

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE
BALTIMORE & OHIO RAILROAD

CANNELBURG, IND.

AUGUST 24, 1937

INVESTIGATION NO. 2196

-2-

SUMMARY

Inv-2196

Railroad:	Baltimore & Ohio
Date:	August 24, 1937
Location:	Cannelburg, Ind.
Kind of accident:	Derailement
Train involved:	Freight
Train number:	88
Engine number:	4536
Consist:	34 cars, caboose
Speed:	20-40 m.p.h.
Track:	Tangent
Time:	8:32 a.m.
Weather:	Clear
Casualties:	2 killed; 6 injured
Cause:	Track work inadequately protected by flag.

September 30, 1937.

To the Commission:

On August 24, 1937, there was a derailment of a freight train on the Baltimore & Ohio Railroad near Cannelburg, Ind., which resulted in the death of 1 employee and 1 trespasser, and the injury of 6 employees. This accident was investigated in conjunction with the Indiana Public Service Commission.

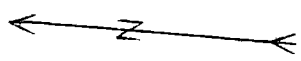
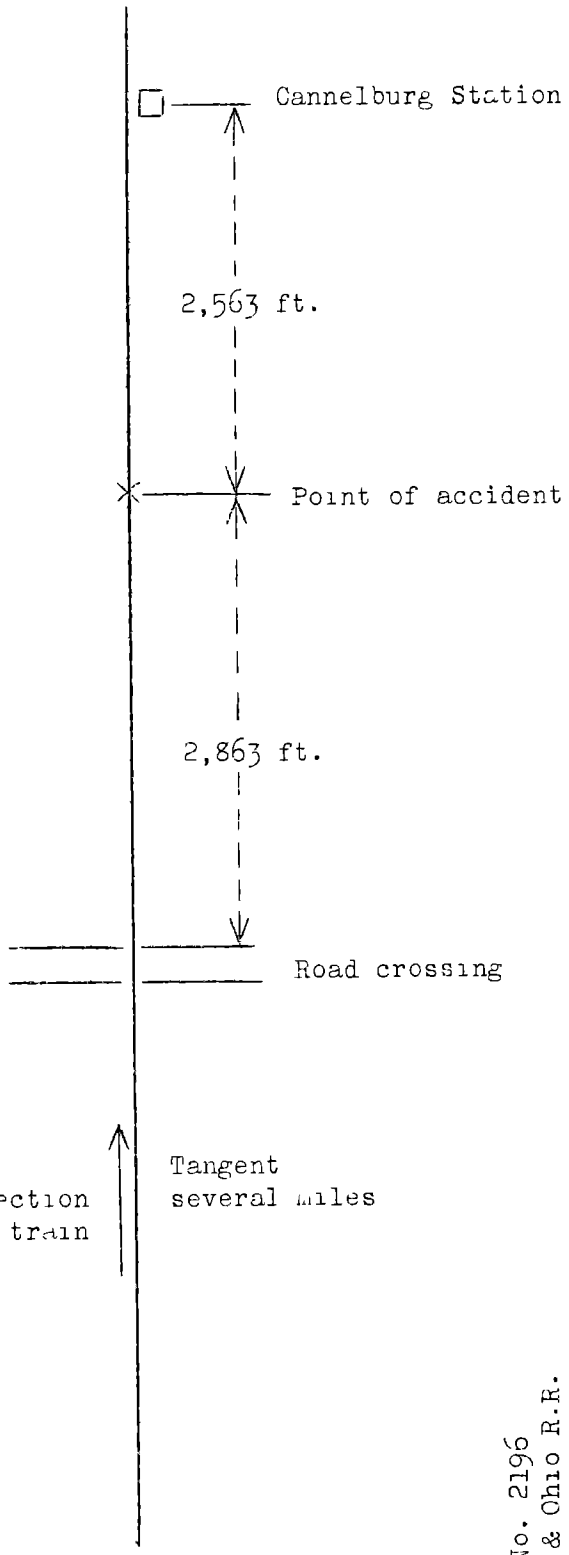
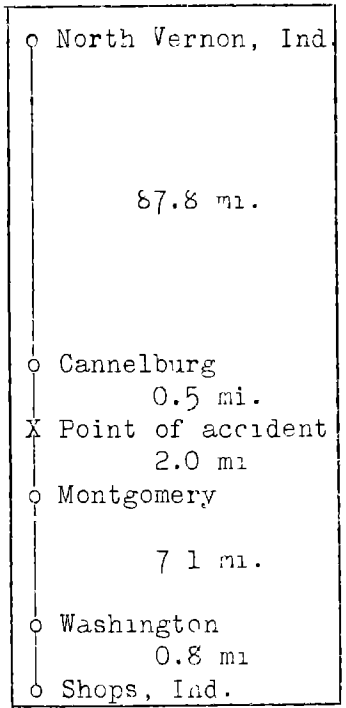
Location and method of operation

