

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
PENNSYLVANIA RAILROAD NEAR ENGLEWOOD STATION,
CHICAGO, ILLINOIS, ON DECEMBER 1, 1924

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January 14, 1925.

To the Commission.

On December 1, 1924, there was a rear-end collision between two passenger trains on the Pennsylvania Railroad near Englewood Station, Chicago, Ill., which resulted in the death of 1 passenger, and the injury of 19 passengers, 2 employees and 1 Pullman porter. The investigation of this accident was made in conjunction with a representative of the Illinois Commerce Commission.

Location and method of operation

This accident occurred on that part of the Chicago Terminal Division extending between Colehour Junction and Chicago, a distance of 14.1 miles, which in the vicinity of the point of accident is a four-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The accident occurred on track 1, the westbound passenger track, at a point 1,605 feet west of the station at Englewood, approaching this point from the station the track is tangent and the grade practically level.

Immediately west of the station the tracks of the Pennsylvania Railroad are crossed by the four-track line of the Chicago, Rock Island & Pacific Railway, movements of Pennsylvania trains on track 1 over this crossing and as far as the next block signal being governed by a home interlocking signal located on the engineer's side of track 1. This is a two-arm signal operating in the upper quadrant, the top arm is a three-position semiautomatic signal connected with the automatic block-signal system, the bottom arm operates only in the stop and caution positions, and when in the caution position it indicates that a diverging route is set up, or it may be operated as a calling-on signal, provided the track is clear as far as the limits of the interlocking plant, about half way between the station and the point of accident.

The weather was somewhat hazy and frosty at the time of the accident, which occurred at about 7.43 a m

Description

Westbound passenger train No 109 consisted of one baggage car, one express car one combination car, one coach, five Pullman sleeping cars and one coach, in the order named, hauled by engine 7049, and was in charge of Conductor Roles and Engineman Baker. The first and last cars were of wooden construction, while the others were of all-steel construction. Train No 109 passed Park Manor, the last open office, 1 mile from Englewood, at 7.31 a.m , 24 minutes late and made a station stop at Englewood, it departed from that point at 7 39 a m under a clear signal indication and had proceeded but a short distance when it was brought to a stop at about 7 40 a.m. on account of a broken knuckle in the coupler on the rear end of the fifth car. The train had been standing for a period variously estimated at from three to eight minutes, within plain sight of the station at Englewood, when the rear of the train was struck by train No 201

Westbound passenger train No 201 consisted of one baggage car, one combination car, one coach, and three Pullman sleeping cars, all of steel construction, hauled by engine 9992, and was in charge of Conductor Small and Engineman Rumell. It passed Park Manor at 7 38 a.m , nine minutes late, stopped at Englewood at 7.40 a.m., departed at about 7.41 a m. under the authority of a hand signal given by the towerman, both of the arms of the home signal being in the stop position, and had attained a speed variously estimated from 10 to 25 miles an hour when it collided with the rear of train No. 109.

None of the equipment was derailed with the exception of the rear truck of the rear car of train No 109, the rear end of this car was telescoped for a distance of 10 or 12 feet. Only slight damage was sustained by engine 9992, as was also the case with six of the other cars in train No 109, and four of those in train No. 201.

Summary of evidence

Brakeman Flanagan, of train No 109, said that after leaving the station at Englewood he was walking through the train when he found that that portion of the train back of the fifth car was being hauled by the safety chains. He brought the train to a stop by an airbrake application made by means of the conductor's valve. Conductor Roles did not know anything was wrong until the train had been stopped, he then went to the rear of the train to obtain another knuckle and said that at that time

rear of the the flagman was on the ground a short distance from the train, having started to go back without any whistle signal to protect the train having been sounded by the engineman When at the rear of his train Conductor Roles also saw train No. 201 standing at the station at Englewood.

Flagman Bentz said that when the train came to a stop he was riding inside of the door on the rear of the last car, he at once descended to the ground, had some conversation with the conductor concerning the broken knuckle, and then continued on his way back to protect the train, and he said that while walking back he could clearly see train No. 201 standing at the station. According to his statements he went back as far as the eastern end of a viaduct over 62nd street, or about 365 feet from the rear of his train, and then began to give stop signals as soon as he saw the engine of train No. 201 pass over the Rock Island crossing as it was leaving the station. His stop signals apparently were not observed by the engineman of train No. 201 and he said that he then ran westward toward the rear of his own train until he had recrossed the viaduct, all the time trying to attract the engineman's attention, and finally throwing his flag at the cab of the engine as it passed, he noticed the brakes being applied on the cars just before the accident occurred.

Paragraph 8, of the special instructions in the time-table, changes rule 99 of the book of rules, and reads in part as follows:

"When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes, and when necessary, in addition, displaying lighted fuses "

Flagman Bentz did not use any torpedoes, saying that when he finally realized the engineman was not going to stop he was then engaged in running across the viaduct ahead of the train and did not have time to use torpedoes. Flagman Bentz further stated that he had noted a little steam leaking from the steam chest on the engine of train No. 201 but said it was not enough to obscure his view of the cab window and that at no time did he see anything of the engineman.

