

April 30, 1914.

IN RE: INVESTIGATION OF ACCIDENT ON THE CHICAGO, BURLINGTON,  
AND QUINCY RAILROAD AT HAWTHORNE, ILL., ON MARCH 30, 1914.

On March 30, 1914, there was a derailment of a passenger train on the Chicago, Burlington & Quincy Railroad at Hawthorne, Ill. There were no fatalities or serious injuries. After investigation of this accident the Chief Inspector of Safety Appliances reports as follows:

Eastbound train No. 3 consisted of 2 baggage cars, 2 coaches, 1 chair car, 2 tourist sleeping cars, and 3 standard sleeping cars, hauled by locomotive No. 2600, and was in charge of Conductor Willard and Engineman Himmon. Train No. 2 passed the last open telegraph office, Clyde, Ill., at 7:21 a. m., at that time being 43 minutes late, and was derailed at the interlocking tower at Hawthorne at 7:23 a. m. while running at a speed of 37 miles per hour.

The first part of the train to be derailed was the rear truck of the 6th car, which was followed by the derailment of the remaining four cars. At point about 200 feet beyond the initial point of derailment the train broke in two between the 6th and 7th cars, the forward portion traveling an additional distance of about 180 feet. None of the derailed cars tipped over or was badly damaged, although they were all tilted at an angle of about 60 degrees. The short distance traversed by the train after derailment is probably accounted for by the retarding effect of the derailed trucks on the rear portion of the train, sinking into the roadbed, prior to the breaking in two of the train, at which time the air brakes were applied. The weather at the time was cloudy.

This part of the Chicago, Burlington & Quincy Railroad has three main tracks, train movements over which are governed by automatic block signals. The track at the point of derailment is straight, with a slight descending grade for eastbound trains. It is laid with 90-pound steel rails, 33 feet in length, with an average of 20 oak ties under each rail. The ballast is of gravel, about 18 inches in depth. Opposite Hawthorne tower is a crossover leading from the track on which train No. 2 was running to a parallel track known as the running track, used for transfer work. The initial point of derailment was at the western end of this crossover.

Examination showed that the derailment was caused by a loose wheel on the south side of the forward axle on the rear truck of the first tourist sleeping car, the 6th car in the train. This wheel, which was loose to such an extent that the wheels on this particular axle were more than 2 inches inside of the proper gauge, had allowed the north wheel to work toward the south until it was far enough in to strike the switch point of

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the facing point switch at the crossover, breaking it and causing the derailment of this truck, as well as the remaining four cars in the train. Examination of the track showed that there was an abrasion on a guard rail 150 feet west of the point of derailment, which indicated that even at this point the north wheel had been far enough inside the rail to enable it to strike a switch point, the center of this mark being four inches from the gauge side of the north rail. There was also a rail joint about four feet west of the switch at which the derailment occurred which had two bolts on the inside broken off. There were no marks on the ties, however, in the distance of four feet intervening between this point and the switch, so that it would appear that these bolts were broken off by some part of the equipment of the trucks when they were derailed at the switch, neither were any other marks discovered immediately west of the point of derailment. Examination of guard rails, frogs and crossings at Aurora, Ill., Galesburg, Ill., and Burlington, Ia., points 30, 154 and 197 miles, respectively, west of the point of derailment, disclosed marks on guard rails and crossing planks on the north side of the track which had been made by a wheel flange, and which corresponded in appearance with the marks made at Hawthorne. At Creston, Iowa, Pacific Junction, Ia., and Omaha, Neb., points 304, 468 and 487 miles, respectively, west of the point of derailment, no marks were found. It is, of course, impossible definitely to say that the flange marks found at Aurora, Galesburg, and Burlington were the result of this loose wheel allowing the north wheel to work in toward the center of the track, but it is supposed that the wheel had been working loose for some distance and that by the time the train reached these stations the wheel had become sufficiently loose to allow the north wheel occasionally to come in contact with the guard rails and crossing planks at the stations named.

This loose wheel was a 36-inch, bolted type, steel tired wheel, equipped with steel centers. It was made at the Pullman works of the Railway S. S. Co., and shipped unmounted on February 14, 1913. On March 10 of that year it was applied to a tourist car at Los Angeles, and on February 9, 1914, was removed on account of a sharp flange. On the same day it was applied to the tourist car involved in this derailment. Examination of the wheel showed that no oil had worked through from the journal box to the axle. The presence of oil upon an axle is depended upon to a large extent by inspectors in detecting loose wheels, and its absence in this case not only made it difficult to detect the defective condition, but leads to the supposition that the wheel might not have worked loose until some time during the trip on which the accident occurred. This train was inspected at Aurora, Galesburg and Burlington, but at none of these points was the defective condition of this wheel discovered.