

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS
RAILWAY AT ST. MARY-OF-THE-WOODS, IND., ON
FEBRUARY 6, 1923.

March 15, 1923.

To the Commission:

On February 6, 1923, there was a derailment of a passenger train on the Cleveland, Cincinnati, Chicago & St. Louis Railway at St. Mary-of-the-Woods, Ind., resulting in the death of one employee, and the injury of five passengers, five mail clerks, and one employee.

Location and method of operation.

This accident occurred on that part of the St. Louis Division extending between Mattoon, Ill., and Indianapolis, Ind., a distance of 128.2 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 the west passing-track switch at St. Mary-of-the-Woods; approaching this point from the west the track is tangent for more than 2 miles. With the exception of a slightly ascending grade, 800 feet in length, the eastern end of which is located 1,952 feet west of the point of accident, the grade is nearly 1 per cent descending for eastbound trains. Engine crews of eastbound trains can not obtain a clear view of the west switch until after reaching the summit of the slightly ascending grade.

The switch involved is a facing-point switch for eastbound trains, with the switchstand located on the fireman's side, night indications are green when the switch is closed, and red when it is open. There is a distant interlocking signal 1,316 feet west of the switch, while the home signal is 3,050 feet east of the switch. The distant signal operates electrically in connection with both the home signal and the west pass-

ing-track switch, and displays a caution indication when either the switch is open or the home signal is in the stop position. The interlocking plant at the station is closed at night, and the home signal is set in the clear position, a caution indication at the distant signal then indicates only that the switch is open, or else that the signal is out of order. The weather was clear at the time of the accident, which occurred at about 2.40 A.M.

Description.

Eastbound passenger train No 46 consisted of two mail cars, one combination car, one coach, and four Pullman sleeping cars, in the order named, hauled by engine 6470, and was in charge of Conductor Spidell and Engineman Denham. This train passed Sanford, 4.4 miles from St. Mary-of-the-Woods, at 2 37 A.M., 12 minutes late, passed the distant signal, which was displaying a caution indication, and was derailed at the west passing-track switch at St. Mary-of-the-Woods, while traveling at a speed variously estimated to have been between 30 and 65 miles an hour.

Engine 6470, its tender, the first four cars, and the forward truck of the fifth car were derailed to the left, the engine coming to rest on its right side, headed west, at the foot of a 20 foot embankment, 361 feet beyond the switch. The first two cars were overturned down the embankment, while the remainder of the derailed equipment was practically upright on the road bed. The passing track was torn up for a distance of about 500 feet. The employee killed was the fireman.

Summary of evidence.

Engineman Denham said that at a road crossing about 2 miles from the point of accident he made a running test of the air brakes, making about a 15-pound reduction, at which time the speed was about 55 miles an hour, and the brakes held properly, after which he almost closed the throttle and released the brakes. On reaching the whistling post, located about 700 feet west of the distant signal, while traveling at a speed of about 55 miles an hour, a 12-pound brake-pipe reduction was made, as the distant signal displayed a caution indication. Engineman Denham then noticed that the switch light was not burning, however, shortly afterwards

the headlight revealed the clear indication, which the engineman said was displayed by the switch target, and he called "White switch" to Fireman McDonald, who acknowledged it. Engineman Denham intended keeping the brakes applied until after passing over the switch, and then to release them. As the engine reached the switch points, traveling at a speed estimated by him to have been about 30 miles an hour, he felt it being derailed, and was of the impression he moved the brake valve to the emergency position. Engineman Denham was aware that the caution indication displayed by the distant signal meant either a signal failure, or that the switch was open or out of order, and that under the rules he should have proceeded to the home signal with caution. However, after passing the distant signal in the caution position, and seeing the white switch banner, he thought there had been a signal failure and made no attempt to stop. He expressed the opinion that had he known the switch was cocked, when he discovered the switch light was extinguished, he could have averted the accident.

Conductor Spidell and Baggage-master Terrell said their first knowledge of anything wrong was when the brakes were applied in emergency, about 10 seconds before the derailment occurred, while Brakeman Fullender said the first thing he noticed was the derailment of the car in which he was riding. The brakeman estimated the speed at 40 or 45 miles an hour, while the conductor and baggage-master estimated it to have been 60 or 65 miles an hour.

An examination of the switch and its appurtenances immediately after the accident disclosed that the lock had been broken, apparently having been forced apart by a wedge. The lever had been turned just enough to hold the switch points cocked or partly opened, in which position the switch target would indicate to the crew of an approaching eastbound engine that the switch was lined for the main track; the switch light was extinguished. The door of the telephone booth at this point had also been tampered with.

An eastbound train passed this point less than one hour prior to the accident, and at that time the crew in charge noticed nothing unusual in this vicinity, no other movement, in either direction, had been made between that time and the occurrence of the accident.

Conclusions

This accident was caused by malicious tampering with a switch.

The switch and its appurtenances bore every indication of malicious tampering, the lock apparently having been forced apart by a wedge, and the lever turned so as to cock or partly open the switch points. The switch light was also extinguished, while the lock on the door of a nearby telephone booth had been tampered with.

While tests showed that with the switch points partly open it was possible for Engineman Denham to have seen the white or proceed indication of the switch target, he knew that with the interlocking plant closed for the night a caution indication displayed by the distant signal could only indicate either that the switch was open or out of order, or that the distant signal was not working properly, and under the rules he should have approached "some signal and intervening switches with caution." In view of the fact that the switch light was extinguished, Engineman Denham should have been governed by rule 27, which provides that the absence of a signal, at a place where a signal is usually shown, must be regarded as the most restrictive indication that can be given by that signal.

All of the employees involved were experienced men; 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.