

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO. 3115  
CHICAGO, SAINT PAUL, MINNEAPOLIS AND OMAHA  
RAILWAY COMPANY

REPORT IN RE ACCIDENT  
NEAR HUBBARD, NEBR., ON

JULY 8, 1947

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SUMMARY

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Railroad: Chicago, Saint Paul, Minneapolis  
and Omaha

Date: July 8, 1947

Location: Hubbard, Nebr.

Kind of accident: Derailment

Train involved: Mixed

Train number: Extra 246-383 West

Engine numbers: 246, 383

Consist: 15 cars, caboose

Estimated speed: 25 m. p. h.

Operation: Timetable and train orders

Track: Single; tangent; 0.35 percent  
ascending grade westward

Weather: Clear

Time: 2:55 a. m.

Casualties: 1 killed; 5 injured

Cause: Broken rail

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 3115

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

CHICAGO, SAINT PAUL, MINNEAPOLIS AND OMAHA  
RAILWAY COMPANY

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August 11, 1947

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Accident near Hubbard, Nebr., on July 8, 1947, caused  
by a broken rail.

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REPORT OF THE COMMISSION<sup>1</sup>

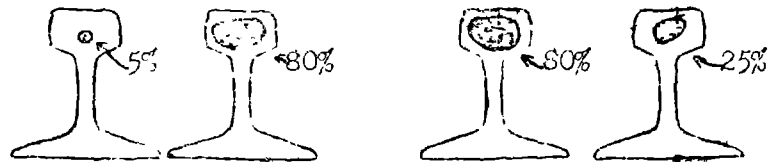
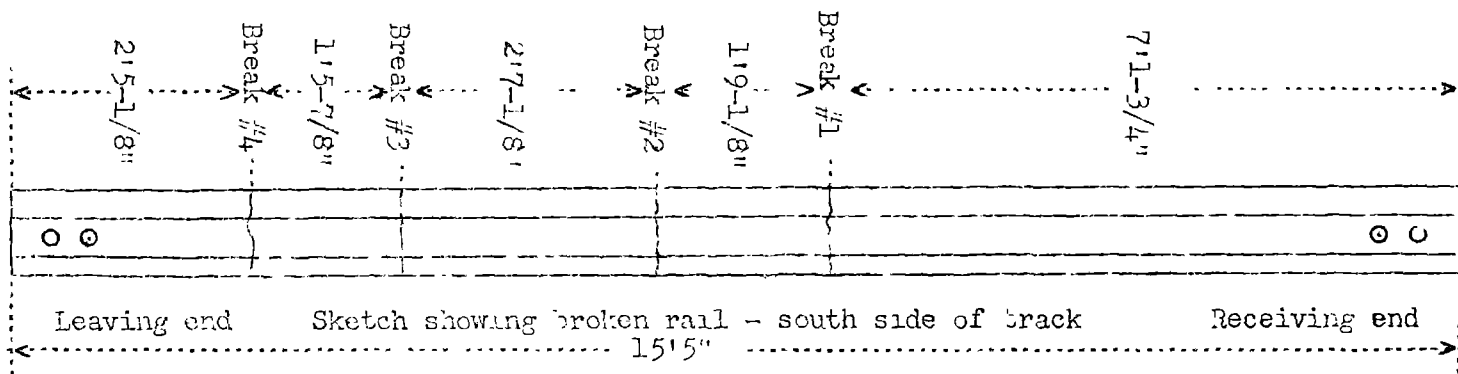
PATTERSON, Commissioner:

On July 8, 1947, there was a derailment of a mixed train on the Chicago, Saint Paul, Minneapolis and Omaha Railway near Hubbard, Nebr., which resulted in the death of one circus employee, and the injury of five circus employees.

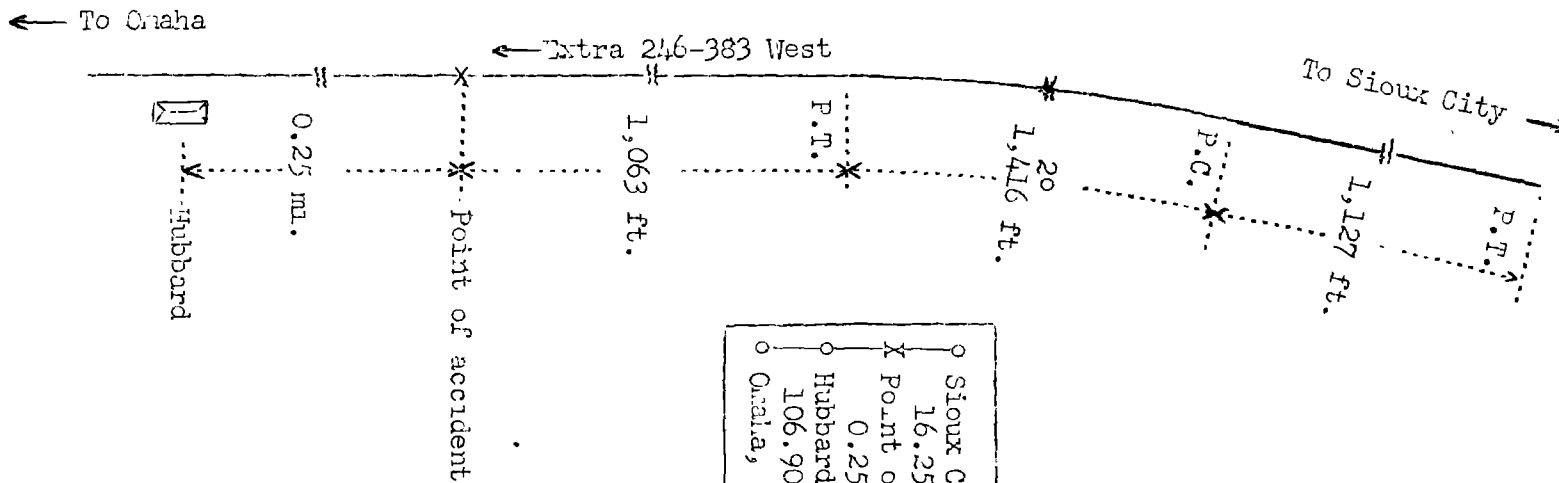
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<sup>1</sup>