This accident occurred on the Washington Subdivision of the St. Louis Division, extending between North Vernon and Shops, Ind., a distance of 98.2 miles; in the vicinity of the point of accident this is a single-track line over which trains are operated by timetable, train orders and a manual block-signal system. The accident occurred about $\frac{1}{2}$ mile west of the station at Cannelburg; approaching this point from either direction the track is tangent for a considerable distance, while the grade is 0.49 percent ascending eastward at the point of accident.

The track is laid on an 18-foot fill, 1,500 feet in length, with 100-pound rail, 39 feet in length, with an average of 21 ties and 6 anti-creepers to the rail length, single-spiked, tie-plated and ballasted with washed gravel to a depth of 12 inches; the track is well maintained. The maximum authorized speed for fast freight trains is 45 miles per hour.

At the time of the accident trackmen were engaged in replacing a rail in connection with the installation of automatic signals. Rule 20, of the instructions governing maintenance-of-way department, provides that any work that interferes with the safe passage of trains at full speed must be protected by sending flagmen with stop signals a sufficient distance in each direction to insure full protection. Rule 51 provides that foremen will know that the men sent to flag trains thoroughly understand Rule 99, of the operating rules, and be governed accordingly.

The weather was clear at the time of the accident, which occurred about 8:32 a.m.



Inv. No. 2196
 Baltimore & Ohio R.R.
 Cannelburg, Indiana
 August 24, 1937

Description

Train No. 88, an east-bound fast freight, consisted of 34 cars and a caboose, hauled by engine 4536, and was in charge of Conductor Myers and Engineman Darling. This train departed from Shops, 9.9 miles west of the point of accident, at 8:12 a.m., according to the train sheet, 12 minutes late; passed Montgomery, the last open office and 2 miles west of the point of accident, at 8:29 a.m., 14 minutes late, and was derailed on account of insecure track while traveling at a speed estimated to have been between 20 and 40 miles per hour.

Engine 4536 and its tender stopped on their right sides at the foot of the embankment, north of and parallel with the track, with the front end of the engine 227 feet east of the point of derailment. The first 8 cars were derailed and scattered in various positions across the track and down the north embankment; the forward truck of the ninth car was also derailed. The employee killed was a trackman, and the employees injured were the engineman, fireman, head brakeman, assistant track foreman and two trackmen.

Summary of evidence

Engineman Darling stated that the air brakes were tested at Shops and worked properly. The engineman was looking ahead through the clear-vision window when approaching Cannelburg at a speed of about 45 miles per hour and saw a track flagman east of a public-road crossing located 2,865 feet west of the point of derailment, at about the same time the head brakeman called "red flag". The engineman closed the throttle and made a service application of the brakes, immediately followed by an emergency application, the brakes responding effectively. He heard two torpedoes explode when the engine was about opposite the track flagman. Several of the trackmen then gave stop signals and the fireman informed him that a rail was out of place. Engineman Darling remembered answering the track flagman's signal, and he estimated that the flagman was then located not more than 45 car lengths west of where the trackmen were working. The engineman saw the flagman standing on the track ahead before he received the flag signal, but he was not aware that the man was a flagman until he waved his flag across the track at which time the engine was close to the public-road crossing. The engineman estimated the speed to have been 20 miles per hour at the time of the accident. Shortly thereafter, he talked to someone whom he thought was the track foreman, asking him why proper flag protection had not been provided, and the foreman said that the engineman could have seen ahead for $1\frac{1}{2}$ miles.

