INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE WABASH RAILWAY AT BEMENT, ILL., ON JANUARY 1, 1931.

January 22, 1931.

To the Commission:

On January 1, 1931, there was a derailment of a passenger train on the Wabash Railway at Bement, Ill., which resulted in the death of one employee, and the injury of three passengers and two employees.

Location and method of operation

This accident occurred on the 7th District of the Decatur Division, which extends between Forrest and Bement, Ill., a distance of 59.9 miles, in the vicinity of the point of accident this is a double-track line over which trains are operated by time-table and train orders, no block-signal system being in use, although the approach to the station and junction at Bement is governed by an automatic signal The accident occurred at a point approximately 400 feet north of the station at Bement, approaching this point from the north, the track is tangent for a distance of 6.24 miles, followed by a 9° curve to the right 819.1 feet in length, the accident occurring on this curve at a point 162.4 feet from its northern end. The grade is descending for southbound trains for a distance of approximately $2\frac{3}{4}$ miles, being 0.1925 per cent descending at the point of accident. The track is laid with 90-pound rails, 33 feet in length, laid on treated oak ties, and is ballasted with rock, the track is well maintained.

The 7th District joins the 9th District of the Decatur Division just beyond the leaving end of the curve on which the accident occurred, and automatic block signal 152.0, located 3,951 feet north of the curve, governs southbound train movements to the junction, there is also a semaphore home signal at the junction There is a stop sign located 266.6 feet north of the junction switch, all trains being required to come to a full stop before entering the tracks of the 9th District, and the normal position of the switch is for 9th District trains

The weather was clear and it was about 7° above zero at the time of the accident, which occurred about 2.50 a.m.

From point of curve to caution signal 3951 ft.
To Chicago
3917.6 Point of curve
8040
Direction of No.13
8040+80
Point of derailment
No wheel marks on ties
Furrow cut in ballast by engine
Southward main
Northward main
42+79
Engine tender on side
43+45
Engine No.684 on side
Baggage car - on side, turned up
Depot - destroyed by fire.
Express office and baggage room destroyed by fire.
To Detroit
No. 1682
Wabash Ry.
Sement, Ill.
Jan. 1, 1931.
9° curve
8045
8045 27 North end of train when it stopped.
Pullman - All wheels on rails
Pullman - Middle wheels of front truck derailed and all wheels of rear truck on north rail riding web of rail. South wheels of this truck on rail.
Buffet car - All wheels on rails
Chair car - All wheels on rails
Baggage car - Rear pair of wheels of front truck derailed - rest of wheels on rails.
Mail car - All wheels derailed
8050+08
8046+92
Stop sign
To St.Louis

Description

Southbound passenger train No. 13 consisted of one baggage and express car, one mail car, one baggage and express car, one coach, one buffet car, and two Pullman sleeping cars, hauled by engine 684, and was in charge of Conductor Harp and Engineman Hitchcock. This train passed Forrest at 12.46 a.m., one minute late, departed from Monticello, 7.3 miles north of Bement, at 2.40 a.m., according to the conductor, six minutes late, passed signal 152.0, which apparently was displaying a caution indication, and was approaching the station at Bement when it was derailed while traveling at a speed estimated at 60 miles per hour.

The engine and tender were derailed and overturned, the engine coming to rest in a badly-damaged condition 264 feet south of the point of derailment and 28 feet east of the northbound main track, the tender also came to rest on the east side of the main tracks, 68 feet to the rear of the engine. The first car landed against the station, 420 feet from the point of derailment, while the remaining cars in the train were not derailed at the initial point of derailment, but continued southward and stopped in upright position, partly derailed as a result of encountering debris, with the rear end of the last car 446 feet beyond the point where the engine was derailed. The stove in the station building was overturned, causing a fire which destroyed the station and a nearby express office and baggage room. All of the other cars in the train were more or less damaged. The employee killed was the engineman, and the employees injured were the fireman and brakeman.

Summary of evidence

Fireman Wede stated that the engineman applied the brakes when the train passed the automatic signal north of Bement, and made another brake application upon reaching a viaduct located 465 feet north of the curve, in accordance with the usual practice. He did not know how much the speed had been reduced prior to the accident, as he had his cab windows closed, and his first knowledge of anything wrong was when the engine lurched to one side and then started to overturn Firemen Wede said he did not talk with the engineman after leaving Monticello, and he could not remember whether the whistle was sounded after that time, neither could he state whether the train was running any faster than usual while approaching the point of accident. It also appeared from the fireman's statements that he has never had occasion to caution the engineman about running too fast approaching Bement, as the engineman always made the stop at that point satisfactorily.

Baggageman Broadhead stated that he was riding in the first car of the train during the entire trip and that he had heard the whistle sounded on several occasions, although he did not know whether it was sounded for the station at Bement, and he could not recall whether the brakes were applied prior to the time the car began to lurch during the course of its derailment, there was nothing about the speed of the train that attracted his attention.

Express Messenger Fisher stated that he was riding in the third car from the engine and, in addition to hearing other whistle signals sounded en route, he heard one long blast of the whistle sounded for the station while approaching Bement. As the brakes were not applied he became alarmed, due to the fact that the train was running very fast at the time, and stepped to the door of the car, a few seconds later he observed a flash of fire and then saw the engine turn over. He also said that he did not feel the brakes apply even after the head end of the train was derailed, and while he did not consider himself a judge of speed, yet he thought the train was traveling about 65 miles per hour when his car began to lurch.

