March 30, 1914.

IN RE INVESTIGATION OF ACCIDENT ON THE CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA RAILWAY AT MENDOTA, MINN., ON MARCH, 14, 1914.

On March 14, 1914, there was a derailment of a passenger train on the Chicago, St. Paul, Minneapolis & Omaha Railway at Mendota, Minn., resulting in the death of 1 passenger and the injury of 68 passengers and 1 employee.

After investigation of this accident and the circumstances connected therewith the Chief Inspector of Safety Appliances reports as follows:

The Minnesota and Iowa division of the Chicago, St. Paul, Minneapolis & Omaha Railway, upon which this accident occurred, extends between St. Paul, Minn., and Sioux City, Iowa, a distance of 397 miles. It is a single track line upon which trains are operated under the manual block signal system.

The derailed train was eastbound passenger train No. 4, in charge of Conductor Weber and Engineman Foote. It was hauled by engine No. 376, and consisted of seven cars, located in the following order from the engine back: mail car No. 722, baggage car No. 246, smoking car No. 141, coach No. 96, coach No. 65, parlor car No. 511, and cafe car No. 615. The parlor and cafe cars were of wooden construction; all other cars in the train were of steel construction.

Train No. 4 is due at Mendota at 7:21 p.m. but does not stop at that station. Upon approaching Mendota on the date of the accident Engineman Foote reduced the speed of his train to

avoid passing the station ahead of time, and while passing over the house-track switch, located about 300 feet west of the station, coach No. 55, the fifth car from the engine, left the rails at the switch. The parlor car immediately in the rear of the derailed coach was also derailed, but the cafe car, which was the last car in the train, remained on the rails. The speed of the train at the time of derailment was about 25 miles per hour. The derailed cars ran about 400 feet to a one-span bridge over a highway crossing at the east end of the station platform. At this point the trucks of coach No. 55 dropped over the side of the bridge to the abutment on the east side of the highway; the car body was torn from its trucks and rolled over down the embankment, which was about five or six feet high, turning three-fourths of the way over in doing so. Parlor car No. 511 broke loose from coach No. 55 and turned so that its front end rested on the ground at the rear of the coach, the rear end remaining with trucks hanging over the side of the bridge. This car remained in an upright position. The forward portion of the train stopped with its rear end about 100 feet beyond the forward end of coach No. 55 as it laid at the foot of the embankment. The track was but slightly damaged. The weather at the time of the accident was clear and mild.

This derailment was caused by the switch points on the house-track switch standing open sufficiently to allow a wheel flange to go between them. The first wheel marks on the ties were at the heel of the switch rail. The opening of the switch

points was caused by the throw rod of the switch becoming disconnected from the up and down rod at the switch stand, due to the removal of a cotter key from the bottom of the up and down rod. This switch was not equipped with a point lock for holding it in the closed position, and the cotter key at the bottom of the up and down rod was the only thing provided for holding the throw rod in place. When this key was removed the throw rod dropped down off the end of the up and down rod, leaving the switch points free to move in response to the vibration of the wheels of a train passing over them.

Section Foreman Langer stated that after the accident he found the cotter key lying on the ground close to the track between the head blocks of the switch, about 18 inches from the point of connection between the throw rod and the up and down rod. It was a shorter key than is generally used for making this connection, and only projected through the up and down rod about half an inch. The spring of the key was sufficient to have held it in place, but there is no evidence that its removal was the result of any malicious or deliberate intent to wreck the train. It was the belief of General Superintendent Peshin that in cleaning out water, caused by melting of the ice and snow and thawing of the ground, section men struck the end of this short cotter key with some tool with which they were working and drove it either wholly or partially out. If driven entirely out it could easily have landed 18 inches away, at the point where it was found, and if driven

only partially out the spring of the key, when it left the hole due to the vibration of trains passing over the switch, would have thrown it to the point where it was found.

Roadmaster Larsen stated that it was the duty of section foreman to make a daily examination of the condition of all switches. Section Foreman Langer said that he examined this switch about 3 o'clock in the afternoon of the day of the accident and did not discover the absence of the cotter key. He did not, however, at that time examine the bottom of the up and down rod to assure himself that the key was in place. He examined the bottom of the rod on March 11th, three days before the accident, and found they were in place at that time.

The investigation developed the fact that switch stands of this type were ordinarily provided with a strap of iron reaching across the head blocks and beneath the bottom of the throw rod, so as to prevent it from dropping down far enough to become disconnected from the up and down rod in case the cotter key became displaced, thus providing a safeguard against the throw rod becoming accidentally disconnected. This safety strap was not in place on this switch stand at the time of the accident. Section Foreman Langer said that the strap had been removed sometime last fall for the purpose of changing the head blocks to the switch. He did not replace the strap after changing the head blocks for the reason that it was worn out, and he intended replacing it with a new one, but forgot about it. He further stated that had the strap been in place the throw rod could not have dropped down far enough to become disconnected.

Roadmaster Larsen said that he made a personal examination of the switch on February 4th, but did not notice the absence of the safety strap. He said that had this strap been in place the throw rod would not have dropped down.

Under date of March 7, 1946, Roadmaster Larsen issued a circular letter to all section foremen warning them to pay particular attention to their switches and see that these safety straps were in place.

For the unsafe condition of this switch, Section Foreman Langer and Roadmaster Larsen are responsible. Both of these men knew the importance of maintaining the safety strap in place, and the roadmaster has issued special instructions with reference to the matter, yet so little attention was paid to it that when the strap was removed by Foreman Langer to permit the changing of heat blocks he neglected to replace it, and admitted that he forgot all about it. The switch therefore remained without this essential safety attachment for several months, and its absence was the primary cause of this derailment. During the time that this switch was in its unsafe condition, contrary to the express instructions of Roadmaster Larsen, it was under the daily observation of Forman Langer, and even the most perfunctory inspection would have apprised him of its condition. Roadmaster Larsen also made an inspection of this switch more than a month prior to the date of the accident, and although the strap was then absent, contrary to his specific instructions, he failed to note it. Inspections by the roadmaster are made for the purpose of disclosing unsafe

track conditions and securing their correction. When they fail to accomplish their purpose, as was manifestly true in this case, the roadmaster cannot escape responsibility for the consequences of such failure.

Section Foreman Lanyer has been employed in track work by the Chicago, St. Paul, Minneapolis & Omaha Railway for eighteen years, nine years of which time had been as section forman. He had been forman of the Vandota section for seven years. Roadmaster Larson had worked for the Chicago, St. Paul, Minneapolis & Omaha Railway in track work for a period of thirty-two years, twenty years as section and extra gang fo man, and twelve years as roadmaster and acting roadmaster. He had been roadmaster on the Minnesota and Iowa division a little over nine years.

No employee involved in this accident was working in violation of any of the provisions of the hours of service law.