INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN ACCIDENT ON THE SOUTHERN RAILWAY NEAR STACEY, N.C., ON MAY 3, 1933.

June 28, 1933.

To the Commission:

On May 3, 1933, there was a derailment of a freight train on the Southern Railway near Stacey, N. C., which resulted in the death of 1 employee and the injury of 2 employees and 4 poultry caretakers.

Location and method of operation

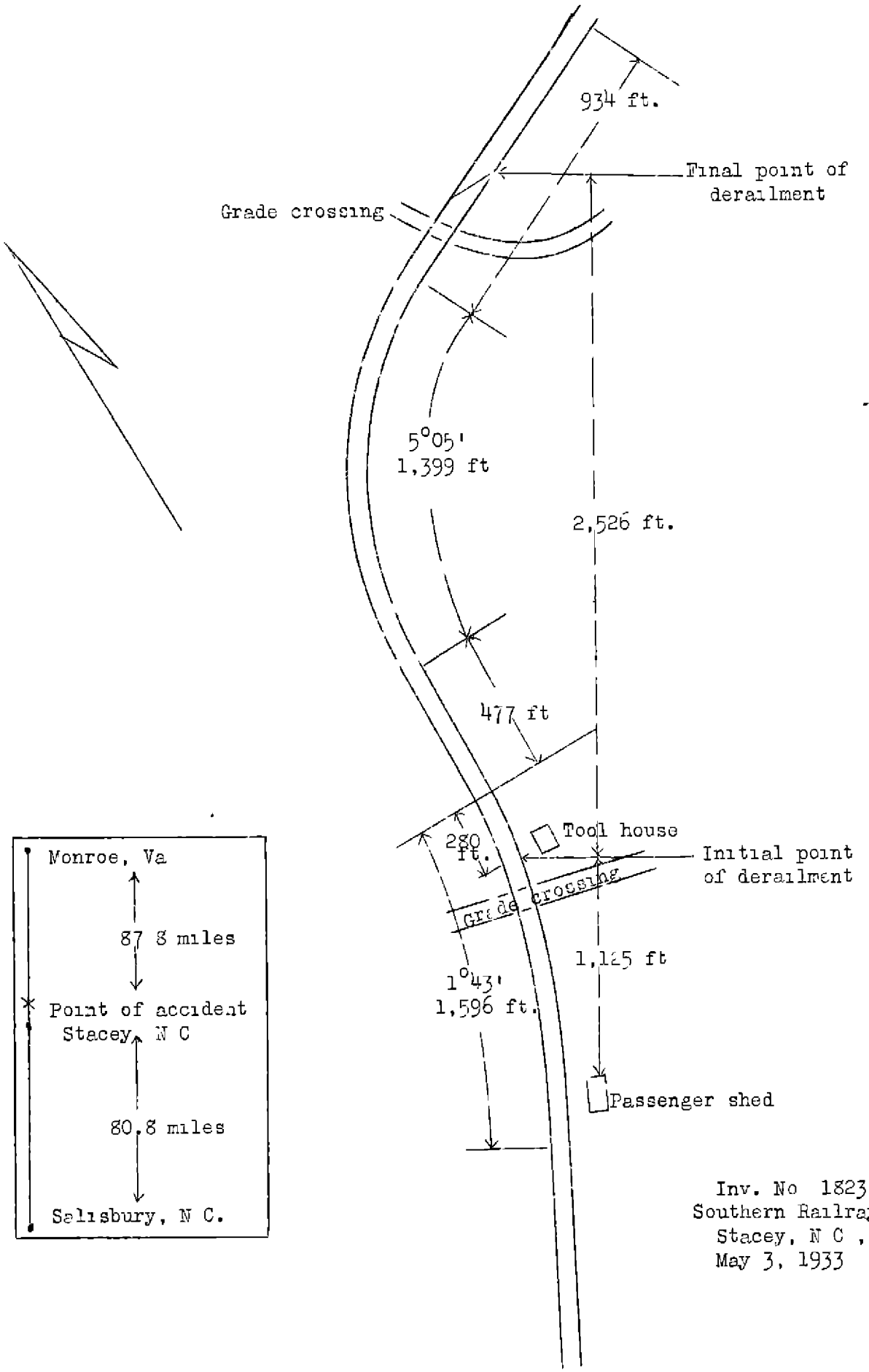
This accident occurred on that part of the Danville Division which extends between Monroe, Va., and Salisbury, N. C., a distance of 168.6 miles, and is a double-track line over which trains are operated by time table, train orders and an automatic block-signal system. The initial derailment occurred at a point approximately 1,125 feet north of the passenger shed at Stacey while the final derailment occurred at the frog of a cross-over 2,526 feet beyond that point. Approaching the point of accident from the south, there is a 1° 43' curve to the left 1,596 feet in length, the initial derailment occurring on this curve at a point about 280 feet from its northern end; the track is then tangent for a distance of 477 feet, followed by a 5° 05' curve to the right 1,399 feet in length, and then tangent track for 934 feet, the final derailment occurring on this latter tangent approximately 550 feet from its northern end. The grade for north-bound trains is 1.28 per cent descending for 1,100 feet to the initial point of derailment and for 1,500 feet beyond, followed by 0.56 per cent descending grade to and beyond the final point of derailment.