Conductor Harp stated that he did not notice anything during the trip to indicate that the brakes were not working properly in stopping the train, but that for some reason the train was a little slow in getting started after having made a stop. The train departed from Monticello at 2.40 a.m. and there was nothing unusual after leaving that point until he felt a sudden shock in the car in which he was riding, the fourth car from the engine, just before it reached the curve on which the accident occurred. The car continued to surge as it rounded the curve, and as soon as it came to a stop he noted the time to be 2.52 a.m. He did not hear the whistle sounded while approaching Bement, although it might have been sounded without his having heard it. He also was unable to say whether the train was running at a higher rate of speed than usual, and was unaware that the train had reached Bement until he felt the jolt at the time of the accident. Conductor Harp further stated that he talked with the engineman before leaving Chicago and there was no indication that the engineman had not had proper rest, he also conversed with the engineman while at Gibson City and he appeared to be normal in every respect.

Brakeman Miller could not remember having heard the engine whistle sounded after passing Monticello, although he had heard it sounded previously. He had been riding in the rear car of the train but was on his way to the head end and had just entered the coach when there was a severe shock which caused him to fall. He felt no brake application prior to this time, and he did not know that his train was

coming into Bement except that the time indicated the train was nearing that point. There was nothing unusual about the handling of the train en route, and he had talked with the engineman while at Forrest but noticed nothing wrong with him.

Train Porter White stated that the only thing he noticed out of the ordinary about the operation of the train was its slow movement while starting from each station. He observed the lights at Bement while approaching that point, after which he heard the engine whistle sounded. A few seconds later he felt a sudden jerk of the train which was followed by a second shock which was more severe, he thought the first lurch was caused by an air-brake application, but it was different from the usual application when making a station stop.

The statements of Mail Clerks Glass and Boyd were to the effect that they were unaware of anything unusual until the derailment occurred, neither of them having noticed whether the brakes were applied prior to that time.

Conductor Ricketts, of the Illinois Terminal Railroad, which railroad crosses the Wabash tracks by means of an overhead bridge about 475 feet north of the curve, stated that he was about 100 yards from the bridge and observed train No. 13 approaching at a high rate of speed, which did not appear to be reduced before the train passed under the bridge. Being concerned about its safety, he continued to watch the train, and about one second after it passed the bridge he heard a crash and saw fire flying. He estimated the speed of the train when it passed under the bridge at 60 miles per hour, and was of the opinion that the brakes were not applied at that time, as he had frequently been in that locality when train No. 13 passed and it usually began to reduce speed near that point, on the day of the accident, however, there did not seem to be any such reduction.

Road Foreman of Engines Barnes stated that shortly after the accident he inspected engine 684 and found the reverse lever near the center of the quadrant, the throttle about one-half inch open, the independent brake valve in running position, and the automatic brake-valve handle slightly towards release position. He also examined the brake rigging, which was intact, with no brake shoes missing, and the wheels and flanges were in good condition. He found nothing about the engine that could have contributed to the cause of the accident.

In a statement signed by the superintendent, division engineer, and master mechanic, their examination of the track showed that where the engine was derailed the track was not

disturbed and the only indication of derailment consisted of slight marks on the ends of the ties on the left or east side of the track for a distance of 11 feet. From this point southward, the ballast was badly disturbed between the two main tracks, apparently caused by the pilot beam or cylinder while the engine was turning over. Engineman Hitchcock was quoted by one of the officials as having made an antemortem statement, on the morning of January 3, that he did not know how the accident happened, but that he "was going down there mighty fast."

Engine 684 is of the 4-6-2 type, with a driving wheel base of 13 feet $4\frac{1}{2}$ inches, and a total wheel base of 34 feet $3\frac{1}{4}$ inches. This engine was released from the shops on September 23, 1930, after having received Class 5 repairs.

Conclusions

This accident was caused by excessive speed on a sharp curve.

According to the statements of Fireman Wede the engineman applied the brakes approximately 4,100 feet from the point of accident and made another application about 625 feet from the point of accident, but he was unable to determine whether the speed had been reduced before the train reached the curve on which the accident occurred. The members of the train crew and other employees on the train, except Train Porter White, felt no application of the brakes prior to the accident, Porter White thought that when the train first lurched just before it was derailed, it was caused by a brake application, although the movement of the train at that time was not the same as that which would result from a regular application of the brakes. It did not appear that any particular notice was taken by the train crew as to the operation of the train while approaching Bement and they were unable to estimate the speed at the time of the accident Express Messenger Fisher, however, looked out just before the derailment occurred and thought the train was traveling at a speed of about 65 miles per hour Illinois Terminal Conductor Ricketts, who was in the vicinity of the point of accident, estimated the speed of the train at the time it passed his location at 60 miles per hour, the accident occurring very shortly afterwards. These estimates would seem to be verified by the absence of marks on the rails, indicating that the engine turned over from excessive speed, while the distance the engine traveled and the manner in which the other equipment came to rest, with the head end out on the 9th District track, four coach-lengths beyond the "stop" sign, clearly indicates that the

speed was far in excess of that at which the train could round the curve in safety.

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.