

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT NO. 3304

THE NEW YORK, NEW HAVEN AND HARTFORD  
RAILROAD COMPANY

IN RE ACCIDENT

AT SPRINGDALE, CONN., ON

JANUARY 1, 1950

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SUMMARY

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Date: January 1, 1950  
Railroad: New York, New Haven and Hartford  
Location: Springdale, Conn.  
Kind of accident: Derailment  
Train involved: Passenger  
Train number: N35  
Consist: 2 multiple-unit cars  
Estimated speed: 25 m. p. h.  
Operation: Timetable, train orders and  
manual-block system  
Track: Single; tangent; 0.312 percent  
descending grade westward  
Weather: Cloudy; dark  
Time: 5:48 p. m.  
Casualties: 25 injured  
Cause: Partly open switch

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3304

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

THE NEW YORK, NEW HAVEN AND HARTFORD RAILROAD COMPANY

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March 7, 1950

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Accident at Springdale, Conn., on January 1, 1950, caused  
by a partly open switch.

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

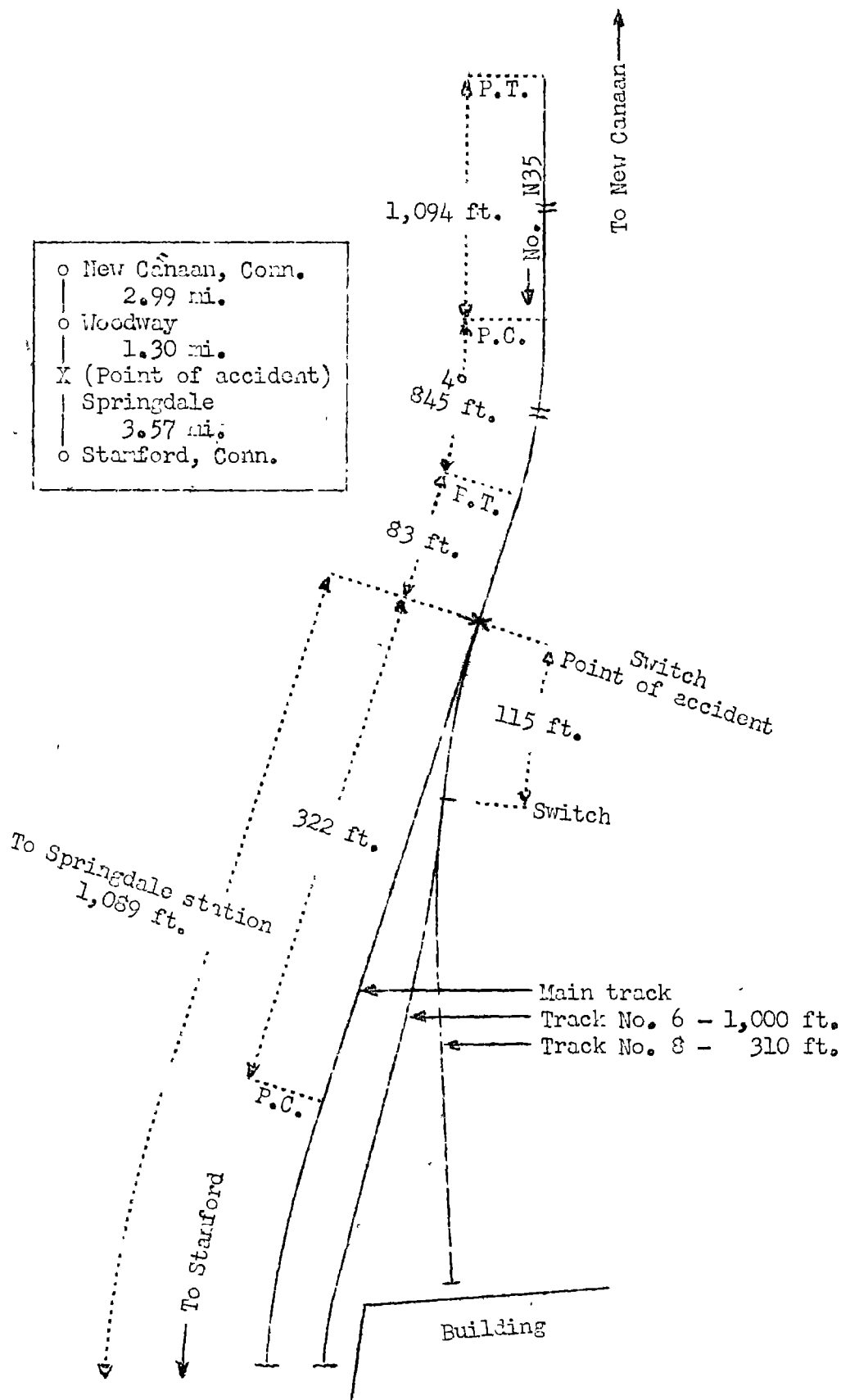
PATTERSON, Commissioner:

On January 1, 1950, there was a derailment of a passenger train on the New York, New Haven and Hartford Railroad at Springdale, Conn., which resulted in the injury of 21 passengers, 3 employees on duty and 1 employee off duty. This accident was investigated in conjunction with a representative of the Connecticut Public Utilities Commission.

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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.

- New Canaan, Conn. 2.99 mi.
- Woodway 1.30 mi.
- X (Point of accident) Springdale 3.57 mi.
- Stamford, Conn.



Report No. 3304  
 New York, New Haven and Hartford Railroad  
 Springdale, Conn.  
 January 1, 1950

Location of Accident and Method of Operation

This accident occurred on that part of the New Haven Division extending between New Canaan and Stamford, Conn., 7.86 miles, a single-track line, over which trains are operated by timetable, train orders, and a manual-block system. At Springdale, 4.29 miles west of New Canaan, an auxiliary track designated as track No. 6 parallels the main track on the south. This track is 1,000 feet in length and connects with the main track at a point 1,089 feet east of the station. At a point 115 feet west of this switch an auxiliary track designated as track No. 8 diverges from track No. 6 and extends southward a distance of 310 feet. Both switches are facing-point for west-bound movements. The accident occurred on the main track at the switch of track No. 6. From the east on the main track there are, in succession, a tangent 1,094 feet in length, a 4° curve to the right 845 feet, and a tangent 85 feet to the point of accident and 322 feet westward. The grade on the main track is 0.312 percent descending westward at the point of accident. The grade on track No. 8 is 2.3 percent descending southward.

The structure of the main track consists of 100-pound rail, 35 feet in length, rolled in 1913 and relaid in its present location in 1920 on 20 treated ties to the rail length. It is fully tieplated with single-shoulder tieplates, single-spiked, and is provided with 4-hole 24-inch joint bars and 4 to 6 rail anchors per rail. It is ballasted with cinders to a depth of 4 inches below the bottoms of the ties. The turnout of track No. 6 is constructed of 100-pound rail, and is provided with a No. 10 manganese center frog and 15-foot switch rails. The switch stand is of the hand-throw intermediate-stand type, and is located 8 feet 7 inches north of the center-line of the main track. It is equipped with an oil-burning lamp. When the switch is lined for movement on the main track, a green light and a circular green target outlined in white are displayed in the direction of approaching trains. When the switch is lined for entry to track No. 6, a red light and a dart-shape red target are displayed. The centers of the lenses of the lamp and the centers of the targets are, respectively, 6 feet and 4 feet 4-3/4 inches above the level of the tops of the rails. The operating lever is of the horizontal-throw type and is hinged so that it will drop into either of two slots cut in the base casting of the switch stand. The slots are placed to correspond with full-throw

positions of the switch. When the lever is dropped into either of these slots, a keeper, which is provided with a hole in which to insert a switch lock, projects through a slot in the lever. The switch lock must be removed from the keeper and the operating lever lifted to a horizontal position before the switch can be operated.

This carrier's operating rules read in part as follows:

#### MOVEMENT OF TRAINS

104a. The normal position for all switches and siding derails is that which leaves the main track clear for the safe passage of train or engines.

Switches must be latched; main track switches and siding derails when in normal position must be locked; after a switch is lined the points must be examined to know that they fit properly.

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The maximum authorized speed for the train involved was 40 miles per hour.

#### Description of Accident

No. M35, a west-bound first-class passenger train, consisted of two multiple-unit passenger-train cars. Both cars were of all-steel construction. This train was being operated from the front control compartment of multiple-unit car 4650, the first unit of the train. It departed from New Canaan, its initial terminal, at 5:39 p. m., on time, and while moving at an estimated speed of 25 miles per hour it was derailed at the switch leading to track No. 6.

