

April 20, 1915.

Inv-262

**In Re Investigation of accident which
occurred on the Wabash Railroad
near Strahan, Iowa, on
March 16, 1915.**

On March 16, 1915, there was a derailment on the Wabash Railroad near Strahan, Iowa, which resulted in the death of a brakeman and the injury of the conductor and flagman. After investigation of this accident, the Chief of the Division of Safety reports as follows:

Westbound second class freight train No. 95 en route from Stanberry, Mo. to Omaha, Nebr., consisted of 20 cars and a caboose, hauled by locomotive 2164, and was in charge of Conductor Parker and Engineman Munger. It left Shenandoah, the last open telegraph office, at 1.45 a.m. and at 4.10 a.m. the caboose and rear car, an automobile car, were derailed at a point nearly 1 mile west of Strahan, which is 16 miles west of Shenandoah. The speed of the train at the time of derailment was about 20 miles per hour.

The automobile car was the first to be derailed and after this car had run on the ties a short distance the caboose was derailed. The automobile car continued on the ties until it came to a stop at a point 781 feet beyond the initial point of derailment, only the rear trucks being derailed. The caboose, however, broke away from the car when about half-way across a trestle and went over the side of this trestle, landing bottom side up on the bed of the creek.

This part of the Wabash Railroad is a single-track line, trains being operated under the manual block signal system.

Leaving Strahan the track is straight with a slight ascending grade for about one-half mile; then there is a curve to the left followed by a short tangent and a curve of 4 degrees 30 minutes to the right about 450 feet in length. In about the middle of this curve is the trestle from which the caboose fell, this trestle being about 128 feet long and 24 feet above the ground at its highest point. Approaching this trestle from either side, there is a fill of about 18 feet. The grade at this point is 1.24 per cent descending for westbound trains. The track is laid with 33-foot rails with about 19 oak ties under each rail, ballasted with 14 inches of cinders and crushed stone. The derailed automobile car was a large car with a steel underframe, having an inside length of 50 feet and a marked capacity of 80,000 pounds.

Engineman Munger stated that the speed of his train was about 15 miles per hour when it started down the grade west of Strahan. Near the beginning of the curve on which the accident occurred he made an 8 or 10-pound application of the air brakes, which reduced the speed at this point to about 18 or 20 miles per hour. He released the air shortly after the engine passed the bridge, at which time he felt a slight jar and thought the train had parted. After finding out that the rear portion had been derailed he examined the track, and east of the first marks made by the derailed wheels he found a mark on the ball of the rail and thought that something had been sliding along on it. This mark was about half the width of the ball of the rail, rougher in some places than in others and looked as if something had been under the wheels, while at times it appeared to clear the rail.

West of this point were flange marks crossing the ball of the rail. He made a search to see if anything could be found that might have been dragging on the track but found nothing, neither did he find anything wrong with the running gear of the train.

Fireman Rodgers stated that upon an examination of the track, he saw marks on the inside of the ball of the rail which indicated that something had been dragging on the inside surface of the outside rail, and he thought it was caused by a brake shoe or some piece of metal. These marks were one or two rail lengths east of the first flange marks. He examined the trucks of the automobile car and one pair of trucks of the caboose, but did not find anything wrong. He also looked over the entire train to see if there were any brake beams down, but found nothing. He did not notice the rough mark on the ball of the rail referred to by the engineman.

Conductor Parker stated that his first knowledge of the derailment was when he felt the wheels of the caboose on the ties, and he at once applied the air brakes by means of the conductor's valve. He could not say whether the caboose or the car ahead of it was the first to be derailed. He had had this caboose regularly for more than two weeks and during that time had had no trouble with it. His statements were corroborated by those of the rear brakeman.

Section Foreman Penny stated that upon his arrival at the scene of the accident, he found a mark on the top of the ball of the rail, deeper in some places than in others, which looked as if something had slid along on the rail ahead of the wheels, and

in his opinion, the accident was caused by something getting under the front wheels of the forward truck of the caboose, the rear truck of the automobile car being derailed as a result of the derailment of the caboose. Although he made a careful search in the vicinity, he was unable to find anything which might have been responsible for the accident.

