IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE GRAND TRUNK RAILWAY NEAR ASHLEY, MICH., ON FEBRUARY 23, 1921

March 26, 1921.

On February 23, 1921, there was a derailment of a passenger train on the Grand Trunk Railway near Ashley, Mich., resulting in the death of 2 employees and the injury of 1 passenger. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

Location

This accident occurred on the Ashley & Muskegon Subdivision, which is a single-track line over which trains are operated by time-table and train orders, no block signal system being in use. The accident occurred at a switch about 2,000 feet west of the station at Ashley; approaching the point of accident from the west there is a curve of 4° to the left about 1,325 feet long, followed by about 400 feet of tangent to the point of accident. The track at the point of accident is practically level. It is laid with 60-pound rails, varying in length from 15 to 30 feet, single-spiked, with an average of about 17 or 18 ties under the 30-foot rails, and ballasted with cinders about 8 inches in depth; no rail braces or tie plates are used. The general condition of the track is poor. The switch at the point of accident leads to a wye to the left of the main track. A short distance east of this switch is a trestle, about 80 feet in length. At the time of the accident it was snowing.

Description

The train involved was eastbound passenger train No. 42, en route from Muskegon to Owosso Junction, Mich., and was in charge of Conductor Rice and Engineman McGraw. It consisted of 1 combination baggage and express car, 1 combination mail and smoking car, and 1 coach, in the order named, hauled by engine 2293. Train No 42 left Pompei, about 6 miles west of the point of accident and the last open telegraph office, at 12.13 p.m., 12 minutes late, and was derailed near Ashley while running at an estimated speed of 20 miles per hour.

Engine 2293 followed the wye track to the trestle, where it turned over to the right, the tender came to rest leaning to the right and almost at right angles with the engine. The first car and the forward truck of the second car were derailed, but the cars remained upright. The engine was considerably damaged. The employees killed were the engineman and fireman.

Summary of evidence.

The statements of the train crew indicated that the engineman had sounded the station whistle; shortly afterwards there were two short blasts of the whistle, an emergency application of the air brakes being made at the same time. None of the employees was able to say what caused the accident, although Conductor Rice found cuts and marks on ties and crossing planks which indicated that something had been dragging on the engineman's side of the

engine

The first indications of derailment were about 15 feet beyond the switch point, and there were also marks on the ties on the wye track, extending to the trestle where the engine overturned. The first rail on the left side of the main track beyond the frog was broken and the guard rail torn out, while on the wye track the first rail on the right side beyond the frog was broken; neither the frog nor the switch was damaged in any way.

Examination of the track showed that on the crossing planks of highway crossings within 3½ miles of the point of accident there were deep indentations on the west ends of the planks, between the rails, about 6½ inches from the gauge side of the right rail. These marks were about 2 inches in depth and 1 inch in width at the bottom, such as might have been made by a tie-bar bolt. Examination of the engine truck showed that the bed plate and top frame of the truck were intact, although the frame was bent upward slightly at the back end of the plate The two 1-1/8 inch bolts at the top of the right front engine truck pedestal were broken off between the pedestal and the frame, while the tie-bar bolt at the bottom of this pedestal was pulled off on the lower side of the bar.

A bolt fitting the bottom of the right No. 2 pedestal jaw was found 3½ miles from the point of accident. The broken top bolts in the No. 1 pedestal and losing the tie bar bolt out of the No. 2 pedestal would

allow the tie bar to carry the weight of the front pedestal, resulting in a tendency to spring downward, loosening the other tie bar bolts until it was low enough to encounter the crossing planks. This tie bar was in line with the marks found on the crossing planks, and it may have come into contact with the rail leading to the wye track, causing the engine truck to be derailed and resulting in the derailment of the train. The right forward end of the tie bar bore evidence of having received a rough blow; it was badly bent, and the surface of the metal was polished at points where it had been in contact with each of the pedestal jaws, indicating that it had been working back and forth. All of the broken parts of this truck were not found, so that it could not be fully reassembled.

Information from the mechanical department was to the effect that an extension in the running time of this train had been recommended on account of rough track and consequent damage to the spring rigging of engines. There is a speed restriction of 30 miles an hour in effect on this subdivision, while the time-table schedule of this train, which is a local with a great many scheduled stops, allows 4 hours and 50 minutes for the run from Muskegon to Ashley, a distance of 95.97 miles. The last monthly inspection of engine 2293 was made on February 6 and the work reports indicate that all necessary repairs had been made. Examination of these reports covering a period of 21 days prior to the occurrence of this accident showed that during that time the only repairs which

could have any relation to this accident were to spring rigging. In view of the statements made as to rough track, measurements were made of the track for a distance of more than 1 mile from the point of accident, but they failed to disclose anything which could have contributed to the cause of the accident.

Conclusions.

This accident is believed to have been caused by the breaking of some part of the engine truck.

While the evidence indicates that the trouble probably originated on the right side of the engine truck, and resulted in the tie bar dropping down far enough at the switch to encounter the rail leading to the wye track, it was not definitely determined exactly when or under what circumstances this trouble developed.

All of the members of the crew of train No. 42 were experienced men and none of them had been on duty in violation of any of the provisions of the hours of service law.