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 of end views showing locations of transverse fissures



○	Sioux City, Iowa
○	16.25 mi.
×	Point of Accident
○	0.25 mi.
○	Hubbard, Nebr.
○	106.90 mi.
○	Omaha, Nebr.

Inv. No. 3115  
 Chicago, Saint Paul, Minneapolis  
 and Omaha Railway  
 Hubbard, Nebr.  
 July 8, 1947

### Location of Accident and Method of Operation

This accident occurred on that part of the Western Division extending between Sioux City, Iowa, and Omaha, Nebr., 123.4 miles, 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 16.25 miles west of Sioux City and 0.25 mile east of the station at Hubbard. From the east there are, in succession, a tangent 1,127 feet in length, a 2° curve to the left 1,416 feet and a tangent 1,063 feet to the point of accident and a considerable distance westward. The grade is 0.35 percent ascending westward.

In this vicinity the track structure consists of 90-pound rail of various lengths, laid during 1928 on an average of 17 ties to the 31-foot rail length. It is fully tieplated with single-shoulder tieplates, single-spiked, provided with 26-inch angle bars and an average of 4 rail anchors per rail length. It is ballasted with cinders to a depth of 10 inches. The involved rail section was manufactured by the Illinois Steel Company in March, 1913. The heat number was not legible. It was cropped to 15 feet 5 inches in length, and relaid during 1928.

The maximum authorized speed for the train involved was 30 miles per hour.

### Description of Accident

Extra 246-383 West, a west-bound circus train, consisted of engines 246 and 383, 2 stock cars, 9 flat cars, 4 coaches and a caboose, in the order named. The first to the eleventh cars, inclusive, and the thirteenth car were of all-steel construction, and the remainder of the cars were of steel-underframe construction. This train departed from Sioux City, the last open office, at 1:55 a. m., and while it was moving at an estimated speed of 25 miles per hour the rear truck of the sixth car, the seventh to the thirteenth cars, inclusive, and the front truck of the fourteenth car were derailed.

A separation occurred between the ninth and tenth cars. The engines and the first nine cars stopped with the rear end of the ninth car 397.5 feet west of the point of derailment. The front end of the tenth car stopped 70 feet east of the ninth car. The derailed equipment stopped practically upright and in line with

the track, and was more or less damaged. The casualties occurred as a result of the shifting of circus equipment which was loaded on the flat cars.

The weather was clear at the time of the accident, which occurred about 2:55 a. m.

### Discussion

Extra 246-383 West was moving on tangent track at a speed of about 25 miles per hour, in territory where the maximum authorized speed for this train was 30 miles per hour, when the derailment occurred. The headlight of the first engine was lighted brightly. The brakes were in the charge of the engineer of the first engine. The brakes had been tested and had functioned properly en route. The engineers, the fireman of the second engine, the front brakeman, and a road foreman of engines, who was on the fireman's seat of the first engine, were maintaining a lookout ahead. The fireman of the first engine was tending the fire. The conductor, the flagman, and a trainmaster were in the caboose. The first that any of these employees knew of anything being wrong was when the road foreman of engines observed fire flying from wheels of the cars in the train, and he called a warning to the engineer. The engineer of the first engine had just started to take action to stop the train when the brakes became applied in emergency, as a result of the derailment. Prior to the time the accident occurred, the engines and the cars were riding smoothly, and there was no indication of defective equipment or track, nor of any obstruction having been on the track.

Soon after the accident occurred a broken rail was found on the south side of the track. This rail was broken at four locations. Break No. 1 occurred 7 feet 1-3/4 inches west of the receiving end of the rail, and breaks Nos. 2, 3 and 4 occurred at points, respectively, 1 foot 9-1/8 inches, 4 feet 4-1/4 inches and 5 feet 10-1/8 inches west of break No. 1. At breaks Nos. 1, 2, 3 and 4, there were transverse fissures which covered, respectively, 25 percent, 80 percent, 80 percent and 5 percent of the cross-sectional area of the head of the rail. None of these fissures extended to the surface of the rail. Break No. 2 occurred between two ties, and the other three breaks occurred over ties. The receiving ends at breaks Nos. 2

and 4 were considerably battered. The piece of rail immediately west of break No. 4 remained attached to the adjoining rail. Apparently the failure of the rail at breaks Nos. 2 and 4 occurred when the front portion of the train passed over it, then the other breaks occurred, and the broken pieces became displaced.

The track involved was last inspected by the section foreman about 10 hours before the derailment occurred, and no defective condition was observed. No rail-detector car had been operated in this territory.

Cause

It is found that this accident was caused by a broken rail.

Dated at Washington, D. C., this eleventh day of August, 1947.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.