Supervisor Holmberg stated that on going east from the trestle, the first thing he found was a flange mark on the rail; six inches east of this was a slight dent on the rail, and from this point extending a distance of 34 feet farther east, there was a mark on the ball of the rail slightly in from the center, which looked as if something had been dragging on the rail ahead of the wheels. He stated that this mark was deeper in some places than in others and was also rough in spots. He did not, however, notice the marks on the inside of the ball of the rail, which were referred to by the fireman. In his opinion, something had been on the rail in front of the forward trucks of the caboose, the rear truck of the automobile car being derailed as a result of the derailment of the caboose. He looked over the brake beams and shoes and found them to be in good condition. He further stated that he could not find anything about the scene of the accident which might have caused it.

Wreck Foreman Butler stated that at the point of derailment there was a mark 6 or 8 inches long which looked as if something had been on top of the rail and had been pushed along by the wheels. East of this mark there was a mark on the inside of the ball of the rail, which looked as if the flange had been crowding

the rail in the endeavor to mount it. East of this, there were marks on the ball of the rail for a distance of 30 or 40 feet which looked as if something had been dragging. In his opinion some object fell on the rail in front of the forward trucks of the caboose resulting in this truck being the first to derail. He thought the marks on the ties east of the initial point of derailment and at the point where the caboose turned over, were made by three pairs of wheels. He traced the marks made by the automobile car from the point where it came to a stop after the derailment back across the bridge to the point where this car was apparently first derailed and found this to have occurred at a point about 50 feet west of where the first wheel marks showed on the ties. At first only one pair of wheels on the rear truck of the automobile car were derailed, followed afterwards by the derailment of the other pair of wheels of that truck.

Although careful examination was made of the track, the statements of the employees relative to the marks on the rails, which appeared to have been made by something being pushed along under the caboose wheels, could not be substantiated. All that could be found was a bright streak along the top of the rail. Several similar streaks were found nearby and were only the natural result of wear. This examination of the track further showed that the first marks of derailment were flange marks made by the left forward wheel of the rear truck of the automobile car at a point 260 feet east of the trestle. This wheel mounted the outside rail of the curve and dropped off on the outside. The two wheels on this axle then worked to the left until the second pair of wheels derailed at

a point about 35 feet beyond. About 52 feet beyond this latter point, the caboose was derailed. The underframe construction of the automobile car prevented the derailed wheels from swinging to the left more than 27 inches approximately, which kept the right hand wheels of the derailed truck in about the center of the track. When the right forward wheel encountered the point of the guard rail, 63 feet east of the trestle, it followed the curve of the guard rail toward the right, while the right back wheel mounted the point of the guard rail and trailed inside of it. As the curve of the guard rail increased, the forward wheel was forced nearer to the right rail of the track and in this manner the car crossed the bridge and came to a stop some distance beyond. When the right forward caboose truck wheels encountered the point of the guard rail they swung toward the left, thus being forced farther away from the track. The coupling between the automobile car and the caboose held until the car was about 50 feet beyond the eastern end of the trestle, with the forward wheels of the caboose over the side and the caboose sliding along with the tool box on the outer guard rail of the trestle. At this point the coupling broke and the caboose turned over into the creek.

When the right forward wheel of the rear truck of the automobile car was cast, a burr was left on the edge of the flange, and that the rear truck of this car was the first to be derailed, is evidenced by the fact that the marks on the ties made by the wheel having this burr, near the point where the car was rerailed after the accident, were identical with those found at the initial point of derailment.

Examination of the track showed only slight irregularities in gauge, while the superelevation was entirely adequate for the speed at which the train was moving. What caused the derailment of the automobile car was not ascertained.

All the employees involved were experienced men and none had been on duty in violation of any of the provisions of the hours of service law.