

February 19, 1916.

In re: Investigation of accident which occurred
on the Minneapolis & St. Louis Railroad,
at Emmons, Minn., January 4, 1916.

On January 4, 1916, there was a derailment of a passenger train on the Minneapolis & St. Louis Railroad at Emmons, Minn., which resulted in the injury of 3 passengers, 4 employees of the railroad company, and 2 Pullman employees.

After investigation of this accident the Chief of the Division of Safety reports as follows:

Southbound passenger train No. 4 was en route from Minneapolis, Minn., to Des Moines, Iowa. It consisted of 1 mail car, 1 baggage car, 1 smoking car, 1 chair car and 3 Pullman sleeping cars, hauled by locomotive No. 187, and was in charge of Conductor Keating and Engineer Eaff. It left Albert Lea, Minn., at 12:40 a.m., on time, and at about 1:05 a.m. was derailed at the north house track switch at Emmons, 13 miles south of Albert Lea, while running at a speed estimated to have been about 25 miles per hour. The locomotive, mail and baggage cars, and the forward trucks of the smoking car remained on the main track. The rear truck of the smoking car was diverted to the side track, resulting in the overturning of this car. It then skidded along on the ground stopping with its forward end clear of the house track and the rear end fouling the main track. The chair car was diverted to the house track and collided with a stock car standing thereon, demolishing the stock car. The coupling broke between the chair car and the first sleeping car, and the two sleeping cars continued on the main track, colliding with the rear end of the coach. The greatest damage was sustained by the coach and first sleeping car. Slight damage was also sustained by the baggage and chair cars. The weather was clear.

This part of the Minneapolis & St. Louis Railroad is a single track line. No block signal system is in use, trains being operated by train orders and time-card rights. The track is laid with 70 pound rails, 30 feet in length with about 15 or 16 ties under each rail. The ballast is of gravel and cinders. The track was in good condition and well maintained. The switch at which this accident occurred is on a curve of 3 degrees leading to the right, about 1,600 feet in length, at a point about 300 feet south of the northern end of the curve. The switch, which is a facing point switch for southbound trains, is what is known as an Elliot Wedge Key Adjustable Switch, the switch stand and main rod being of the Pettibone Safety type. The switch points on the switches of this type are secured to the bridge bar by two seven-eighths inch bolts through each rail.

Examination after the accident showed that the two bolts securing the switch rail on the right side of the track had been struck by something and sheared off just back of the nuts, allowing the switch point to become misplaced. The switch stand was lined up and locked for main line movements and no other defects or damage of any kind either to the switch or track could be found at this point. About 500 feet north of the switch is a highway crossing equipped with flat steel cattle guards. On these cattle guards were fresh marks and indentations which indicated that something had been dragged over them as the train passed. These marks were found along the track for a distance of about one-half mile north of the switch.

Examination of the equipment of the train showed that the brake lever fulcrum on the forward truck of the baggage car had broken, allowing the brake lever to drag on the track, and it is supposed that this brake lever came in contact with the bolts securing the switch point on the right side of the track, breaking them off. This permitted the switch point to swing toward the main track rail sufficiently to divert a part of the train to the house track. When removed from the track the brake lever showed, by the way it was marked, that it had been dragging on the track for some distance. Examination of the broken fulcrum showed that about two-thirds of the metal had recently been broken, while the remaining one-third was rusty, indicating that there had been a crack there for some time. There did not appear to be any flaw in the metal. The equipment of this train had been inspected at Albert Lea, at which time no defects were discovered.

This switch had been cleaned by the section foreman on January 2nd, at which time it was in good condition. The last train to pass over it since was a northbound extra freight train at about 4:20 p.m., January 3rd, nearly 2 hours prior to the occurrence of the accident, nothing wrong with the switch being noticed at the time.

This derailment was caused by a misplaced switch point which had been detached from its fastening by the breaking of the bolts provided to hold it in place. The evidence is that these bolts were broken by dragging brake rigging on the forward truck of the baggage car of the derailed train, the dragging brake rigging being the result of the parting of the fulcrum which secured the brake lever to the brake beam. There was some evidence of an old defect in the brake fulcrum, which it is not believed could have been discovered by ordinary inspection.