The first car was derailed to the south and stopped with its west end 270 feet west of the switch. It leaned to the south at an angle of 45 degrees. The second car was not derailed at the switch but became separated from the first car, entered track No. 8, demolished the bumper at the end of that track, and stopped after it struck a building located south of the end of the track. Both cars were considerably damaged.

The motorman, the conductor, and the baggageman were injured.

The weather was cloudy and it was dark at the time of the accident, which occurred about 5:48 p. m.

During the 30-day period preceding the day of the accident, the average daily movement over this line was 38.1 trains.

The first car of No. N35 was a combination passenger and baggage car, and had seating capacity for 54 passengers. It was equipped with two 4-wheel trucks spaced 47 feet 7-1/2 inches between centers. Its overall length was 70 feet 10-1/2 inches and its light weight was 101,500 pounds. The second car was a passenger car with a seating capacity for 84 passengers. It was equipped with two 4-wheel trucks spaced 47 feet 7-1/2 inches between centers. Its overall length was 72 feet 1/2 inch and its light weight was 176,100 pounds. A control compartment was provided on the right side of each end of each car.

#### Discussion

As No. N35 was approaching the point where the accident occurred the headlight was lighted brightly. The motorman was maintaining a lookout ahead from the control compartment at the front of the first unit. The conductor and the baggageman were in the passenger compartment of the first car. The brakes of this train had been tested and had functioned properly when used en route. The speed was reduced to about 10 miles per hour when the train was about 700 feet east of the point where the accident occurred. Then the brakes were released and the speed was increased. The switch lamp displayed green in the direction of the approaching train. The speed was about 25 miles per hour when the accident occurred.

After the accident occurred the switch of track No. 6 was found to be partially open. The operating lever was in a horizontal position and was midway between the slots in the casting, and the normally closed switch point was open about 1 inch. The switch lock was hanging by its chain and was locked.

Examination of the main track throughout a considerable distance immediately east of the point of accident disclosed no indication of dragging equipment or of any obstruction having been on the track. The first mark of derailment was a flange mark on the nut of a track bolt on the north side of the north lead-rail of track No. 6 at a point 47.4 feet west of the point-of-switch. Immediately west of this mark, the ties bore marks indicating that one truck had become derailed to the south. At a point about 12 feet west of the frog additional marks on the ties indicated that another truck had become derailed. Flange marks appeared on the head of the north switch-rail of track No. 8 and on the north rail of track No. 6 just west of the point-of-switch of track No. 8. These marks indicate that after the front truck of the first car passed over the switch of track No. 6 the switch opened sufficiently to cause the rear truck to enter track No. 8. The rear truck became derailed 47.4 feet west of the point-of-switch, and the front truck became derailed about 12 feet west of the frog. The south wheels of the rear truck apparently struck the normally open point of the switch of track No. 8 in such a manner as to reverse the position of the switch. The second car entered track No. 6 and became separated from the first car between the switch of track No. 6 and the switch of track No. 8. It entered track No. 8, and, because of a steep descending grade, the brakes did not stop the car before it reached the end of the track.

The switch involved was last examined by a maintenance-of-way employee on December 30, and at that time it was properly lined and locked. Between 2 a. m. and 3 a. m., December 31, switching was performed on track No. 6. The front brakeman of the crew, who operated the switch, said that when their work was completed he lined the switch for movement on the main track, placed the hasp of the switch lock in the keeper, and locked the switch lock. This was the last time the switch was used for a diverging movement prior to the time the accident occurred. Between 3 a. m., December 31, and the time the accident occurred there were 21 west-bound movements of scheduled passenger trains over the switch. The last west-bound train preceding No. N35 passed over the switch about 3 hours 20 minutes before the accident occurred.



The investigation disclosed that on January 1 two boys, each of whom was 10 years of age, passed the switch, and they said they found the switch lock open. The hasp was inserted in the keeper, but the lock was not closed. Between 3 p. m. and 3:30 p. m. that afternoon, one of the boys again was in the vicinity of the switch, at which time he removed the lock from the keeper and experimented with operating the switch. When he attempted to return the operating lever to normal position, he was unable to move it far enough so that it would drop into the slot in the casting. Not realizing the danger, he left the switch unsecured and did not mention the incident until after the accident occurred.

Cause

It is found that this accident was caused by a partly open switch.

Dated at Washington, D. C., this seventh day of March, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.