

**In re investigation of accident on the  
Wabash Railroad, near Hannells, Iowa,  
on January 15, 1915.**

On January 15, 1915, there was a derailment of a passenger train on the Wabash Railroad, near Hannells, Ia., resulting in the death of one passenger and the injury of 14 passengers and one Pullman porter.

After investigation of this accident, the following report is submitted by the Chief of the Division of Safety.

The derailed train was westbound No. 1, enroute from Moberly, Mo., to Des Moines, Ia., and consisted of engine 426, one combination mail car and coach, one combination baggage car and coach, one chair car and one standard Pullman sleeping car, Engineman Baker and Conductor Carter being in charge of this train. All the cars in this train were of wooden construction, the two combination cars having steel siding.

On the date of the accident train No. 1 left Moberly at 2:20 a.m., one hour late, and passed Percy, Ia., the last telegraph station east of the point of derailment, at 8:27 a.m., 57 minutes late. The derailment occurred 3.9 miles west of Percy, at 8:35 a.m., the speed of the train at that time being approximately 30 miles per hour.

The sixteenth district of the Wabash Railroad, on which this accident occurred, is a single track line operated by the train order system, the manual block system being used for following movements only. Approaching the point of derailment from the east the track is level, and where the derailment occurred there is a 3-degree curve toward the left or south, the elevation of the outside rail being about three inches. The rails used at this point had been rerolled in 1904, being reduced in weight from 70 to 63 pounds per yard; the rails have been in the track for about ten years. They are 30 feet in length and single-spiked. Seventeen white-oak ties are used to the rail, new ties having been put in during the fall of 1914. No tie-plates were used on this curve. The ballast consisted of gravel and burnt gumbo. On this district the speed of passenger trains was restricted by time card rule to 45 miles per hour. At the time of the accident the weather was clear.

The rear wheels of the combination mail car and coach were the first wheels to be derailed, then subsequently all the following wheels were derailed, the engine and forward wheels of combination mail car remaining on the track. All the cars remained upright except the Pullman sleeping car, which was thrown down an embankment, landing bottom side up. All the persons who were killed and injured were in this car.

Examination of the track and equipment indicated that the wheels on the inside of the curve were derailed first, the wheels remaining on the opposite rail for a distance of 40 feet, where the wheels running on the ties struck the angle-bar at a joint of the inside rail; from that point the mail and baggage cars ran a distance of about 800 feet, crossing a bridge, 92 feet long, 210 feet from point of derailment. The chair car stopped about 280 feet beyond this bridge. In passing over the bridge the chair car apparently loosened the guard rails and caused the bridge ties to start bunching, and the Pullman car caught the point of guard rails and tore them up; it was thrown down the embankment on the south side of the track at the west end of the bridge.

The investigation disclosed that for several hundred feet in both directions from the point of derailment considerable trouble, due to soft spots in the track, has been experienced, and that this section is regarded as one of the most difficult to maintain. At the point where the wheels left the rails the roadbed had settled in the center of the rail on the outside of the curve, and about two weeks before the date of the accident this rail had been shimmed up, shims one inch in thickness being used on each of the 17 ties under this rail; the rail had also been braced with two oak timbers, 8 feet long, and two short angle bars, the braces being about 8 feet apart. After the derailment it was found that this rail had been pushed outward about two inches, bending the outside spikes, but the rail had not turned over.

The track supervisor had been over this portion of the road on Monday, January 11, and had located several "swings" or points where maintenance work was necessary. He wrote out a message to the foreman in charge of this section, containing instructions regarding repairing the track at these places, and intended to throw it off to the section foreman on his return trip. However, he did not have an opportunity to deliver the message, but mailed it from his headquarters so that it should have reached him the next day. He stated that he took no measures to ascertain whether or not the section foreman received this message and made the repairs directed. He stated he did not think the conditions required slow orders calling for reduced speed on this part of the road. Although the weather was such that the ground was alternately thawing and freezing, which might be expected to cause soft spots to develop quickly, and on this part of the road track trouble had frequently developed, on account of other duties he had not been over this section again until after the accident, a period of more than 4 days.

The section foreman stated that the rail where the derailment occurred had been shimmed up about two weeks before the accident occurred and had not required any attention since. He stated that he received a message from the supervisor early in the week but that it did not call attention to track conditions at the

location of this accident. This message had been destroyed or lost before this investigation. He stated that he went over his section each day, as required by the rules, examining the track carefully; but the investigation indicated that he had not been over the track where the derailment occurred either the day before or on the morning of the accident.

The engineer of maintenance of way stated that in view of the number and size of shims used the rail which spread should have been braced at every tie, and that the section foreman did not carry out his instructions in this respect.

This derailment was caused by a rail spreading under a train, due to shims being used without adequate bracing. The foreman of this section is at fault for not properly bracing the rail after shimming it up, and for not properly inspecting the track. The supervisor is also at fault for not properly inspecting the track and insuring that the bad spots noted by him had been repaired; also, for not discovering and correcting the dangerous condition due to shimming and inadequate bracing which had existed for about two weeks before the accident occurred.

In inspecting and maintaining track, particularly during the present season of the year when dangerous track conditions frequently and quickly develop, such laxity as was disclosed by this investigation should not be permitted to exist on any railroad.

This accident again calls attention to the fact, brought out in previous reports, that extraordinary care must be taken to maintain the strength of the track structure when shims are used and other winter repairs are made.