

**July 10, 1915.**

**No. 270**

**IN RE INVESTIGATION OF ACCIDENT ON  
THE CHICAGO & ALTON RAILROAD,  
NEAR MINIER, ILL., JUNE  
3, 1915.**

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On June 3, 1915, there was a derailment of a passenger train on the Chicago & Alton Railroad near Minier, Ill., which resulted in the injury of 22 passengers, 2 employees and 1 mail clerk. After investigation of this accident the Chief of the Division of Safety reports as follows:

The train involved in this accident was eastbound train No. 70, consisting of 1 mail car, 1 baggage car and 2 coaches, hauled by locomotive 558, and was in charge of Conductor Grady and Engineman McLaughlin. It passed Hopedale, 4.3 miles west of the point of accident, at 10:04 a.m., 2 minutes late, and was derailed about 1 mile west of Minier, while running at a speed of approximately 40 miles per hour.

The tender was the first part of the train to be derailed, and was followed by the derailment of all four cars, the first three of which turned over on their sides. None of the equipment was badly damaged.

This part of the Chicago & Alton Railroad is a single track line, trains being operated by the manual block signal system. The track is laid with 60 pound rails, 30 feet in length, with an average of 16 oak ties under each rail, about 20 percent of which are treated ties. The ballast is of stone, varying from 2 to 6 inches in depth, a great deal of this stone ballast being from 3 to 5 inches in diameter, making

it difficult to tamp properly. The track at the point of accident is straight, with a slight descending grade for east-bound trains. The weather was clear.

Enginemen McLaughlin stated that the train was traveling at a speed of about 40 miles per hour when the tender started to jump, and after three or four jolts the wheels seemed to go out from under it, he at once applying the emergency air brakes. He did not know what caused the accident.

Fireman Mulhern stated that he had just started putting in a fire when he noticed the tender was derailed. The tender started to go toward the right and then swung back and turned to the left. He thought the speed at the time was about 35 or 40 miles per hour.

The roadmaster stated that the section foreman went over the track on May 31, leveling it and picking up low spots, and that he himself rode over the track on June 1, at which time he did not notice any rough track or bad spots. He further stated that the ties were in good condition. The rails were laid in 1895 and were also in good condition. The angle bars, however, were eaten by brine and some were badly surface bent, which would allow the joints to be one-half inch low.

Examination of the wheels, trucks, etc., of the derailed equipment, revealed nothing which could have caused this accident. The track was examined for a distance of one-half mile west from the point of derailment, and also for one-fourth mile east of that point. It was found that the forward tender wheel had mounted the right-hand rail, and after running

along on the ball of this rail for a distance of 87 feet had dropped off on the south side of the rail and run along on the ties a distance of about 1 rail length. The wheel marks on the ties up to this point indicated that only one pair of wheels had been derailed. After dropping off the rail the wheels worked away from it until, in a distance of 30 feet, they were about 35 inches away from the rail. They then began to tear up the track, resulting in the derailment of the balance of the train.

This examination also showed that, while the gauge and alignment of the track were good, the surface was irregular. About 8 feet west from the point of derailment there was a rail joint in the left rail that was nearly 1 inch low. Fifteen feet west of this joint the left rail was a little less than one-half inch low, while at the next joint the left rail was slightly over 1 inch low. Fifty-three feet west of the point of derailment the left rail was nearly one-half inch low, while 69 feet away the two rails were practically level. About 84 feet from the point of derailment the left rail was about three-fourths of an inch higher than the right rail, this condition existing for a distance of about 20 feet. One hundred and twenty-eight feet west of the point of derailment, the two rails were level again, while at a distance of 155 feet the left rail was again lower than the right rail, the deviation in this case amounting to nearly one-half inch.

This accident was caused by the derailment of the forward tender wheels, due to the uneven condition of the track immediately west of the point of derailment. This un-

even condition undoubtedly caused the tender, partially filled with water, to rock back and forth to such an extent that the wheels mounted the rail, dropping off on the outside and causing the subsequent derailment of the rest of the train.

In many previous reports dealing with accidents which have been due to tender derailments on account of uneven track, attention has been called to the fact that on many railroads the track is not properly constructed or sufficiently well maintained to permit of the safe operation of trains at the rates of speed allowed. In the accident under investigation the track was not in good condition, the surface being very irregular. Until steps are taken to place track in good condition, and to maintain it in that condition, accidents of this character may be expected to occur.