INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN ACCIDENT ON THE CHICAGO, MILWAUKEE, ST.PAUL & PACIFIC RAILROAD AT KINGSTON, ILL., ON MAY 14, 1933.

July 12, 1933.

To the Commission:

On May 14, 1933, there was a derailment of a freight train on the Chicago, Milwaukee, St. Paul & Pacific Railroad at Kingston, Ill., which resulted in the death of one trespasser and the injury of one trespasser. The investigation of this accident was made in conjunction with representatives of the Illinois Commerce Commission.

Location and Method of operation

The accident occurred on that part of the Chicago-Savanna Subdivision of the Dubuque-Illinois Division, which extends between Bensenville, near Chicago, and Savanna, Ill., a distance of 120.9 miles, and is a double-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The accident occurred at a point 2,714 feet east of the station at Kingston, approaching this point from the east, the track is tangent for more than 1 mile, this tangent extending for a considerable distance beyond the point of accident. The grade for west-bound trains is generally descending and is 0.6 percent at the point of accident.

Special time-table instructions restrict the speed of trains of the type involved in the accident, a merchandise train, to 50 miles per hour, and all except passenger trains must not exceed 25 miles per hour when passing over interlocked railroad crossings; a crossing of this character is located 2,245 feet east of the point of accident.

The track is laid with 130-pound rails, 39 feet in length, with 24 hard wood and treated pine ties to the rail length, fully tie-plated, and ballasted with gravel to a depth of 16 inches. The track was well maintained.

The weather was clear at the time of the accident, which occurred at 12:10 p.m.

Description

West-bound freight train extra 8688 consisted of 78 cars and 2 cabooses, hauled by engines 8688 and 8618, and was in charge of Conductor Sophy and Enginemen Seiber and Williams. This train departed from Spaulding, 29.9 miles east of Kingston, at 11.09 a.m., passed Fox River Crossing, the last open office, 27.4 miles east of Kingston, at 11.14 a.m., and was derailed at Kingston while traveling at a speed estimated to have been from 25 to 30 miles per hour.

Twenty-six cars in the train were derailed. The eighteenth car, UTLX,8124, loaded with gasoline, was the first car to be derailed and it stopped on its side clear of andalmost at right angles to the west-bound track; the nineteenth car, also loaded with gasoline, was thrown to the east-bound track, where it turned over on its side, skidded along the track for a distance of about 400 feet, and the contents took fire, while the twentieth to the forty-third cars, inclusive, were piled in a heap within a distance of approximately 200 feet; all the derailed cars passed the eighteenth car before stopping.

Summary of evidence

Engineman Seiber, of the lead engine, stated that after the cars to be picked up at Spaulding had been assembled and the brake pipe fully charged, a heavy reduction in brake-pipe pressure was made, after which Brakemen Hume and Whitmer inspected the cars and the brakes were released. These cars were then coupled to the remaining portion of the train and the brake pipe was again charged and a heavy application of the air brakes was made. After the brakes were released Brakeman Whitmer walked up and boarded the second engine, and Brakeman Hume watched the train as it pulled by him so he could bleed any brakes that might be sticking; he then boarded the caboose and gave the engineman a proceed signal. Engineman Seiber stated that the train ascended the grade at Elgin in a normal manner and he did not use the automatic brake until he reduced the speed to about 25 miles per hour for the interlocking plant located just east of Kingston, and was operating his train at a speed of from 25 to 28 miles per hour at the time of the accident. He looked back over his train at every opportunity en route but said that if any of the wheels had been smoking the smoke would have trailed under the train as the wind was from the West. After the accident he placed his hand on two pieces of a broken wheel found along the right-of-way and while they were warm he could leave his hand on them; this was about ½ hour after the occurrence of the accident. He also examined an axle lying nearby and it appeared to be shiny where the wheel fitted to the axle.

Fireman Anderson, of the lead engine, and Engineman Williams and Fireman Fosser, of the second engine, stated that they watched

their train closely while en route but at no time did they see anything unusual.

Engineman Williams also stated that after the accident he saw two broken wheels, and while one of them was not hot at the time he inspected it, it appeared to have been very hot at one time, and the axle had the appearance of the wheel having been turning on it.

