INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE PENNSYLVANIA RAILROAD AT JOHNSTOWN, PA., ON MAY 20, 1928.

June 23, 1928.

To the Commission.

On May 20, 1928, there was a derailment of a freight train on the Pennsylvania Railroad at Johnstown, Pa., the wreckage of which was struck by a passenger train traveling in the opposite direction on an adjacent track, resulting in the death of 1 employee and the injury of 23 passengers and 1 employee.

Location and method of operation

This accident occurred on that part of the Pittsburgh Division extending between Pittsburgh and Altoona, Pa., a distance of 113.8 miles, in the vicinity of the point of accident this is a four-track line, the tracks being numbered from north to south 4, 3, 2, and 1, over which trains are operated by time-table, train orders and an automatic block-signal system. The beginning of the derailment of the freight train was on eastbound track 2, on a 6° 20' curve to the left 744 feet in length, at a point 527 feet from the western end of the curve, at what is known as Haws Road crossing, a highway crossing at grade, located about 1,600 feet west of the passenger station at Johnstown, while the final derailment, followed by the derailment of the passenger train, occurred on the eastern end of a compound curve to the left 1,902 feet in length, at a point about 620 feet east of the station, at which point the compound curve is at its maximum, 5° 06'. East of the curve on which the initial derailment occurred there is a short tangent and then a short curve to the right and another short tangent, followed by the curve on which the final derailment occurred. The grade is practically level. The track is laid with 130-pound rails, 39 feet in length, with 20 ties to the rail-length, fully tie-plated, and ballasted with rock to a depth of from 12 to 16 inches. The track is well-maintained.

There was a light rain falling at the time of the accident, which occurred at about 6.51 a.m.

Description

Eastbound freight train extra 6874, running on track 2, consisted of 82 cars and a caboose, hauled by engine 6874, and was in charge of Conductor McConnell and Engineman Renouf. This train passed SG Cabin located 2.2 miles west of Johnstown, at 6.25 a. m. and while passing over Haws crossing at a speed of about 15 to 20 miles per hour the thirty-fifth car, a steel box car P.R.R. 571046, became derailed, the wreckage eventually fouling track 3 and throwing that track out of line at a point approximately 2,220 feet farther to the east.

Westbound passenger train No. 61, running on track 3 consisted of one baggage car, one club car, one dining car and five Pullman sleeping cars, all of steel construction, hauled by engine 5419, and was in charge of Conductor Faust and Engineman Hooper. This train passed C Cabin, 1.9 miles east of Johnstown, at 6.29 a.m., and on reaching a point just east of the station at Johnstown, while traveling at a speed estimated to have been between 35 and 40 miles per hour, it encountered the track out of line and also collided with the wreckage of extra 6874.

Apparently the lead pair of wheels of the forward truck of car 571046, were the first to be derailed and it then continued a distance of approximately 2,220 feet to the point where the car became entirely derailed. It then veered to the north or left knocking track 2 out of line, also a track known as Capress siding, which is located between tracks 2 and 3 at this point, as well as track 3, none of the other equipment in extra 6874, with the exception of the east truck of the thirty-sixth car, was derailed or damaged. Immediately after car 571046 came to rest it was struck by train No. 61, and the engine, tender, the first two cars and the forward truck of the third car in the passenger train were derailed. Engine 5419 came to rest on its left side immediately north of and parallel with track 3, badly damaged. The first car came to rest diagonally across tracks 3 and 4 but remained upright, as did the second car. The employee killed was the fireman of train No. 61.

Summary of evidence

The first knowledge members of the crew of extra 6874 had of anything wrong was when the air brakes applied in emergency, due to the train parting at the point of final derailment. Engineman Renouf, Fireman Clements and Head Brakeman Kuhn stated that the passenger train was opposite them when their engine came to a stop and that there was no opportunity whatever to flag the passenger train. After the accident Conductor McConnell saw wheel marks on the ties and he followed these marks back to Haws crossing. Flagman Moore also saw the marks of derailment when he got off the caboose. The members of the crew of extra 6874 estimated the speed to have been between 15 and 20 miles per hour at the time of the accident.

