

November 30, 1912.

In re investigation of accident on the Delaware,
Lackawanna & Western Railroad, near Hallstead, Pa., on
October 18, 1912.

On October 18, 1912, there was a rear-end
collision between two freight trains on the Delaware,
Lackawanna & Western Railroad, near Hallstead, Pa.,
resulting in the death of two employees.

After investigation, I beg to submit the
following reports:

This accident occurred on the Scranton Division
of the Delaware, Lackawanna & Western Railroad. It is
a double-track line equipped with two-arm, lower quadrant,
automatic block signals of the normal clear type. The
signals are so arranged that when a block is occupied
the first signal to the rear of the train indicates stop,
both semaphores being horizontal. The second signal to
the rear of the train indicates caution, the upper semaphore
being horizontal and the lower semaphore being at an angle
of 45 degrees. The third signal in the rear indicates
clear, both semaphores being at an angle of 45 degrees.
Approaching the point of the accident from the west the
track is straight for a distance of 4,878 feet.

The trains involved in this accident were east-
bound extra freight trains 708, 748 and 755. Extra 740,
consisting of engine 748 and 67 loaded cars, in charge

of Conductor Smith and Engineman Mahoney, left Elmira, N.Y., at 11:15 p.m., October 17th. Fifteen minutes later, at 11:30 p.m., extra 755 left Elmira with engine 755 and 56 loaded cars, in charge of conductor Hill and engineman Hammond. Both these trains reached Binghamton, new yard, to clear east-bound passenger train No. 14 at 1:45 a.m., on October 18th. After the departure of No. 14, extra No. 745 left Binghamton, new yard, at 4:55 a.m., and stopped about 1 mile west of Hallstead, a station 14 miles distant from Binghamton, at 5:35 a.m., to secure a helper engine to assist the train into Hallstead yard. Engineman Mahoney sounded three blasts of the whistle as a signal to the helper engine, and then gave the whistle signal for a flagman to go back and protect the rear end of his train.

Flagman Young of extra 745 stated that as soon as his train stopped he left the caboose with one red and one white lantern, four torpedoes and one red fusee. He started back in the direction of the approaching train, but had gone only 75 feet from the rear of his train when his red lantern went out. He then returned to the caboose for another red light. After procuring the second red light he again started back, but had reached a point only about 250 feet in the rear of his train when he saw extra No. 755 approaching. He gave a stop signal with the red light, and when the engineer

failed to acknowledge the signal he used the white lantern. He did not use torpedoes or fuses, stating that he was so scared he overlooked it. Extra 755 passed the flagman at a speed estimated to be 8 or 10 miles per hour, and collided with the rear of train 745 at 5:48 a.m., killing Conductor Smith and Brakeman Farber who were in the caboose of extra 745.

Extra 755 left Binghamton new yard at 5:02 a.m., seven minutes later than extra 745. Engineman Hammond found the first block signal east of Binghamton in the danger position and brought his train to a stop. After this signal cleared up he proceeded; thinking that he might have to stop for the next signal also, he ran his train slowly and the next signal went to the caution position before he reached it, allowing him to pass by it without stopping. The next signal was also in the caution position, but the next succeeding one was clear, indicating that two blocks ahead were unoccupied. This was the only clear signal that engineman Hammond received between Binghamton and the place of the accident, the other signals being at caution when he passed by them except the one immediately in the rear of extra 745, which was in the danger position.

Engineman Hammond said that when he passed a caution signal he knew that the second block ahead of him was occupied, and he expected to find the next signal

in advance in the stop position in case the train had not yet passed out of the block ahead. After passing the last caution signal previous to the accident he watched for the next signal continuously but the weather was very foggy and he turned around at one time to work with his injector and passed the signal without seeing it while his attention was diverted in that way. He ran by this stop signal a distance of 2,869 feet to the point of collision.

The fog began to get very dense at Conklin, the first station west of Hallstead. In spots it was so foggy that the headlight had no effect, and then again for a little distance, say the length of the train, it was possible to see 5 or 6 car lengths ahead. At the time the flagman flagged him Engineman Hammond said that it was not possible to see more than 2 car lengths. He was not depending upon a flag, but was expecting to find the block against him, or in the caution position. He knew that train extra 745 was ahead of him and expected to find a flag when it stopped for the helper, but on account of the fog he was partially lost and expected to find one more block between the one he passed in the caution position and the rear end of the preceding train.