Conductor Sophy stated that 24 cars were picked up at Spaulding, 1 being placed behind the engines and the others behind the first 9 cars, these cars were inspected by his two brakemen but he was quite positive that the train was in proper condition upon leaving that point and that there were no sticking brakes and no hand brakes set on the cars, saying that if there had been any brakes set the train would not have run 30 miles before being derailed. The speed of the train had been reduced to 25 or 28 miles per hour on approaching the railroad crossing at Kingston, but had attained a speed of about 30 miles per hour at the time of the accident. About 10 minutes after the occurrence of the accident he found pieces of broken wheel lying near the eighteenth car in the train, a tank car, one piece being missing. These broken pieces were not so hot as to prevent him from holding his hand on them, and he said the shiny spots on the axle indicated that the wheel had been loose and rubbing, and he thought a loose wheel caused the accident. He did not see any brake shoes lying near the fragments of wheel.

Head Brakeman Whitmer and Rear Brakeman Hume inspected the cars picked up at Spaulding before they were coupled to the train, Brakeman Whitmer said the brake pipe pressure was pumped up and the brakes tested before they were doubled over and coupled to the balance of the train; he then watched about 20 cars pull by him and after they had been coupled to the train another application was made. A proceed signal was then given and on his way to the engine Head Brakeman Whitmer saw the brakes releasing and he was sure that they were functioning properly and that none of them was sticking on leaving that point. Rear Brakeman Hume said he was at the rear of the cars to be picked up and after the brakes were applied he walked ahead until he met Head Brakeman Whitmer; the brakes then were released and he walked back to the rear car of the cut, where he road while the cars were doubled over and coupled to the train. After closing various switches, which had been used he walked toward the head end and watched the cars as they pulled by him. Both brakemen stated they watched the train closely en route, and exchanged signals with the brakemen of the two trains they passed en route. After the accident they saw pieces of a broken wheel, and these pieces were not so hot as to make it difficult to handle them.

General Car Foreman Shoulty arrived at the scene of the accident about two hours after its occurrence and upon investigation he found three large pieces and two small pieces of a broken wheel, at a point about 40 feet west of the point of derailment. The broken parts of the wheel showed signs of heating, having many heat cracks, or transverse cracks which occur in a wheel only from heating. This wheel had been on the north or right side of UTLX tank car 8124. Examination of the axle revealed nothing that indicated that the wheel had been loose, and the shoulders on the wheel fit were not worn. He also found a burned brake shoe which had been very hot and had melted and doubled together. This brake shoe was lying between the broken parts of the above-mentioned wheel and another broken wheel, and was the only one to show signs of heating; he was not positive which car it came from, except that it was close to the pieces of broken wheel. All eight wheels of this car showed indications of brake burns and four of them were broken and were still warm, although Car Foreman Shoulty was of the opinion that three of these wheels were broken as a result of the derailment. He found several triple valves but was unable to identify them. General Car Foreman Shoulty also said it was possible that excessive heating at some prior time might have had something to do with the failure of the wheel at the time of the accident.

Inspector Struve made a written statement to the effect that he inspected UTLX tank car 8124 on its arrival at Spaulding earlier in the morning and found it in good condition, and that no brakes were sticking when leaving Spaulding.

Conclusions

This accident was caused by a broken wheel, apparently due to overheating.

A wheel on the eighteenth car, UTLX tank car 8124, was broken into several pieces, and the breaking of this wheel apparently precipitated derailment which resulted in breaking three other wheels under the same car. While there was a difference of opinion as to the degree of heat in these wheels after the accident, Car Foreman Shoulty found them still warm about 2 hours after the occurrence of the accident, and there is no doubt that they had been very hot at some recent time for all of them showed evidence of heating; the treads were badly brake-burned and were checked with many thermal cracks, some of which had passed the incipient stage and were well developed. There was no definite evidence that any of the wheels had been loose on the axles although some of the employees

expressed the opinion that that may have been the case. This car was picked up at Spaulding, about 30 miles east of the point of accident, the air brakes were tested, and according to the statements of the crew, as well as an inspector at Spaulding, the train departed from that point with no brakes sticking. It also was stated that no application of the air brakes was made en route from that point until the train approached the railroad crossing less than 1 mile from the point of accident. The train crew noted no indication of brakes sticking or hot wheels en route. Under these circumstances, and in view of the fact that after the accident the brake equipment of this car was not located, no definite statement can be made as to when or how the wheels came to be overheated.

Respectfully submitted,

W. P. BORLAND,

Director.