

INTERSTATE COMMERCE COMMISSION

NOTICE

April 27, 1943.

The Commission's mimeographed report No. 2675, dated March 29, 1943, of an accident which occurred on the New York Central Railroad at Utica, N. Y., on February 13, 1943, contains the following statement near the bottom of page 6:

The truck side-frame was manufactured in May, 1930, by the American Steel Foundries Company and its identification markings were GATX-21587, C-ARA 29PSF, 5-30.

This statement is in error and should have read as follows:

The truck side-frame was manufactured in May, 1930, by the Pittsburgh Steel Foundries Company and its identification markings were GATX ARA 29 21623 5-30 PSF.

Dated at Washington, D. C., this twenty-seventh day of April, 1943.

By the Commission, Commissioner Patterson.

W. P. BARTEL,
Secretary.

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2675
THE NEW YORK CENTRAL RAILROAD COMPANY
REPORT IN RE ACCIDENT
AT UTICA, N. Y., ON
FEBRUARY 13, 1943

SUMMARY

Railroad: New York Central
Date: February 13, 1943
Location: Utica, N. Y.
Kind of accident: Derailment
Train involved: Freight
Train number: Extra 2774 East
Engine number: 2774
Consist: 81 cars, caboose
Speed: 25-30 m. p. h.
Operation: Automatic block-signal and
automatic train-stop system
Track: 4; 1°02' left curve;
practically level
Weather: Snowing
Time: About 5:50 p. m.
Casualties: 1 killed; 3 injured
Cause: Accident caused by a broken
truck side-frame

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2675

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

THE NEW YORK CENTRAL RAILROAD COMPANY

March 29, 1943.

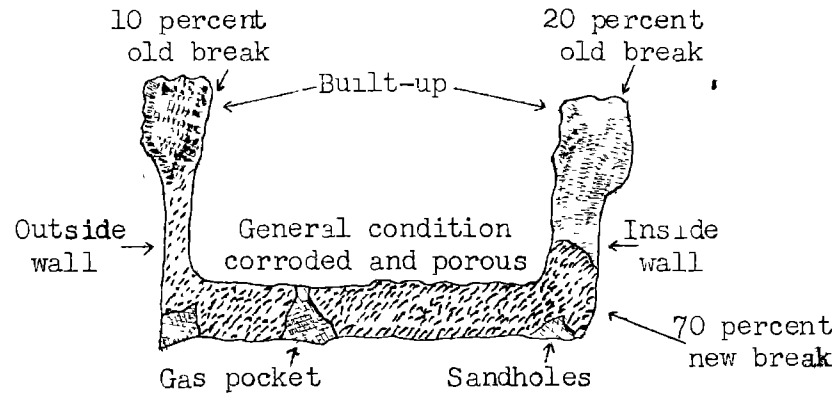
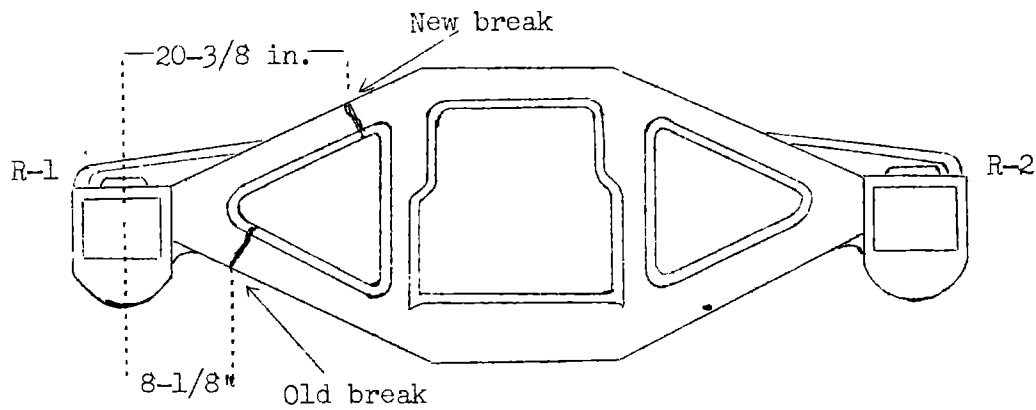
Accident at Utica, N. Y., on February 13, 1943, caused by
a broken truck side-frame.