Fireman Gerrard and Head Brakeman Kirbert gave testimony similar to that of Engineman Darling; the engine was just a little east of the road crossing when the fireman saw a flagman standing on the track about 10 car lengths ahead and about 35 or 40 car lengths west of where section men were working; two torpedoes exploded about the time the engine passed the track flagman. When a few car lengths away the fireman saw an open space between the ends of two rails in the track. He did not think that a full-service air-brake application had taken effect before the emergency application was made. Head Brakeman Kirbert was on his seat box looking ahead continuously; he saw someone on the track but said that the train traveled about $\frac{1}{2}$ mile before any stop signals were given; he saw the track flagman unfurl the flag and give stop signals when the engine was about fifteen car lengths away, at which time the flagman was between 25 and 30 car lengths west of the point of accident. The fireman and head brakeman said that the speed was reduced from about 45 miles per hour to between 20 and 25 miles per hour immediately prior to the accident. They said that the flagman's signals were acknowledged when the engine was in the immediate vicinity of the road crossing. There had been no conversation between the men on the engine to distract their attention when approaching the point of accident.

Conductor Myers and Flagman Murphy who were on the caboose stated that a service application of the air brakes was immediately followed by an emergency application at which time the speed was about 20 miles per hour; the accident occurred soon thereafter and when the caboose stopped the track flagman was from 3 to 5 car lengths behind it. The track flagman told them that he was out about 16 pole lengths or about 2,400 feet from where the men were working, but the conductor did not think he was out that distance, saying that the track flagman was a considerable distance east of the public-road crossing, and that the accident was due to insufficient flag protection.

Track Flagman Pridemore stated that while at Cannelburg the signal foreman arranged with the track foreman to install a rail with an insulated joint at a point about $\frac{1}{2}$ mile west thereof. On arrival at the point where the work was to be done, Assistant Track Foreman Stuckey told him to go westward and flag east-bound trains. Another section man was sent out to flag west-bound trains. Flagman Pridemore got a flag and two torpedoes and walked westward at a lively pace. He saw the approaching train when the engine was just east of Montgomery and then started to run, but did not give stop signals as he went; he ran westward about two and one-half rail lengths and placed two torpedoes on the rail, then ran eastward about two or three rail lengths so as to be between the torpedoes and track work. This

location placed him about 1,150 feet east of the road crossing or 1,713 feet west of the point of derailment. He then began to flag, at which time the train was about 50 rail lengths distant and about 800 feet west of the crossing. When the engine reached the crossing or just east thereof the engineman answered his flag signals, following which the torpedoes were exploded. The engine passed him at a speed of about 45 miles per hour and when the caboose stopped it was about two or two and one-half rail lengths east of him. He was not aware of any information regarding trains his foreman may have had and did not know that Train No. 88 was overdue. Track Flagman Pridemore said he used a standard red flag and gave stop signals from a point 1,638 feet west of where the rail was being changed, and thought that this was a sufficient distance to permit the engineman to stop. The weather was clear, sun shining, visibility good and the track was straight for a long distance. He had his flag unfurled when he placed the torpedoes and said that had he given stop signals when he first saw the approaching train, the accident probably would have been averted. While on another section he had been instructed to keep any torpedoes that he placed on the rail, between himself and an approaching train, in case the engineman did not recognize his flag. In his one year of service he had not been called upon to flag more than six times, and had never been examined on flagging rules, although one foreman had given him written instructions to go out twenty-five pole lengths, about 3,300 feet, when flagging; he also said that he knew the rail was being changed and that he should have gone out this distance. His flag was unfurled when he started out to flag and, although he was not certain about the time, he estimated that he had been gone from 5 to 8 minutes when he saw Train No. 88 and said that he would have gone out farther had there been more time at his disposal. He assumed that the track foreman would wait until he got out far enough to afford protection before opening the track. Three days after the accident the track flagman, in company with others, reenacted, in part, his movements prior to the accident. He walked from the point where he said he was located when he first saw Train No. 88 to the point where the rail was displaced, in 4 minutes 45 seconds. His location was 1,294 feet east of the center line of the road crossing, while the lead from the torpedoes which he had placed on the rails was found 46 feet farther east or 1,522 feet west of the point of accident.

