

INTERSTATE COMMERCE COMMISSION.

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE DETROIT, TOLEDO & IRONTON RAILROAD AT SPRINGFIELD, OHIO ON MARCH 13, 1924.

April 28, 1924.

To the Commission:

On March 13, 1924, there was a derailment of a freight train on the Detroit, Toledo & Ironton Railroad at Springfield, Ohio, which resulted in the death of one employee and the injury of four employees.

Location and method of operation

This accident occurred on the Second District of the Northern Division, extending between Napoleon and Junction, Ohio, a distance of 117.5 miles, and is a single-track line over which trains are operated by timetable and train orders, no block-signal system being in use. This accident occurred at a switch leading to an industrial track to the west of the main track, located 1,690 feet south of the station at Springfield, this is a facing-point switch for northbound trains. Approaching this point from the south, the track is tangent for some distance, followed by a 6-degree curve to the right about 950 feet in length, from which point the track is tangent for a distance of 830 feet to the point of accident and continuing some 1,100 feet beyond. The grade for northbound trains is slightly descending. The track is laid with 85-pound rails, 33 feet in length, with an average of 18 ties to the rail length, single-spiked except on curves and ballasted with cinders, it is double-spiked on curves and tie-plates are used on curves and switch leads. The track is maintained in fair condition. The weather was clear at the time of the accident which occurred about 5.25 a.m.

Description.

Northbound freight train extra 94-92 consisted of 36 cars and a caboose, hauled by engines 94 and 92, and was in charge of Conductor Hartley and Enginemen Gorman and Berkes. This train left Junction Yard, Springfield, en route to Lima, Ohio, at 4.50 a.m., and was derailed at a switch leading to the O. S. Kelly Works, Springfield, while traveling at a speed of 10 or 15 miles an hour.

Both engines, together with their tenders, were derailed; engine 94 followed the siding for a distance of about 300 feet and came to rest leaning to the left at an angle of about 45-degrees, its tender blocking both tracks, while engine 92 followed the main track and came to rest in an upright position, still coupled to the rear of the tender of engine 94. The first five cars were derailed and came to rest diagonally across the tracks in an upright position; with the exception of the front pair of trucks of the sixth car none of the other cars was derailed. Both the main track and the siding were torn up for a distance of about 250 feet. The employee killed was the fireman of the leading engine.

Summary of evidence.

Examination of this switch disclosed that a door closing arm of a side clearing hopper car had been caught and wedged between the stock rail of the spur track and the west switch point of the main track, forcing the switch point open about two inches. The door closing arm was in three sections, the first section which is attached to the winding shaft is 2 x 8 x 5/8 inches, the second section is 1 x 2 1/2 x 48 inches, forged and threaded at one end, and a third section consisting of a turnbuckle 2 1/2 inches in diameter and 8 inches long, forged "T" shape at the end, with a 1 1/2 inch hole through the "T" and threaded for a bracket pin which is 11 inches long, one end of which passes through the turnbuckle forging and the other end through a bracket on the hopper door and is provided with a hole for a cotter key. The turnbuckle end of the closing arm was wedged fast in the switch about 24 inches from its receiving end but the bracket pin was not found.

Southbound freight train extra 94-92, hauling 65 cars, in charge of the same crew involved in this accident, passed over this switch about three hours prior to the derailment. An inspection of the equipment of this train disclosed that a door closing arm at the "A" end, rear right side of SV&E hopper car 227876, located in the train about 20 car lengths ahead of the caboose, had become disengaged from the hopper door and dragged along the track a distance of more than 2 miles until it was caught and wedged in the switch point, tearing the arm loose from the winding shaft. An examination of the door arm bracket indicated that the pin had not been through the inner end of this bracket as the inside of the bracket hole was rusty while the outer bracket hole showed signs of recent wear. Further examination disclosed that the

other five closing arms were in place but the cotter key in the right door arm pin at the "B" end of the car was missing and the cotter key hole badly corroded with rust. At a point approximately 2.3 miles north of Springfield, a deep indentation was found on the end of a frog of an interchange track which appeared to have been made by the turnbuckle casting. Marks then led along the outside of the rail to the switch point crossing over the ball of the rail at that point, then trailing along inside the west rail of the track until reaching the frog of a facing point switch at a right turnout where the closing arm again crossed over the ball of the west rail and was dragged along the outside of the rail for a distance of about 3,100 feet when it was torn loose from the car and wedged between the stock rail and west switch point of the switch at the point of accident.

None of the employees noticed anything unusual during the southbound trip; saw no fire flying and did not feel any jar passing over the spur track switch at the Kelly plant.

Engineman Gorman, of leading engine 94, said that on the northbound trip the train was moving at a speed of about 10 or 15 miles an hour approaching the point of accident, and his first intimation of danger was when the engine left the rails. He said the headlight was burning brightly but he did not notice whether or not the switch light was burning.

Brakeman Donnelly said he was riding on the seat box on the fireman's side and although he did not notice any object in the switch point he did observe the indication of the switch light and said it showed green.

Engineman Berks and Fireman Dunbar of the second engine estimated the speed to have been about 12 or 15 miles an hour when the derailment occurred.

Conductor Hartley said he examined the switch after the accident and found the door closing arm wedged between the stock rail of the spur track and the point of the switch and that the point was open about two inches.

Car Inspector Kennedy inspected SV&E car 227876 on the Erie interchange track at Lima on March 10th and stated that the hopper doors were shut and properly secured and the pins and cotter keys in place and passed the car as being in safe condition for train movement. Inspector Morris said he inspected both sides of the train in which this car was moved southbound on March 12th at Lima, and did not notice any hopper doors open in the train.

Conclusions.

This accident was due to a switch point being held open by a hopper-door closing-arm being caught and wedged between it and the stock rail

The investigation disclosed that this hopper-door closing arm probably was not securely fastened at the time the inspection was made by Car Inspector Kennedy when the car was received on the interchange track, furthermore, inspection after the occurrence of the accident disclosed that the cotter key from the right door arm pin on the "B" end of the car was missing and the cotter hole corroded with rust. Had a thorough inspection been made by the car inspectors before this car was permitted to be moved, the defects apparent should have been discovered and the conditions remedied, thereby averting this accident.

The possible dangers which may arise as a result of lax and inadequate inspections are apparent and all possible precautions should be taken to make certain that equipment of this character is in secure and safe condition before cars are moved.

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.