

INTERSTATE COMMERCE COMMISSION.

REPORT OF THE CHIEF OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE VIRGINIAN & WESTERN RAILROAD NEAR GLEN ROGERS, W. VA., ON JUNE 22, 1922.

July 10, 1922.

To the Commission:

On June 22, 1922, there was a derailment of a work train on the Virginian & Western Railroad near Glen Rogers, W. Va., resulting in the death of 2 employees, and the injury of 3 employees.

Location and Method of operation.

This railroad extends between Virwest and Glen Rogers, W. Va., a distance of 14.85 miles, which in the vicinity of the point of accident is a single-track line over which trains are operated by telephone, instructions being issued under the authority of a yard clerk, stationed at Polk Gap, which is located about 5 miles from Virwest, the eastern terminus of this railroad. The accident occurred approximately $5\frac{1}{2}$ miles east of Glen Rogers, approaching this point from the east, there are 2,407 feet of tangent, followed by a 12-degree curve to the right 681 feet in length, the accident occurring on this curve at a point 267 feet from its eastern end, at which point the grade is 1.0 per cent descending for westbound trains. The view across the inside of the curve is restricted, owing to a rock cut. The track in this vicinity is laid with 85-pound rails, 33 feet in length, with an average of 18 ties to the rail-length, single-spiked, tie-plated, and ballasted with crushed rock. The weather was clear at the time of the accident, which occurred at about 9.10 a. m.

Description.

Westbound work train extra 451, consisting of 1 water car, 1 ditcher, 1 dump car, engine 451, 10 cars and a caboose, in the order named, was in charge of Conductor Warren and Engineman Bingham. This train left Polk Gap at 8.45 a. m., and after having proceeded about $4\frac{1}{2}$ miles, was derailed while traveling at a speed estimated to have been between 12 and 15 miles an hour.

The three leading cars and engine 451 were derailed, but remained upright on the roadway. The employees killed were the head brakeman and a laborer, who were riding on the leading car at the time of the accident,

Summary of evidence.

Engineman Bingham noticed one of the employees on the leading car either jumping or being thrown, while the train was rounding the curve on which the accident occurred, then that car turned across the track, at this time the train was drifting, with the air brakes applied, and he immediately moved the brake valve to the emergency position, placed the engine in reverse, and began to work steam, the train being brought to a stop within about 80 feet. Conductor Warren was riding on the caboose at the time of the accident, and the first intimation he had of anything wrong was when the air brakes were applied in emergency. The statements of Fireman Akers and Flagman Markham corroborated those of Engineman Bingham and Conductor Warren, respectively.

Examination made immediately after the accident disclosed that the derailment was due to a broken flange on the left front wheel of the forward truck on the leading car. Engineman Bingham found evidence of an old break in the flange, the metal showing that there had been a fresh break on the outside, the extent of the new break being about $\frac{1}{4}$ inch; in his opinion this break would not have been detected by inspection. The statements of Conductor Warren indicated that the old crack extended to within $\frac{1}{8}$ inch of the rim and $\frac{1}{4}$ inch of the throat of the flange. Conductor Warren, in company with General Foreman Anderson, saw where the wheel had crossed the rail, and on going back about 3,200 feet found two pieces of the broken flange; they also saw marks on the rail between that point and the point of accident which had been made by a broken flange. After the truck containing the defective wheel was removed from the wreckage, these pieces of broken flange were placed in position, and it was found that they fitted.

The wheel which failed was of cast iron, manufactured in 1910, and weighed 665 pounds. There were $18\frac{1}{2}$ inches of the flange broken off, 12 inches of it being an old defect; this old crack was $1\frac{1}{2}$ inches in depth at its maximum, and did not extend to the surface. It would not have been detected by visual inspection, but probably could have been detected had the wheel been subjected to a hammer test. No record was obtainable of when this wheel was placed in service.

Conclusions.

This accident was caused by a broken flange.

The evidence indicated that the breaking of the flange was due to an old defect, the presence of which could not have been discovered by visual inspection, although its presence probably would have been detected by a hammer test.

At the time of the accident the employees involved had been on duty less than 3 hours, after having been off duty more than 10 hours.

Respectfully submitted,

W. P. Borland,

Chief, Bureau of Safety.