The track is laid with 100-pound rails, 33 feet in length, with 20 hardwood ties to the rail length, single-spiked, fully tie-plated, and ballasted with chats to a depth of 18 inches; rail anchors are also used. The track is maintained in good condition.

The weather was clear at the time of the accident, which occurred about 4:35 p.m.

Description

North-bound second-class freight train No. 52 consisted of 48 cars and a caboose, 1740 tons, hauled by engine 4893, and was in charge of Conductor Miller and Engineman Allen. This train departed from Pomona at 3:35 p.m., according to the train sheet,



Inv. No 1823
Southern Railray
Stacey, N C ,
May 3, 1933

1 hour and 9 minutes late, passed Reidsville, the last open office, approximately 7 miles south of the point of accident, at 4:18 p.m., 1 hour and 2 minutes late, and was derailed near Stacey while traveling at a speed estimated to have been between 40 and 50 miles per hour.

The engine, tender, first 27 cars and the front truck of the twenty-eighth car were derailed. The engine stopped on its left side with its front end about 35 feet to the right of the track and 298 feet north of the north cross-over switch; the tender remained coupled to the engine, leaning to the left at an angle of 45°. The following 27 cars were piled within a space of about 215 feet, all being destroyed with the exception of two stock cars. The twenty-eighth car, the last car to be derailed, stopped on the switch. The employee killed was the engineman and those injured were the fireman and conductor.

Summary of evidence

Conductor Miller, who was riding on the engine, stated that after going over the hill at Stacey a little dust blew up in his face, which was unusual, and on looking out on the engineman's side he saw ballast and rock flying from under the engine. He told the engineman that something was down under the engine and to apply the brakes, but just as the engineman made a service application of the brakes the engine struck the cross-over and turned over. Conductor Miller stated that the brakes had functioned properly, the last application having been made at Greensboro, about 31 miles south of the point of accident, and he was positive that there was no application of the brakes at Stacey until made by the engineman just before the derailment. He further stated that the train had been traveling at a speed of about 45 miles per hour.

A brief statement was made by Fireman Woodson while still in the hospital as a result of injuries sustained in the accident, in which he said that the engine rode smoothly, the train was traveling at a speed of about 50 miles per hour, and he noticed nothing unusual until they approached the cross-over near Stacey, when he saw ballast flying out from under the engine. He warned the engineman that something was dragging and as the engineman applied the brakes the derailment occurred.

Head Brakeman Gray stated that he was riding on the right side in the brakeman's cabin on the tender, with Patrolman Lowder on the left side. He noticed some dust flying as they passed over the grade crossing just south of the cross-over, but there was not enough to cause any alarm, and the first he knew of anything wrong was when the accident occurred. The train was riding smoothly at a speed of about 40 miles per hour and the brakes had not been applied between Greensboro and the point of accident. Brakeman Gray further stated that after four cars had been set out at Pomona he coupled up the train and the brakes were tested and found to be wroking properly.

Patrolman Lowder stated that some time after the accident he walked back over the track for a distance of about ¼ mile and found marks indicating that the front wheels of the engine truck had been running on the ties.

Flagman Whitler stated that the train was operated at a uniform rate of speed, that he observed the air gauge in the caboose frequently because trespassers had been turning angle cocks, and that he did not feel an application of the air brakes prior to the occurrence of the accident.

Roadmaster Anderson and Signal Supervisor Snead stated that they were on south-bound train No. 135 when it was flagged at Ruffin, about 2 miles north of the point of accident. They immediately went to the scene of the accident, accompanied by Section Foreman Parris, and near the tool house he found wheel marks on the ties outside of the right rail; tracing southward from this point, a mark was found on the outside of the head of the rail where a wheel had dropped off the rail, and south of this there was a flange mark which extended along the top of the rail for a distance of 18 feet to the point where the wheel mounted the rail; 6 inches south of that point there was an impression in the ball of the east rail and just opposite this impression a spike was found lying just off the ends of the ties. This spike was placed in the impression and found to fit; apparently it had been lying with the point facing the approaching north-bound train, and its appearance showed that it had been run over.

