

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE CHICAGO & ALTON RAILROAD NEAR NILWOOD, ILL.,
ON FEBRUARY 12, 1923.

March 16, 1923.

To the Commission

On February 12, 1923, there was a rear-end collision between a passenger train and a freight train on the Chicago & Alton Railroad near Nilwood, Ill., which resulted in the death of 2 employees, and the injury of 15 passengers, 1 mail clerk, and 1 employee.

Location and method of operation.

This accident occurred on Sub-Division 2 of the Southern Division, extending between St. Louis, Mo., and Springfield, Ill., a distance of 98.96 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The accident occurred at a point about 1 mile south of Nilwood; the track is tangent for several miles north and south of the point of accident, while the grade is practically level for some distance.

The automatic signals are of the two-position, lower quadrant type, displaying red and green indications for stop and proceed, respectively, and are equipped with electric lights which light up when an approaching train is approximately 4,000 feet away. Signal 240 is located 2,500 feet south of the point of accident and signal 242 approximately two miles south of signal 240, its control circuit extending to a point 500 feet north of the point of accident.

The weather was very foggy at the time of the accident, which occurred at 11.45 P.M.

Description.

Northbound freight train extra 880 consisted of 38 cars and a caboose, hauled by engine 880, and was in charge of Conductor Herman and Engineer Jones. This train, according to the train sheet, left Carlinville, 8.3 miles south of the point of accident at 11.12 P.M., and at a point about 2,500 feet north of signal 340 while running at a speed of about 20 miles an hour, the rear end was struck by train No. 6.

Northbound passenger train No. 6 consisted of 1 express car, 1 baggage car, 1 mail car, 1 coach, 1 chair car and 2 sleeping cars, in the order named, hauled by engine 658, and was in charge of Conductor Foster and Engineer Snodgrass. This train left Carlinville at 11.30 P.M., 30 minutes late, and 18 minutes behind extra 880, passed signals 275 and 270, and struck the rear of extra 880 while traveling at a high rate of speed.

Engine 658, of train No. 6, was derailed, and overturned on the southbound main track, bottom up and parallel to the tracks. The first four cars of train No. 6 were derailed to the right, the first one being partly overturned. The caboose and one car of extra 880 were demolished, no other cars of the freight train were derailed, but the ends of eight others were broken and damaged. The employees killed were the engineer and fireman of train No. 6.

Summary of evidence.

At Plainview, 10.4 miles south of Carlinville, the crew of extra 880 received a message advising them that train No. 6 would run 10 minutes late from Shipman to Girard, and it was agreed that they would back across at Carlinville to allow train No. 6 to pass. At Rinaker, 2.1 miles south of Carlinville, another message was received advising them that train No. 6 was 20 minutes late. Extra 880 stopped at Carlinville, and after some discussion between the engineer and conductor, it was decided not to cross over to the southbound track, as there would not be time to clear southbound train No. 79, but to run ahead of train No. 6 to Girard or to keep going until southbound train No. 79 passed and then back over to the southbound track. Conductor Herman said he had told Flagman Wallace what he intended doing, and instructed him to watch out for train No. 6, he rode on the engine

after leaving Carlinville, and said it was difficult to see the signal lights owing to the fog, but that he could see the position of the boards.

Engineman Jones said he observed the automatic block signals and that they were working properly. He estimated the speed of his train at the time of the accident at 20 or 25 miles an hour. He further said that Conductor Herman suggested that they head in on the Schopper lead track at Bierd, 4.1 miles from Carlinville, and about 4 miles from the point of accident, and clear train No. 6, but that he refused owing to the fog, the presence of a mine engine at that point, and the fact that he had no protection for the movement. Flagman Wallace said he remained on the rear platform of the caboose after leaving Carlinville, where he threw off a 10-minute red fusee, at 11.09 P.M. He threw off another fusee at Bierd and then entered the caboose for another fusee, looked at his watch and saw it was 11.33 P.M., and on consulting his timetable saw that train No. 6, if 20 minutes late, would be due at 11.33 P.M. He was still in the caboose when south-bound train No. 79 passed, and he saw the reflection of the headlight of train No. 6 on the cars of train No. 79. He reached the door of the caboose but saw that he would not have time to get out, and turned his back as the collision occurred.