Assistant Track Foreman Stuckey, in charge of the track work involved, stated that his crew left Cannelburg about 8 a.m. with a rail prepared with an insulated joint. On arrival at the point where the rail was to be changed everything was gotten ready to make the change and a flagman was sent out in each direction, at about 8:20 a.m.; when they were out a sufficient distance the assistant track foreman gave instructions

to open the track and put the other rail in place, which was at about 8:25 a.m. However, some difficulty was experienced due to a tight fit, making it necessary to pull a few spikes from the adjoining rail and this was being done when Foreman Stuckey observed the train approaching in the vicinity of Montgomery, which was about 15 minutes after the flagman had departed, but he did not pay further attention to the train as he knew that he had a flagman protecting. The section crew was busy trying to get the ends of the rails together when the signal foreman shouted a warning of danger, and shortly afterwards the accident occurred, at which time he estimated the speed of the train to have been between 30 and 35 miles per hour. It was Foreman Stuckey's opinion that the flagman had gotten back about 18 or 20 pole lengths which the foreman thought was a sufficient distance since the track was straight, weather clear and visibility good. He had received a line-up on trains, but had no particular information on No. 82. He knew that this train was overdue when the work of unfastening the rail was begun. In previous flagging instructions he had told Track Flagman Pridemore to go out from 18 to 25 pole lengths, depending upon the place and weather conditions, but in any event as far as 18 pole lengths on straight track. He thought that the track flagman fully understood how to flag. Work of securing a rail can be performed in about 5 minutes provided no trouble is encountered; it takes about 20 to 25 minutes to completely change a rail. He had had about 15 years of track experience, the last 2 of which were as assistant foreman, and he had been in charge of this section crew since about April 1, 1937.

Statements of Trackmen Borders, John Fields, William Fields, Lindley, Hotz and Myers as to what transpired were similar to those of the assistant track foreman. They estimated the speed of Train No. 82 to have been as high as 40 miles per hour when the accident occurred.

Signal Foreman Jennings stated that he was engaged in signal work near the point of derailment. The trackmen left Cannelburg about 8 a.m., and began changing the rail about 8:15 a.m., having worked about 15 minutes when the accident occurred. He did not see the track flagman start out, but noticed someone, whom he took to be the flagman, walking westward on the track about 14 or 15 car lengths distant at the time No. 82 was passing the flagman.

Discussion

An automatic block-signal system was being installed in the territory involved. Assistant Track Foreman Stuckey and crew of eight men left Cannelburg about 8 a.m. with a rail and an insulated rail joint to be placed in the north side of the

track at a point about $\frac{1}{2}$ mile west of Cannelburg. On arrival at that point and after certain bolts and spikes were removed from the track, flagmen were sent out in each direction at about 8:20 a.m., at which time Train No. 88 was overdue. About 5 minutes later the rest of the spikes and bolts were taken out and the old rail removed. Difficulty was experienced, however, in installing the new rail and insulated rail joint on account of a tight fit. While this work was in progress Track Flagman Pridemore was walking westward; he saw No. 88 coming when the engine was about 2 miles away and started running but did not give stop signals as he advanced. He placed two torpedoes on the rail and then ran eastward about 2 or 3 rail lengths and gave stop signals with his flag. The engineman acknowledged the flagman's signals when a short distance away, at which time the train was approaching at a speed of about 45 miles per hour; the speed had been reduced to about 20 miles per hour at the time of derailment. There was some conflict in the testimony as to the exact location of the track flagman when the train passed him, also as to how long it was from the time he started out until No. 88 was seen approaching. However, the engine, tender, and first 9 cars continued by the point of derailment and when the caboose stopped, the track flagman was located from 3 to 5 car lengths behind it, which indicates that he was from 25 to 30 car lengths west of the point of track work. Also, the lead from the exploded torpedoes was found at a point 1,522 feet west of the point of accident. Track Flagman Pridemore estimated that it was between 5 and 8 minutes from the time he started westward until he saw No. 88 approaching; however, three days after the accident he walked from where he said he was located when he saw No. 88 coming, to the point of accident, in 4 minutes 45 seconds; however, regardless of his exact location, it appears from his own statement as well as the statements of those on the approaching engine, that the accident probably would have been prevented had the flagman started to give stop signals when the train was at a greater distance from him.

Conclusion

This accident was caused by failure to provide adequate flag protection while a rail was being replaced in the track.

Respectfully submitted,

W. J. PATTERSON,

Director.