The calling-on signal at Englewood was found to be out of order when train No. 201 was ready to depart, and the towerman finally gave the fireman a hand signal to proceed. As soon as this signal had been communicated to the engineman the train departed, the engineman clearly understanding that this hand signal only constituted

permission to move his train over the Rock Island crossing and that it had no bearing on the question of whether or not the block was occupied. Engineman Rumell said that after starting the train he was unable to see beyond the front end of the engine on account of an excessive amount of leaking steam, that he did not see Flagman Bentz at any time although riding with his head out of the cab window, and that he did not see the rear of train No 109 until it was only 200 feet distant, and he expressed the opinion that he would not have seen it at that time if he had not shut off steam in order to get a view of the track around the curve. The speed of his train at the time of shutting off steam was about 15 or 20 miles an hour, and he at once applied the brakes, opened the sanders, and then reversed the engine, apparently locking the driving wheels. Immediately after the accident he looked back and he said he saw Flagman Bentz standing just back of the tender of his engine. Engineman Rumell felt he had not been properly flagged and that if the flagman had used torpedoes the accident would not have occurred. The statements of the fireman brought out no additional facts of importance other than to verify the engineman's statement about the view being obscured by leaking steam.

Investigation developed that engine 9992 was taken out of service on November 10, 1924, and placed in the shops at Logansport for heavy running repairs on November 11, the engine being taken out of the shops on November 18. The next trip of this engine was in freight service, and the work report made out when the engine returned to Logansport on November 21, indicated that the only steam leak was at a joint between the engine and tender. On November 22 the engine was used on a through passenger run between Columbus, O., and Chicago, being kept in this service until November 27, and examination of the work reports for November 22, 24 and 26, made out at Chicago, showed that on November 26, the only front and steam leak was at the left front cylinder cock, no other front end leaks were reported on any of those dates. On November 27, the engine was taken from this run and assigned to Engineman Rumell, between Logansport and Chicago. On arriving at Chicago on November 28 he reported no steam leaks; on arriving at Logansport on November 29 he reported that the right valve head was leaking steam and the work report showed that this was tightened; no mention of this leak was made in the work report at the end of the next trip, nor were any other steam leaks reported when the engine returned to Chicago on November 29. Assistant Road Foreman of Engines DeWitt rode on the engine when it was operated from Chicago to Logansport on November 30, the day prior to the accident, and at a point where a stop was made to

take on coal he examined the front end of the engine and found several leaks, he did not consider them serious enough to obscure the vision of the engineman but told Engineman Rumell to report them on his arrival at Logansport. These leaks were shown on the work report as follows: Superheater valve, right valve stem, right back cylinder cock, and the release valve on the forward end of the right cylinder. Engineman Rumell said the leaks which he so reported had not been repaired when he took the engine out of Logansport on the morning of the accident and that they seemed to become worse as the train proceeded. This condition was not so extreme when the engine was standing, but he said that when he began to work steam in starting the train it was impossible to see ahead until the train had attained a speed sufficient to cause the steam to be blown to one side; he estimated this speed at 20 or 30 miles an hour. He also stated that he had been unable to see anything immediately after shutting off steam when moving at a speed of 60 or 65 miles an hour. He thought, however, that the condition of the engine was not sufficiently dangerous to prevent his operating it into the terminal.

The engine house records showed that the work of repairing the various leaks reported by Engineman Rumell on November 30 was assigned to Mechanic Hagan, and his work slip indicated that the cylinder cock was tightened, the release valve ground in, the superheater valve renewed, and the valve stem packing tightened and oiled. Gang Foreman Wermes inspected this work and said that it was completed in a satisfactory manner, although no test was made to determine the effectiveness of the repairs. Gang Foreman Wermes also said that Engineman Rumell made no complaint concerning the condition of the engine when he took it from the engine house for the trip on which the accident occurred. Towerman Clark, on duty at Englewood, said there was always more or less smoke and steam around the engines and that he did not pay particular attention to the matter when train No 201 departed from that point immediately prior to the accident.

After the accident engine 9992 was tested for the purpose of ascertaining the extent of the steam leaks but no excessive leaks were found. Before making these tests, however, it had been necessary to repair the engine to some extent and it is possible that in making these repairs the source of some of the leakage complained of by Engineman Rumell was eliminated.

Conclusions

This accident was caused by the failure of Engineman Rumell, of train No 201, properly to obey signal indications.

On account of the fact that the bottom arm of the signal at Englewood could not be moved to the caution position, being out of order it was necessary for the towerman to give a hand signal to proceed. Engineman Rumell thoroughly understood that this hand signal only governed the movement of his train over the crossing, it having no bearing on the condition of the block. Engineman Rumell should have operated his train at slow speed prepared to stop short of a train or obstruction, but he claimed that on account of excessive steam leakage he was unable to see far enough ahead of the engine to observe the rear of train No 109 in time to stop. The investigation, however did not develop that there had been any excessive leakage prior to the trip on which the accident occurred, nor was anything discovered which would support the statements of the engineman and fireman concerning the leakage immediately prior to the occurrence of the accident, and it is believed that Engineman Rumell's failure to observe the rear of train No 109 in time to stop was due more to the fact that he was not maintaining a proper lookout than it was to escaping steam.

Under the rules flagmen are required to go back a sufficient distance and then put down two torpedoes. The estimates varied considerably as to how far back Flagman Bentz went for the purpose of protecting his train, but under the circumstances of this case, with the following train standing at a station approximately 1,600 feet distant, in daylight, it does not appear that it was necessary for the flagman to go back a great distance in order to comply with the requirement of the rule that he go back "a sufficient distance". Under the rule the use of torpedoes is mandatory when the flagman has gone back the sufficient distance, but here again the circumstances of the case make it a matter of some doubt as to when or where they should have been put down, and as to whether sufficient responsibility can be attached to the flagman for his failure to use torpedoes to make this failure even a contributory cause of the accident.

All the employees involved were experienced men. At the time of the accident the crew of train No 201 had been on duty from 3 to 4 hours, after periods off duty varying from 14 to 50 hours, the crew of train No. 109 had been on duty about 4 hours, after from 15 to 26 hours off duty.

Respectfully submitted,
W. P. BORLAND,
Director.