

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE CHICAGO, BURLINGTON & QUINCY RAILROAD NEAR
GREGORY, MO., ON AUGUST 18, 1927.

October 25, 1927.

To the Commission:

On August 18, 1927, there was a derailment of a passenger train on the Chicago, Burlington & Quincy Railroad near Gregory, Mo., resulting in the death of 2 passengers and the injury of 18 passengers and 2 employees.

Location and method of operation

This accident occurred on that part of the Hannibal Division of the Missouri District extending between Burlington, Iowa, and Hannibal, Mo., a distance of 101.2 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders and a manual block-signal system. The derailment occurred at a point about 1.5 miles north of Gregory; approaching this point from the north there is a $1^{\circ} 24'$ curve to the right 740.5 feet in length, followed by 3,461.1 feet of tangent, the accident occurring on this tangent at a point 863 feet from its northern end. The grade in this vicinity is practically level. The track is laid with 90-pound rails, 30.5 feet in length, with an average of 18 hardwood ties to the rail-length, single-spiked, about 85 per cent tie-plated, and ballasted with slag to a depth of about 18 inches. The rails were sawed and re-laid in 1917. The track is well maintained.

The weather was cloudy at the time of the accident, which occurred at about 9.36 p.m.

Description

Southbound passenger train No. 10 consisted of one baggage car, two coaches, and one Pullman sleeping car, hauled by engine 722, and was in charge of Conductor Farrell and Engineman Banks. The first three cars were of wooden construction while the last car was of steel construction. This train left Alexandria, 6 miles north of Gregory, at 9.27 p.m., according to the

train sheet, 12 minutes late, and was approaching Gregory when it was derailed by a broken rail while traveling at a speed of 50 miles per hour, as indicated by the tape of the speed recorder with which engine 722 was equipped.

The engine and tender remained on the rails while the baggage car remained coupled to the tender but was derailed to the left and came to rest with its rear end about 25 feet from the track. The second car came to rest on its left side about 40 feet behind the baggage car and approximately 35 feet east of the track; the last two cars were also derailed.

Summary of evidence

None of the members of the crew was aware of anything wrong until the accident occurred. Engineman Banks stated that the train gave a jerk and then he heard a noise like something dragging, after which the engine stopped. He immediately got off the engine and went back to the point of derailment and found the broken rail, on the east or left side of the track. Engineman Banks also stated that when the engine passed over the point of derailment there was nothing to indicate that there was a broken rail. The track did not ride hard and on the northbound trip on train No. 3, which is due at Gregory at 12.35 p.m., he noticed nothing wrong with the track conditions. Engine 722 was in very good condition and the air brakes worked properly. The statements of Fireman Martin practically corroborated those of Engineman Banks; Fireman Martin also stated that he had just stepped down on the deck of the engine to put in a fire when the tender began to bounce a little, apparently on account of the cars behind it being derailed, as he had felt nothing wrong when the engine passed over the track at the point of derailment. After the engine stopped he also went back and saw the broken rail which caused the accident, the breaks in the rail being fresh breaks. The statements of Conductor Harrell and Brakeman Kirby brought out nothing additional of importance.

Roadmaster Cameron stated that he passed over the point of derailment on the inspection engine twice on the day prior to the occurrence of the accident, the last time at about 5 p.m., but noticed nothing wrong. On his arrival at the scene of the accident, about three hours after its occurrence, he saw the broken rail on the east side of the track. The west rail was in place and fully spiked but the east rail had

been pulled out as a result of the derailment. He said that six pieces of the broken rail were found after the accident. In his opinion the accident was caused by a broken rail, due to a transverse fissure, located about 24 inches from the receiving end of the rail and covering practically the entire head of the rail.

Section Foreman Briscoe stated that he went over the track at the point of accident during the morning of the day of its occurrence but noticed nothing wrong with track conditions. He was of the opinion that the accident was caused by a broken rail, due to a transverse fissure.

Northbound freight train extra 2105, consisting of 79 cars, passed this point at about 5 p.m. at a speed of about 18 or 20 miles per hour; southbound freight train No. 80, consisting of 62 cars, passed at about 7.20 p.m., and northbound passenger train No. 15 passed at about 7.30 p.m. at a speed of about 45 miles per hour. Members of the crews of these trains noticed nothing unusual as to track conditions.

Examination of the track by the Commission's inspectors disclosed that the west rail had remained in place and north of the broken rail no marks were found that had any bearing on the derailment.

Engine 722 is of the 4-6-0 type, class K-4, having a total weight, engine and tender loaded, of 251,300 pounds. The engine has a total weight of 156,600 pounds and the weight on the drivers is 121,400 pounds. It had traveled 39,126 miles since receiving heavy running repairs. Inspection of the engine failed to disclose any defect that would have caused or contributed to the accident.

Conclusions

This accident was caused by a broken rail, due to a transverse fissure.

The rail which failed was branded Bethlehem Open Hearth 90 D VII 10, heat number 174472-E. It was 30 feet 6 inches in length. The first break occurred 24 inches from the receiving end; this piece of the rail remained connected to the adjoining rail by the angle bars. When the five small pieces of the six broken pieces of the rail, found after the accident, were arranged in their original positions they formed practically a straight line, and there was no indication that the

track had spread or that the rail had turned. Several transverse fissures were found in the broken pieces of the rail, however; the transverse fissure nearest the receiving end of the rail, covering almost the entire head of the rail, apparently was the primary cause of the failure of the rail. Two of the broken pieces were placed under a steam hammer and when broken by this means, at predetermined points, transverse fissures were disclosed at the points where they were broken.

All of the employees involved were experienced men, and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.