signal was not acknowledged by the engineman. After the collision Flagman Killian was "tanding about 50 feet behind the passenger train.

Possenger train No. 5, known as the "Pennsylvania Limit-ed," en route from New York to Chicago, consisted of an engine, one club car, four sleeping cars, a dining car and an observation car. On February 17 it left Fort Wayne at 5:01 A. M., six minutes late, and collided with the wrocking train at about 5:40 A. M.

train was approximately 40 miles an hour. All of the wrecking train, except the engine and the derrick car, was destroyed, and the engine and the first two cars of the passenger train were derailed and considerably damaged. The track where the accident occurred is straight. About helf a mile east of where the wrecking train stopped there is a one-degree curve, and there is an ascending grade toward the west of about 1½ per cent. At the time of the accident there was a heavy fog and it was difficult to see signals more than a short distance away.

Engineman Bechtol of the passenger train stated that all signals were white until he reached the red signal at the entrance to the block in which the wrecking train was standing. As soon as he saw this sign I he shut off steam and applied the air brakes. He did not see the flagman of the wrecking train or any flagging protection except a red light which he thought was about 25 feet from the rear of the wrecking train.

The fireman of the passon or train stated that Engineman Bechtol called out the indications of the signals as the train approached them. The third signal east of the point where the accident occurred, which should have indicated caution, was called white by the engineman. The fireman did not remember the next signal, but the first signal east of the point where the accident occurred was called red by the engineman. The fireman did not see these signals himself.

The flagman of the wrocking train stated that from time to time he noticed the signals after his train had passed them and that in all cases they were red. The engineenan of a

west-bound freight train which followed immediately behind No. 5 stated that he found the usual caution and danger signals as his train approached train No. 5, indicating that the signals were working properly. After the collision the signals were inspected by signalmen and were found in good working order. It is apparent, therefore, that Engineeran Bechtol of train No. 5 passed the caution signal and the first danger signal either without seeing them or incorrectly reading their indications.

Jerienced men, and were considered competent and reliable. Conductor Spencer and Brakeman Killian of the wrecking train had been on duty 1 hour and 55 minutes, after 18% hours off duty. Engineen Bechtel had been on duty 1 hour and 45 minutes after 19 hours off duty.