INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2629

THE LOUISVILLE & NASHVILLE RAILROAD COMPANY

REPORT IN RE ACCIDENT

NEAR PANA, ALA., ON

SEPTEMBER 24, 1942

SUMMARY

Railroad:	Louisville & Nashville
Date:	September 24, 1942
Location:	Pana, Ala.
Kind of accident:	Derailment
Train involved:	Freight
Train number:	Third 93
Engine number:	1780
Consist:	28 cars, caboose
Speed:	30 m. p. h.
Operation:	Timetable and train orders
Track:	Single; 3°30' curve; 1.26 percent descending grade southward
Weather:	Clear
Time:	About 4:30 a. m.
Casualties:	1 killed; 1 injured
Cause:	Accident caused by broken rail, as result of presence of transverse fissures

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2829

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE LOUISVILLE & NASHVILLE RAILROAD COMPANY

November 9, 1942.

Accident near Pana, Ala., on September 24, 1942, caused by broken rail, as result of presence of transverse fissures.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On September 24, 1942, there was a derailment of a freight train on the Louisville & Nashville Railroad near Pana, Ala., which resulted in the death of one employee and the injury of one employee.

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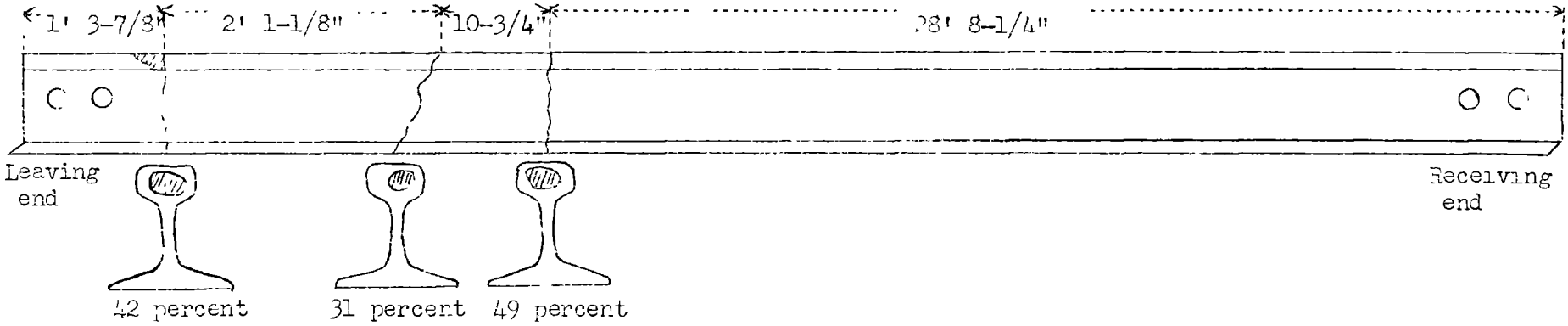
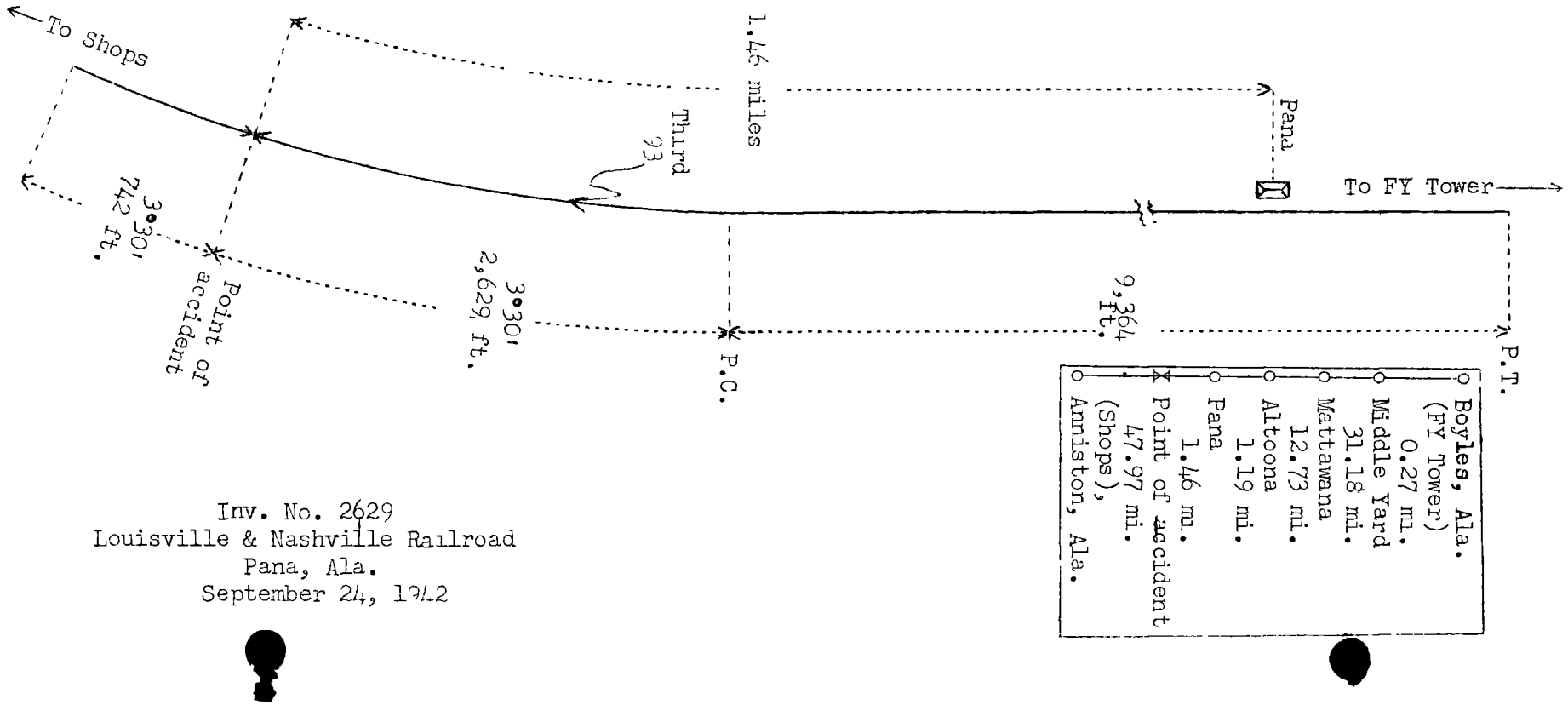
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Sketch showing locations of fractures and transverse fissures