Captain of Police Greene and Lieutenant of Police Dallas, of the Southern Railway, stated that they obtained information indicating the probability of the spike having been placed on the rail by one of the school children who leave the county school bus at the grade crossing near the tool house opposite where the spike was found. Each child who leaves the bus at that point was interviewed separately, with the result that Frank Cardwell, Jr., about 8 years of age, stated that he and two other boys had stopped to play with railway spikes and scrap iron after getting off the bus on the day of the accident. After throwing several spikes at the cars in a north-bound train they sat on the ends of the ties after the passage of the train and while sitting there he placed a spike on the rail, stating that he wanted to see what the train would do to it. He did not know whether the other boys noticed him when he placed the spike on the rail. This boy made practically the same statement the following day in the presence of railroad officials and the Commission's inspectors.

General Car Foreman Fulk stated he arrived at the scene of the accident several hours after its occurrence and in checking the damaged equipment he found that the weight "Little Watchman" on the engine truck had been tripped and that the stem was bent. Car Foreman Fulk stated that a drop of the truck of from 3 to 3½ inches is required for the "Little Watchman" to function. He further stated that had the "Little Watchman" functioned it

should have called the engineman's attention to that fact before he had gone 1,000 or 1,200 feet.

Air Brake Inspector Feamster made the statement that he inspected the Wright "Little Watchman" at the time he made inspection of the brake equipment on engine 4893 before its departure from Spencer on train No. 52 on the day of the accident, and found it in good condition and working perfectly.

Superintendent Woodall inspected the "Little Watchman" on the engine truck, which was found to have been tripped, the stem bent and the valve open, and also inspected the "Little Watchman" on the front truck of the tender and found it was tripped; he thought that the latter was probably tripped after the engine became entirely derailed at the switch.

Assistant Engineer Kittles inspected the track for a distance of 1,600 feet south of the initial point of derailment, checking the gauge, alinement and superelevation on the curve, and with the exception of slight tightness in the gauge on the curve the measurements were uniform.

Examination of the track by the Commission's inspectors failed to reveal any indication of dragging equipment south of the point at which the spike was found, and conditions at and north of that point were practically as described by the various witnesses. The flange marks on the ties varied from 6 to 10 inches from the sides of the rails, the marks inside the west rail being well defined while those on the outside of the east rail were very light, not showing on some of the ties.

Engine 4893, of the 2-8-2 type, was equipped with a Wright "Little Watchman" on the engine truck and on the front tender truck, which were installed for the purpose of applying the air brakes should either of these trucks become derailed. Examination of the "Little Watchman" on the engine truck showed the stem to have been bent, but it worked properly with respect to being able to trip and reset it. Two tests were made of this device; the first was on a freight train consisting of 43 loaded and 35 empty cars, 2,441 tons, on a descending grade of 1.35 per cent, at a speed of approximately 40 miles per hour, with the throttle open, brake valve in running position, and a brake-pipe pressure of 68 pounds; after the device was operated the train came to a stop within approximately its own length. The second test was made on May 11 with train No. 52, consisting of 50 loaded cars, 1,969 tons, at a speed of approximately 50 miles per hour, throttle in drifting position, brake valve in running position, and a brake-pipe pressure of 70 pounds. The "Little Watchman" was tripped in this case at approximately the same point at which the engine truck was derailed on the day of the accident, and the train came to a stop within a distance of 2,636 feet, or 60 feet north of the cross-over switch.

Conclusion.

This accident was caused by a track spike having been placed on the track by an 8-year old boy.

The spike was found lying on the end of a tie opposite an impression in the rail into which this spike was found to fit perfectly; this imprint was about 6 inches south of the first wheel mark on the rail. An 8-year old boy accompanied by two other boys, stopped to play with track spikes and scrap iron after leaving the county school bus at the grade crossing nearby, and confessed to having placed the spike on the rail, stating that he wanted to see what the train would do to it. The evidence indicated that the front wheels of the engine truck became derailed after striking this spike, mounted the rail, dropped off on the outside, and ran on the ties until the frog of the north switch of the cross-over was encountered, 2,526 feet beyond, where the engine and the following cars were entirely derailed.

The engine involved was equipped with a Wright "Little Watchman;" the function of this device is to open an air valve and apply the brakes in case the engine truck becomes derailed. All the evidence, however, indicates that there was no application of the air brakes until about the time the train was finally derailed, although examination of the device after the accident showed the "Little Watchman" to have been tripped. Tests of this device were made at a later date, and with a train of slightly more tonnage than that involved in the accident, the device functioned properly, the train coming to a stop 2,636 feet beyond the point at which the device was tripped, or 60 feet beyond the switch, whereas in the accident the engine, tender, and 27 cars were beyond the switch. The statements of members of the train crew establish the fact that there was no application of the brakes until the time of final derailment, and it is apparent that the "Little Watchman" failed to function when the engine truck was first derailed, the fact that the marks made by the left wheel were well defined while those made by the right wheel, on the inside of the curve, were very light and did not show on some of the ties, indicates that the truck did not in the beginning drop a sufficient distance to cause the device to function.

Respectfully submitted,

W. P. BORLAND,

Director.