This accident was caused by the joint failure of Engineman Hammond and Flagman Young to perform the respective duties imposed upon them by the rules of the railroad company. Rule No. 4 of the Delaware, Lackawanna & Western Railroad reads as follows:

Enginemen finding a distant signal at Caution must immediately bring their trains under control and be prepared to stop before reaching the home signal.

Rule No. 6 reads as follows:

In foggy or stormy weather, engineman must approach both distant and home signals with great care, and have train under control. This applies to both automatic block and interlocking.

These rules were disregarded by Engineman Hammond, who admitted that he failed to observe the home signal after finding the distant signal at caution.

Notwithstanding the failure of Engineman Hammond this accident could not have occurred had Flagman Young properly performed his duty. Train 745 stopped at the place of the accident at 8:36 a.m., the collision occurred at 8:48 a.m., 12 minutes later. The flagman therefore had ample time to take all necessary precautions for the protection of his train. Following the accident at Corning, N.Y., on July 4, 1912, the Delaware, Lackawanna & Western Railroad Company issued revised flagging regulations reading as follows:

Rule 99. When a train stops or is delayed, under circumstances in which it may be overtaken by another train, the flagman must go back immediately with stop signals a sufficient distance to insure full protection and place one torpedo on the rail. When recalled he may return to his train, first removing the torpedo, except in foggy or stormy weather or should other conditions require it; when he will place an additional torpedo on the rail not more than two hundred feet from the first one. (Torpedoes should be placed not less than twelve feet from rail joints.)

99-(a) The front of a train must be protected in the same way, when necessary, by the baggageman, if one present, otherwise by the head trainman and in the absence of both, by the fireman.

99-(b) When necessary, red fuses must be used in addition to other stop signals to insure stopping trains.

99-(c) At night, and in fog or severe storm, day or night, flagman will, when recalled, place one lighted green fuse upright outside the rail on an inner's side, in addition to placing torpedoes.

99-(d) Green fuses, as may be necessary must be dropped off at intervals to insure protection.

99-(e) In stormy or foggy weather, the flagman must not be recalled when a first-class train is due.

99-(f) Torpedoes exploded by hand, velocipede or gasoline cars must be at once replaced.

These regulations were not observed by Flagman Young. He failed entirely to use torpedoes or fuses and did not go back as far as he might have gone in the time at his disposal. On account of the heavy fog prevailing extra precautions should have been taken, and green fuses should have been dropped off at intervals, as provided in rule 99-(d). Knowing, also, that his train would stop west of Hallstead yard for a helper, in

accordance with the usual custom, Flagman Young should have dropped off the caboose some distance back, before the train came to a full stop. Conductor Smith, who was killed in the collision, should have instructed the flagman to do this, especially in view of the weather conditions, and should have satisfied himself that a flagman was taking all proper precautions for the protection of his train.

Engineman Diamond entered the service of the D.L.& W. Railroad as fireman in 1904 and was promoted to engineman January 14, 1910. He had been regularly employed as an engineman since September 30, 1910. He had been given demerits on two occasions since his promotion for minor infractions of the rules, but otherwise his record was clear.

Flagman Young entered the service of the company as a trainman in 1905. He was suspended ten days in 1910 for overlooking a switch which was in the wrong position, but aside from this his record was good. He had been employed as flagman since March 5, 1912.

All of the employees involved in this accident were working in conformity with the provisions of the hours of service law.

The circumstances entering into the cause of this accident are in all essential particulars the same as those which led to the accident at East Corning, N.Y.,

on the Delaware, Lackawanna & Western Railroad, on July 4, 1912. At East Corning the weather was foggy and the engineman failed to obey the indication of two fixed signals, one at caution, the other at stop, due to his attention being diverted from the track by his injector. At Hallstead the weather was foggy, and the engineman failed to obey the indication of two fixed signals, one at caution, the other at stop. At Hallstead the engineman saw the caution signal, and was looking for the stop signal, but passed the latter without observing it, due to the dense fog and the fact that his attention was for a short time diverted from the track by his injector. At East Corning the flagman was back a sufficient distance and used a green fusee, as well as hand signals, which would have given the engineman warning in time to have enabled him to avoid the collision had he observed them; but considering the condition of the weather the flagman exercised poor judgment in not using torpedoes as well as hand signals and a fusee. At Hallstead the flagman did not go back a sufficient distance, and failed entirely to perform his duty.

The circumstances of this and similar accidents emphasize the inadequacy of signals and rules alone to prevent serious train accidents. No signal system, however, admirable, can prevent accidents unless its indications are observed and obeyed. No rule, however, explicit, can prevent accidents unless its direction is followed.