

September 6, 1913.

In re Investigation of Accident on the Missouri Pacific Railway near Berger, Mo., on July 2, 1913.

On July 2, 1913, there was a derailment of a passenger train on the Missouri Pacific Railway near Berger, Mo., which resulted in the death of 1 employee and the injury of 45 passengers and 1 employee.

After investigation of this accident, in which investigation the Public Service Commission of Missouri cooperated, the Chief Inspector of Safety Appliances submits the following report:

Westbound passenger train No. 1 was en route from St. Louis, Mo., to San Francisco, Cal. It consisted of two mail cars, one baggage car, one coach, one chair car, one tourist sleeping car, one dining car and two Pullman sleeping cars, in the order given, hauled by locomotive No. 6409, and was in charge of Conductor O'Brien and Engineman Meyers. This train left St. Louis at 9:05 a.m., 5 minutes late, passed Elich, Mo., at 11:08 a.m., 6 minutes late, and was derailed at a point about 3 miles west of Elich at 11:12 a.m., while running at a speed of 48 miles per hour.

The engine ran along the top of the fill at this point for about 400 feet before turning over and going down the embankment, which at this point was about 8 feet high. The tender frame followed the engine, but the tender itself separated from the frame and went down the embankment on the opposite side. The first mail car stood at the top of the fill lying directly across the track, while the second mail car and the baggage car were partially upright at the bottom of the fill. The coach also went down the embankment, turning over on its side. The next three cars were derailed but did not leave the track, while the two Pullman sleeping cars did not leave the rails.

This division of the Missouri Pacific Railway is a single track line. Trains are operated under the manual block system. At the hearing held by the Missouri Public Service Commission, General Roadmaster Morrison stated that the derailment occurred on a 3-degree 40 minute curve leading toward the north, 494 feet in length, the superelevation of the outside rail being about 5-1/4 inches. The track had been built for a speed of 55 miles per hour, and after the accident examination of the track on both sides of the point where the derailment occurred indicated that it was safe for

a speed of 50 miles per hour. At this point the track is level and is laid with 85-pound steel rails, there being about 12 oak ties under each rail. The ties are single spiked and standard angle bars are used. No tie plates or braces are used. The ballast is of chert, varying in depth from 10 to 12 inches. No slow orders were in force in the vicinity of the accident other than the time-card rule limiting the speed of passenger trains to 50 miles per hour.

Examination of the track showed that the outside rail for a distance of 150 feet east of the point of derailment was marked on top and sides of the ball in such a manner as to indicate that some part of the engine truck had fallen upon the rails. When within about 8 feet of the point of derailment the outside rail was found to have turned over, flange marks on the web of this rail being found for a distance of 25 feet.

Locomotive No. 6409 was of the Pacific type, having a total weight of engine and tender, ready for service, of 403,600 pounds. The engine truck was totally demolished, with the exception of the wheels, and on this account it was impossible to ascertain what, if anything, was the matter with it. One of the wheels was badly worn, but there was no other evidence of anything wrong with the flanges or wheels.

The cause of this accident could not be definitely determined, but on account of the marks and burns on the ball of the rail it is believed that some part of the engine truck became defective and dropped down on the rail, causing the derailment.