Inv. No. 2629
Louisville & Nashville Railroad
Pana, Ala.
September 24, 1912

Location of Accident and Method of Operation

This accident occurred on that part of the Birmingham Division which extends between Boyles and Anniston, Ala., a distance of 94.8 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable and train orders. There is no block system in use. The accident occurred on the main track at a point 1.46 miles south of the station at Pana. As the point of accident is approached from the north there is a tangent 9,362 feet in length, which is followed by a 3°30' curve to the right 2,629 feet to the point of accident and 742 feet beyond. In the vicinity of the point of accident the grade for south-bound trains is generally descending and at the point of accident it is 1.26 percent descending.

In the immediate vicinity of the point of accident the track is laid on a hillside cut. The track structure consists of 90-pound rail, 33 feet in length, rolled in 1924 and laid on 18 treated ties to the rail length; it is fully tieplated, single-spiked and equipped with 4-hole angle bars and three gage rods to each rail, and is ballasted with cinders to a depth of 18 inches. The roadbed averages about 20 feet in width. The superelevation on the curve involved is 4-1/2 inches.

In the vicinity of the point of accident the maximum authorized speed for freight trains is 35 miles per hour.

Description of Accident

Third 93, a south-bound second-class freight train, consisted of engine 1780, 28 loaded cars and a caboose. After a terminal air-brake test was made this train departed from Middle Yard, 45.1 miles north of Pana, at 1:45 a. m., according to the dispatcher's record of movement of trains, 1 hour 35 minutes late, departed from Mattawana, 13.92 miles north of Pana and the last open office, at 3:50 a. m., 2 hours 12 minutes late, and while moving at an estimated speed of 30 miles per hour it was derailed at a point 1.46 miles south of Pana.

The engine and first 26 cars were not derailed. The rear truck of the twenty-seventh car was derailed. This car remained coupled to the front portion of the train and stopped with its rear end 1,555 feet south of the point of derailment. The twenty-eighth car was derailed, became separated from the front portion of the train and stopped down the embankment on its left side at a point 341 feet south of the point of derailment. Both trucks were detached and the car was considerably

damaged. The caboose was derailed, became separated from the twenty-eighth car and stopped down the embankment, bottom up, at an angle of 45 degrees to the track and at a point 293 feet south of the point of derailment. The cupola was crushed and the remainder of the caboose was considerably damaged.

It was clear at the time of the accident, which occurred about 4:30 a. m.

The employee killed was the conductor, and the employee injured was the brakeman.

Data

The rail involved was a 33-foot, 90-pound ARA-B, open-hearth rail, manufactured by the Tennessee Coal, Iron and Railroad Company in February, 1924, and laid in the track during the same year. The heat number was 28792, Letter B.

According to information furnished by the carrier, during the 6-month period preceding the day of the accident four broken rails caused by the presence of transverse fissures were found in the territory involved.

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 14.36 trains.

Discussion

Third 93 was moving at a speed of about 30 miles per hour in territory where the maximum authorized speed was 35 miles per hour. Prior to the time of the accident, the engine and the cars were riding smoothly. There was no indication of defective track or equipment, or of any obstruction on the track. As the engine passed over the point where the accident occurred, the enginemen heard a noise from the right side of the engine which they thought was caused by a piece of coal falling from the tender to the apron. No unusual motion of the engine occurred. When the engine reached a point about 1,300 feet south of the point where the noise was heard, the brakes became applied in emergency and the train stopped within a distance of 1,555 feet. The members of the train crew who were in the caboose did not know of the derailment until the car next ahead of the caboose and the caboose began to sway and to lurch.

After the accident a broken rail was found on the west side of the track. The rail was broken into 4 pieces. The

first break occurred at a point 28 feet 8-1/4 inches south of the receiving end of the rail. At the first break there was a transverse fissure covering about 49 percent of the cross-sectional area of the head of the rail. At the second and third breaks, which occurred at points 29 feet 7 inches and 31 feet 8-1/8 inches south of the receiving end of the rail, there were transverse fissures covering, respectively, 31 percent and 42 percent of the cross-sectional area of the head. None of these fissures had progressed to the outer surface of the head of the rail. A section of the leaving end of the rail 1 foot 3-7/8 inches long remained in normal position. Wheel marks at the north end of this section of rail indicated that the derailment occurred at this point.

Apparently the rail broke when the engine of Third 93 was passing over the point where the derailment occurred. The track involved was last inspected about four days prior to the day of the accident. According to information furnished by the carrier, detector-car service has not been used on this line.

Cause

It is found that this accident was caused by a broken rail, as a result of the presence of transverse fissures.

Dated at Washington, D. C., this ninth day of November, 1942.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

(SEAL)

Secretary.