

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED
ON THE NEW YORK, NEW HAVEN & HARTFORD RAIL-
ROAD NEAR YALESVILLE, CONN.,
OF AUGUST 21, 1920.

September 13, 1920.

On August 21, 1920, there was a derailment of a passenger train on the New York, New Haven & Hartford Railroad near Yalesville, Conn., which resulted in the death of 2 employees and the injury of 26 passengers and 2 employees. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

This accident occurred on that part of the Hartford Division extending between Air Line Junction, Conn., and Springfield, Mass., a distance of 59.78 miles. This is a double-track line over which trains are operated by timetable, train orders, and an automatic block-signal system. The point of derailment was about $1\frac{1}{2}$ miles north of Yalesville, and 285 feet south of the south switch of Holt's Siding; approaching the point of derailment from the south there is 1,310 feet of tangent, a curve of $1^{\circ} 50' 30''$ to the right 1,083 feet in length, 180 feet of tangent, and a curve of $1^{\circ} 56' 46''$ to the left extending to the point of accident, a distance of 637 feet. Beginning at the station at Yalesville the grade is about 0.5 per cent ascending for about $1\frac{1}{2}$ miles; the accident occurred on a level track just north of the top of this grade. The track is laid with 107-pound rails, 33 feet in length, with about 20 oak and chestnut ties to the rail, ballasted with crushed stone; tie plates are used at the point where the accident occurred, while anti-rail-croppers are in use at regular intervals. The track was in good condition in every respect. The weather at the time of the accident was clear.

The train involved in this accident was northbound passenger train No. 90, en route from New York, N. Y., to Springfield, Mass. It consisted of 1 Pullman club car, 1 Pullman parlor car, and 8 coaches, in the order named, all of steel construction, hauled by engine 1378, and was in charge of Conductor May and Engineer Bill. It left New Haven at 3.58 p.m., 33 minutes late, left Wallingford, 3.35 miles south of Yalesville and the last open telegraph office, at 4.20 p. m., 34 minutes late, and at about 4.30 p. m. was derailed north of Yalesville while traveling at a speed estimated to have been about 40 miles an hour.

Engine 1378 came to rest on its right side, east of the siding, approximately 500 feet north of the point of

derailment, the tender was separated from the engine and came to rest beside the engine in a reversed position. The first Pullman car turned over on its right side at an angle with the track of about 45° and rested across the siding and both main tracks. The second Pullman car also turned over on its right side, its head end coming in contact with the engine while the rear end remained on the ties of the northbound main track. The first coach and the front truck of the second coach were derailed, but both cars remained upright and were not damaged to any great extent. The employees killed were the engineman and fireman.

Engineman Handyside, who was riding on engine 1378 for the purpose of learning the road, was on the left side of the engine and said that although he was looking ahead along the track he did not see any obstruction of any kind or the rails, saying that his mind was fixed on locating the switch and switch target. His first intimation of anything wrong was when he saw the engine truck wheels and also the classification lights rise up. Engineman Handyside said engine 1378 was in excellent condition and rode smoothly.

Conductor May noticed nothing wrong until he felt the emergency application of the air brakes, following which the train ran a distance estimated by him to have been about 6 or 7 car-lengths, he thought the speed at the time the brakes were applied was about 40 or 45 miles an hour. The statements of the ticket collector, baggage master, flagman, and brakeman, as to the speed, varied from 35 to 45 miles an hour; two of them agreed with the conductor as to the distance traveled by the train after the emergency application of the air brakes, while the other two thought this distance was only 4 or 5 car-lengths. When going back to protect his train Flagman DeFere noticed nothing near the track in the way of an obstruction. Upon examining the track Conductor May found flange marks on the ties at a distance estimated by him to have been about three passenger car-lengths south of the switch leading to Holt's Siding; these marks were on the east or right side of the rail. Conductor May found nothing to indicate what had caused the wheel to leave the rail at this point.

Engineman Callaghan, who was a passenger on train No. 90, said that the first marks were about 6 inches from the rail and apparently were made by a pony truck wheel; neither he nor any of the other employees could find anything to indicate that wheels had run along the ball of the rail; they were also unable to find any obstruction which might have been on the rails.

Track Supervisor Reilly reached the scene of the accident about an hour after its occurrence and found what he said was a peculiar mark on both rails about 10 or 15

feet south of the point of derailment. The marks on the west or inside rail of the curve were more pronounced; they consisted of two short marks about 1 foot apart, and were from $\frac{1}{2}$ inch to 1 inch in width and less than 1 foot in length. One was in about the center of the rail and the other toward the gauge line. These marks on the west rail were a little north of the marks on the east rail. He expressed the opinion that these marks had been made by some metallic object being on the rails. Supervisor Reilley also found a mark on the inside of the west rail which appeared to have been made by something being caught between the flange of a wheel and the gauge of the rail; this mark was about $1\frac{1}{2}$ inches long and quite pronounced. Aside from the one wheel first derailed, Supervisor Reilley said that no wheels were derailed until the switch was reached, when the derailed wheel followed the stock rail, the track then being badly damaged and the head end of the train entirely derailed.

Trainmaster Halliday, who arrived at the scene of the accident with Supervisor Reilley, examined the track but did not see any marks on the rails, his first knowledge of them being when his attention was called to them the following morning by Master Mechanic Booth and Mechanical Superintendent Harris, and he said they agreed that the marks were made by an engine slipping.

Master Mechanic Booth examined the track for a distance of about $1\frac{1}{2}$ mile, but found nothing wrong with the track or any indication of anything dragging. The marks on the rails seen by him the next morning were 63 feet from the first mark of derailment, and he was positive that they were not there when he examined the track on the night of the accident. Master Mechanic Booth made a careful examination of engine 1378 but was unable to find anything which might have caused the derailment. He thought the front wheels of the engine track were the first to derail, saying that there was a mark on the front end of the truck which indicated that the lead pair of wheels were first derailed, and that they led off to the right, one of the wheels rubbing against the frame. He thought the derailment was due to an obstruction of some kind on the rails.

Road Foreman of Engines Buckley saw marks on the left rail, one of which, on the running surface, was about $1\frac{1}{2}$ inches square; he thought it looked as if some substance had gotten under the wheel.

Engine 1378 is of the 4-6-2 type, and has a total weight, engine and tender, of 419,800 pounds. It had been inspected prior to the accident and found to be in good condition, while examination after the accident failed to disclose any defects which could have caused the accident.

Several days after the occurrence of this accident two boys, 6 and 8 years of age, were arrested, it being alleged that they had placed stones on the rails. The evidence indicates that there were no signs of crushed stone in the vicinity of the point of accident, and while it is possible that these boys may have placed some small stones on the track it is doubtful if they could have been of sufficient size to derail the train without signs of crushed stone being evident after the accident. The statements of many witnesses indicate that the obstruction, if there was one, was of a metallic nature, while the statements of other witnesses, including officials, were to the effect that there were no marks on the rails indicating that there had been any kind of an obstruction.

The cause of this accident was not definitely ascertained.

While stones may have been placed on the rails, it is impossible to state definitely that they caused the derailment of the train; neither is it possible to state that the accident was due to any other form of obstruction, while careful examination of the track and equipment failed to disclose anything which could have contributed to the accident.

With the exception of the fireman, who was employed in February, 1920, all of the members of the crew of train No. 90 were experienced employees, and none of them had been on duty in violation of any of the provisions of the hours of service law.