Conductor Foster of train No. 6 said that his train had been delayed by reason of the prevailing fog. He had received an order at Godfrey to run 10 minutes late from Shipman to Girard and left Carlinville 15 minutes late on that order and 25 minutes late on the timetable schedule. Conductor Foster said at no time did he notice the reflection of a fusee nor did he feel any application of the brakes prior to the collision, also that the train was not being operated at an excessive rate of speed prior to the accident. Fireman Ball, of south-bound train No. 79, said he remembered passing extra 880 and noticed a white light on the rear of the caboose of that train as it passed and shortly afterwards train No. 6 passed and he remarked to his engineman that train No. 6 was close to the extra; he did not see any indications of red fusees.

Signal Supervisor Kies said that after the accident he tested the automatic signals from Bierd to Nilwood

including signals 240, 242, and 241, and found them to be working properly. Signal maintainers Ed Adams and Atterbury also tested the signals and found them to be working properly, as were the approach lighting system for these signals. Road Foreman of Engines Bronning said he inspected engine 878, of train No. 6, after the accident and found the throttle open, the reverse lever in one of the working notches, and the brake valve in running position, indicating that the engine had not been shut off nor the brakes applied.

Conclusions

This accident was caused by the failure of Engineman Sherburne, of train No. 6, properly to observe and obey automatic block signal indications. A contributing cause was the failure of Flagman Wallace, of extra 880, properly to protect his train.

The automatic block system in this vicinity is so arranged that signals 242 and 240 should have been displaying stop indications at the time they were passed by train No. 6. These signals were working properly when passed by extra 880, and subsequent examination and test failed to disclose anything irregular in their operation; it is therefore believed that they were displaying stop indications at the time train No. 6 passed, and that for some reason these stop indications were not observed by Engineman Sherburne.

There is no passing track at Carlinville, and it would have been necessary for extra 880 to back across to the southbound main track in order to allow train No. 6 to pass at that point. This was the intention until the crew received the message giving them additional time on train No. 6. Had the extra then backed across at Carlinville as originally intended, probably it would have been necessary to stop southbound train No. 79, a mail train which all except first-class trains are required to clear at least 15 minutes. While, therefore, the crew of extra 880 may have been justified in leaving Carlinville ahead of train No. 6, this fact, when coupled with the very unfavorable weather conditions prevailing, made it necessary that great care be exercised to see that their train was fully protected. Such protection was not furnished by Flagman Wallace. According to his own

statements, he threw off a fusee at Carlinville at 11.09 P.M., and a second fusee at Bierd at about 11.32 P.M., while the accident occurred at about 11.45 P.M.; undoubtedly both fusees burned out before train No. 3 reached them. Had Flagman Wallace been on the alert, he would have thrown off lighted fusees less than 10 minutes apart instead of allowing about 24 minutes to elapse between the first and second fusees, and then allowing an additional period of 13 minutes to pass without throwing off any fusee. He was an experienced man, fully acquainted with the conditions existing and the movement being made, and is at fault for his failure properly to attend to his duties.

Under rule 86, of the Rules of the Operating Department, inferior trains are required to clear the time of a superior train, in the same direction, not less than 10 minutes. Train No. 6 is due to leave Carlinville at 11.05 P.M., so that when running 20 minutes late it would depart from that point at 11.25 P.M. In departing from Carlinville at 11.12 P.M., extra 880 was only 13 minutes ahead of train No. 6, according to the time which they had received, and while Conductor Herman had instructed Flagman Wallace to look out for train No. 6, yet in view of the prevailing weather conditions, it is believed that Conductor Herman would have displayed much better judgment had he instructed Flagman Wallace to remain at Carlinville, stop train No. 6, and advise the engineman of that train as to what was being done.

This accident again directs attention to the necessity for an automatic train-control system which will operate to control a train whenever for any cause an engineman fails to see or heed danger signal indications. In accidents of this character, involving experienced men and automatic block signals, such failures of the human element can not be fully checked and provided against except by the use of an automatic train-control system to supplement existing signal systems for the purpose of compelling obedience to such indications.

All the employees involved were experienced men. At the time of the accident the crew of extra 880 had been on duty about 6 hours and the crew of train No. 6 about 3 hours and 15 minutes, after off-duty periods of 12 3/4 and 13 1/2 hours, respectively.

Respectfully submitted,

W. P. BORLAND
Director.