Engineman Hooper, of train No. 61, stated that his train was traveling at a speed of about 35 miles per hour and was about two or three car-lengths from the derailed box car when he was flagged by City Patrolman Bowser. At about the same time the engineman noticed that the truck was out of line and he immediately made an emergency air-brake application, but although the air brakes worked properly there was not enough space within which to reduce the speed materially prior to the accident. Conductor Faust, of train No. 61, estimated the speed of the passenger train to have been between 35 and 40 miles per hour when the air brakes were applied in emergency.

City Patrolman Bowser stated that he was opposite the passenger station as extra 6874 passed and after the front end of the train got by he heard an unusual noise and then saw fire and smoke coming from the derailed box car, which was bumping along on the ties and then swung back and forth and turned over. Patrolman Bowser ran toward the car, saw that it had knocked track 3 out of line, noticed train No. 61 approaching and at once waved stop signals, the derailment of the passenger train occurring immediately afterwards. Patrolman Bowser said that there was not enough time for the crew of extra 6874 to have given a warning of danger to the crew of train No. 61.

Inspection of the track disclosed the first mark of derailment to be a wheel-flange mark on the gauge side of the head of the high rail of the curve at a point 3 feet 3/4 inch east of the west side of Haws crossing, apparently it was at this point that the right lead wheel of the forward truck of the box car climbed the rail and it then continued in a direct line diagonally across the top of the rail for a distance of 16 feet 4 inches, at which point it dropped to the ties outside of the rail, and from this

point eastward wheel-flange marks appeared on the ties at a point about 14 inches from the rail, with corresponding marks on the ties on the opposite side of the track, for a distance of 1,833 feet. At this latter point the derailed wheels moved abruptly to the center of the track, running in that position for a distance of 195 feet. Marks made by two or more wheel flanges then appeared on the ties for a distance of 176 feet to the final point of derailment, where the marks were obliterated by the general derailment.

Investigation disclosed that the car involved was heavily, but not excessively, loaded; it contained 90,000 pounds of corrugated metal sheets securely stacked in four piles and properly anchored by metal grabs to the floor of the car, over the trucks in each corner of the car. There was no indication of shifted lading. Examination of the truck which was the first to be derailed showed that the female or truck center plate had 5½ inches broken out of the trailing portion of the rim while the center boss was almost entirely broken away, all that remained being a fragment on the north side about ¾ inch high and 1¼ inches long. The center pin was broken off in the truck bolster 2¾ inches below the bearing surface of the truck center plate and the remaining portion was only 6½ inches in length as compared with its original length of 15 inches. The truck center plate had abrasions on its rim indicating that at some time the male or body center plate had ridden on the rim. The fragment of the boss of the truck center plate extended into the normal clearance about ½ inch and it was found that when the body center plate was mounted upon the truck center plate, in normal position, and moved by hand to conform to its movement in service, it would lock, which condition might have prevented the truck from readily adjusting itself to the curvature of the track,

Conclusions.

This accident is believed to have been caused by the defective condition of a truck center plate under P.R.R. box car 571046.

The flange mark made by the derailed wheel of the truck on the top of the high rail of the curve from the point where it climbed the rail to where it dropped outside, a distance of 16 feet 4 inches, was clear and distinct and indicated that the wheel apparently was forced to climb the rail by a constant heavy pressure, holding the wheel rigidly in line, for when the flange released it on mounting the top of the rail at the initial point of derailment the wheel did not suddenly cross the rail,

3 inches in width, and drop off to the outside, but instead the flange continued in a direct line diagonally across the top of the rail in proportionate ratio to the easement of the curve, indicating that the truck was cramped or bound by some force which prevented it from adjusting itself to the curvature of the track It also appeared that the column casting bolt and its nut on the left side of the derailed truck closely hugged the outside of the low rail and guided the truck in its movement until it was burned off by friction, permitting the derailed truck to swerve farther from the rails and resulting in the final derailment.

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.