

INTERSTATE COMMERCE COMMISSION

REPORT OF THE CHIEF OF THE DIVISION OF SAFETY COVERING HIS INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE KANSAS CITY SOUTHERN RAILWAY NEAR TIPTON FORD, MO, ON AUGUST 5, 1914

SEPTEMBER 19, 1914

To the COMMISSION

On August 5, 1914, there was a head-end collision between a gasoline motor car and a passenger train on the Kansas City Southern Railway near Tipton Ford, Mo, resulting in the death of 38 passengers and 5 employees and the injury of 34 passengers and 4 employees. After investigation as to the nature and cause of this accident, I beg to submit the following report.

Missouri & North Arkansas passenger train No 209, operating between Joplin, Mo, and Harrison, Ark, consisted of motor car No 103, and was in charge of Conductor Nicholas and Motorman Rathiff. This train left Joplin at 5 30 p m, 1 hour and 15 minutes late, and at 6 p m collided with train first No 56 at a point about 3,500 feet south of the south switch at Tipton Ford while running at a speed of about 35 miles per hour. Motor car No 103 was a gas-electric motor car of light steel construction, 70 feet long, weighing 47 tons, with a seating capacity of about 65 persons. It had a carrying capacity of 150 gallons of gasoline, and at the time of the collision carried about 105 gallons.

Kansas City Southern passenger train, first No 56, operating between Heavenor, Okla, and Pittsburg, Kans, consisted of mail and baggage car No 38, baggage and express car No 21, baggage and express car No 3, express car No 1709, day coach No 159, chair car No 277, and one Pullman sleeping car, hauled by locomotive No 805, and was in charge of Conductor Sisk and Engineman Brennan. Cars Nos 38, 21, 1709, and 277 had steel underframes, while the remainder of the cars were of wooden construction. This train left Neosho, Mo, 8½ miles south of the point of accident, at 5 40 p m 3 hours and 15 minutes late, and at 6 p m collided with train No 209 while running at a speed of about 35 miles per hour.

Motor car No 103 was totally destroyed. Locomotive No 805 and two baggage cars broke from the remainder of the train, the

locomotive telescoping the motor car about 20 feet and shoving it back 651 feet, where they came to rest in an upright position with the rear wheels of the engine truck derailed and the front truck of the motor car pushed back under the car. The collision caused the pipes and tanks carrying the gasoline to burst, permitting its ignition, at once enveloping the entire car in flames, making the work of rescue impossible. Many of the passengers were burnt beyond recognition.

Illustration No 1 shows motor car No 103 after being rolled over and pulled north 132 feet to clear the track. Illustration No 2 is a photograph of motor car No 103 taken some time prior to the accident.

The division on which this accident occurred is a single-track line, with train movements governed by the train-order system, without block signals. Missouri & North Arkansas Railroad trains operate over this line from Joplin, Mo., to Neosho, Mo., a distance of 19.6 miles, under the operating rules of the Kansas City Southern Railway. The weather at the time was clear.

This accident occurred on a tangent 550 feet in length with practically level track. There is a 2° curve leading to the east 160 feet south of the point of accident, while 390 feet north of the point of accident there is a 5° curve leading to the east. Approaching the point of collision from opposite directions, enginemen have an unobstructed view of each other for 900 feet. Illustration No 3 is a view looking toward the south, showing the wrecked motor car and the curve near which this accident occurred.

On the day of the accident the dispatcher at Pittsburg, Kans. addressed train order No 84 to train No 209 at Joplin, the order reading as follows:

First No 56 meet No 209 at Tipton Ford and wait at Tipton Ford until 5 50 p m. Saginaw 6 p m for extra No 563 south.

Operator Hadley, on duty at Joplin, stated that he handled several train orders for train No 209 on August 5, including train order No 84, all of which were delivered to Conductor Nicholas of that train and signed by the latter in his presence. He stated that he personally delivered two copies of train order No 84 to Conductor Nicholas after receiving his signature, and produced carbon copies of this order bearing the conductor's signature. He did not see the motorman at all and could not say whether or not the conductor delivered the order to him. He stated that this order was first signed by Conductor Gibson and made complete at 5 05 p m, after sending his signature to the dispatcher at Pittsburg, Kans., and was made complete in the same manner at 5 08 p m after Conductor Nicholas had signed it. Operator Hadley further stated that the order numbers were placed

on the clearance card, but did not know whether the conductor checked off the orders against the numbers thereon. About 10 or 15 minutes after train No 209 left Joplin he started to report that train to the dispatcher at Pittsburg, but noted that it had not been registered out, whereupon he informed the dispatcher of the fact, stating that it left at 5 30 p m, to which the dispatcher replied "O K". After the accident train No 209 was registered by Mr Lucas, superintendent of terminals. This was the first time he had known Conductor Nicholas to fail to register his train. Operator Hadley was positive in his statements that Conductor Nicholas signed the orders and received them, but stated that they were not read back to him by the conductor after he received them.

Train Dispatcher Sebring, located at Pittsburg, Kans, stated that he was on duty at the time of the accident and issued train order No 84. This order was repeated back to him by Operator Hadley, at 4 53 p m, and made complete at 5 08 p m, which is done on all orders of this kind after the conductors of the trains to which they are to be delivered sign them. About 5 40 p m he asked Operator Hadley for a report on train No 209, and was informed that the conductor had failed to register it out, but that it left at 5 30 p m. He asked Operator Hadley if the crew of No 209 had received train order No 84, and was informed that they had. He asked the operator to repeat the order, his object being to reassure himself that no mistake had been made. The first information he had regarding the accident was at 6 10 p m. He further stated that he had transacted considerable train-order business with Operator Hadley and found his work to be first class.

Superintendent of Terminals Lucas, in the employ of the Joplin Union Depot Co, stated that Operator Hadley entered the employ of his company on July 25, 1914. He employed Operator Hadley upon his own statement as to his experience and qualifications, and stated that his service was very satisfactory. He further stated that he was personally acquainted with Conductor Nicholas and Motorman Ratliff, and there was no question in his mind as to their qualifications. He was at his home when informed by telephone of the accident by the ticket agent at Joplin, and when he arrived at the telegraph office and looked at the train register he noticed that train No 209 had not been registered out. In order to keep correct the record of wheelage through Joplin Union Depot, Mr Lucas registered train No 209. He asked the operator for the orders for train No 209, picked up train order No 84 and noticed the name of Conductor Nicholas on it, but could not say whether or not it was his signature. However, he was satisfied in his own mind that Operator Hadley delivered a copy of train order No 84 to Conductor Nicholas.

Conductor Gibson, of extra 563, stated that his train arrived at Joplin about 4 40 p m , and he went into the telegraph office at that place about 4 55 p m or 5 p m to register his train, and while there received a copy of train order No 84 . When he had finished registering he saw Conductor Nicholas and pushed the register toward him . After receiving train order No 84, Conductor Gibson left the telegraph office about 5 05 p m , and at that time Conductor Nicholas was standing at the register, apparently checking it . He did not see Conductor Nicholas receive a copy of train order No 84 .

Conductor Morris, of the Missouri, Kansas & Texas Railway, stated that he saw Conductor Nicholas in the telegraph office at the register table about 5 05 p m or 5 10 p m , apparently registering his train, but could not say definitely what he was doing . He did not see him sign for any orders, but Conductor Nicholas was still standing at the operator's counter when he left the office .

Conductor Hailey, of the Missouri, Kansas & Texas Railway, stated that he saw Conductor Nicholas in the telegraph office at Joplin about 5 20 p m or 5 25 p m . He first saw him at the register and thought he was registering, but paid no particular attention to him . He saw Conductor Nicholas with a bundle of papers in his hand, but could not say whether they were orders or something else . He saw Conductor Nicholas and a man he supposed was the motor-man walk together toward train No 209 .

L S Wells, a hackman at Joplin, stated that he saw Conductor Nicholas at the operator's desk at Joplin shortly after 5 o'clock and saw him reach over on the board in front of the operator and get some papers, but he did not know what the papers were, nor did he see him do any writing . He stated, however, that he did not know exactly what business Conductor Nicholas transacted with the operator .

Fireman Walters, of train first No 56, stated that the speed of his train at the time of the accident was about 35 miles per hour, and the engineman had only sufficient time to shut off steam, apply the air, and start for the gangway before the collision occurred . The gasoline tank on the motor car seemed to burst, throwing gasoline back over the locomotive and allowing it to ignite from the fire box . He was on the seat box on the outside of the curve and did not see the motor car until the engineman called to him .

Line foreman Laudeback, of the Missouri & North Arkansas Railway, stated that he was a passenger on train No 209 at the time of the collision, riding on the rear platform, and had no warning of the collision, as there was no application of the air brakes prior to the crash . He stated that the whistle was sounded for Tipton Ford and train No 209 passed there at a speed of about 35 miles per hour .

He succeeded in rescuing several passengers from the motor car before the fire made it impossible to continue the work. He then went to a telephone and advised the railroad officials of the wreck. He knew both Conductor Nicholas and Motorman Ratliff well and considered them careful men.

This accident was caused by train No 209 failing to wait at Tipton Ford for train first No 56, as directed by order No 84.

While at the hearing before the Public Service Commission of Missouri the question was raised as to whether or not the name "Nicholas" on the carbon copy of train order No 84, furnished by Operator Hadley, was the signature of Conductor Nicholas, there was no positive or direct evidence that the signature was not genuine. While a number of persons saw Conductor Nicholas with papers in his hand at the register and when leaving it, no person saw him sign or receive train order No 84 except Operator Hadley, who is positive in his statements that he signed and received this order at Joplin. On account of the entire crew of train No 209 being killed in the collision and their bodies cremated, no evidence is procurable as to the reason why the direction contained in order No 84 was not obeyed by them.

Conductor Nicholas entered the service of the Missouri & North Arkansas Railroad as a brakeman on January 17, 1901, and was promoted to conductor on April 1, 1901. In June, 1901 he left the service, but was reinstated as conductor in April, 1902. On November 15, 1906, he was promoted to superintendent, but resigned that position September 12, 1908, and resumed work as a passenger conductor. His record was good.

Operator Hadley is 29 years of age and secured his first position as an operator in 1903, since which time he had been in the employ of eight different railroad companies. It further appeared that when he first became a telegrapher he was discharged by the Atchison, Topeka & Santa Fe Railway at Holly, Colo., for failure to deliver a train order. He entered the employ of the Joplin Terminal Co about July 22, 1914, and had been rendering satisfactory service.

This is the first accident investigated by the commission wherein a gasoline motor car was involved. On account of the fire caused by ignition of this highly inflammable substance, the casualty list in this accident was much larger than it otherwise would have been. The rapidly increasing use of these motor cars, carrying large quantities of gasoline, introduces such an additional element of danger as to demand extraordinary precautions against the possibility of collisions wherever such cars are used.

As previously noted, no block-signal system is in use on the Kansas City Southern Railway. It appears also from the facts developed

in this investigation that even the inherently weak train-order system is not used at its highest degree of efficiency on this railroad Rule No 208 of the Kansas City Southern Railway book of rules provides for the placing of a meet order at the designated meeting point "when practicable" It was obviously not practicable to use the middle order in this case, for the reason that no operator was stationed at Tipton Ford

The 20 miles of track between Joplin and Neosho is used jointly by trains of the Kansas City Southern and Missouri & North Arkansas Railroads Four first-class and two third-class trains of the latter road are scheduled to pass over this section of track daily, subject to the operating rules of the Kansas City Southern Railway There are two passing tracks between Joplin and Neosho and it must frequently become necessary to require trains to meet at those points yet no operator is employed at either place, and it is thus rendered impossible to use the middle order at meeting points on this section of track

Respectfully submitted

H W BELNAP,
Chief Division of Safety