REPORT OF THE COMMISSION¹

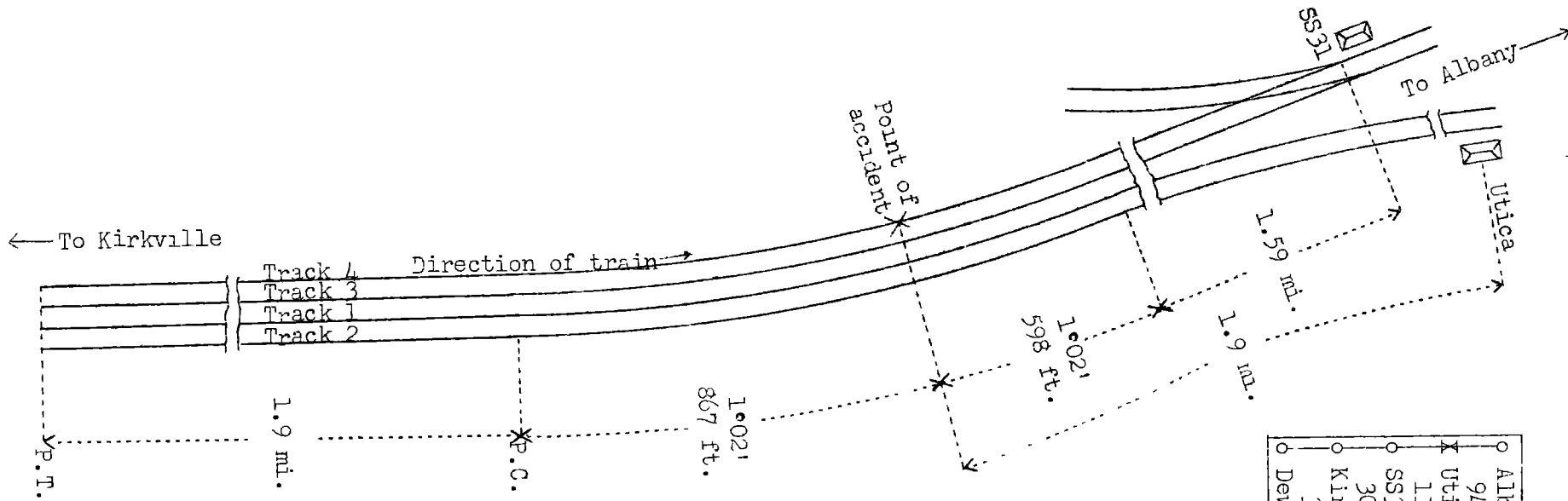
PATTERSON, Commissioner:

On February 13, 1943, there was a derailment of a freight train on the New York Central Railroad at Utica, N. Y., which resulted in the death of one signal maintainer, and the injury of two operator-levermen and one signal maintainer.

¹Under 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.



Cross section of tension member



○ Albany, N. Y.
○ 94.57 mi.
○ Utica (P.O.F.A.)
○ 11.48 mi.
○ SS34
○ 30.71 mi.
○ Kirkville
○ 3.79 mi.
○ Dewitt Yard, N. Y.

Inv. No. 2675
 New York Central Railroad
 Utica, N. Y.
 February 12, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the Mohawk Division extending between Kirkville and Albany, N. Y., a distance of 136.76 miles. In the vicinity of the point of accident this is a 4-track line over which trains moving with the current of traffic are operated by an automatic block-signal and automatic train-stop system. Signal indications supersede time-table superiority. The main tracks from south to north are No. 2, eastward passenger track, No. 1, westward passenger track, No. 3, westward freight track, and No. 4, eastward freight track. The accident occurred on track No. 4 at a point 1.9 miles west of the station at Utica. Approaching from the west there is a tangent 1.15 miles in length, which is followed by a 1°02' curve to the left 867 feet to the point of accident and 598 feet beyond. At the point of accident the grade is practically level.

On the curve on which the accident occurred the structure of track No. 4 consists of 127-pound rail, 39 feet in length, laid on 24 treated ties to the rail length; it is fully tie-plated with double-shoulder tieplates, double-spiked, provided with 8 rail anchors per rail length, and is ballasted with 16 inches of crushed rock.

Automatic signal 23974, which governs east-bound movements, is located 1,145 feet west of the point of accident.

The maximum authorized speed on track No. 4 for the train involved is 45 miles per hour.

Description of Accident

Extra 2774, an east-bound freight train, consisted of 78 loaded and 3 empty cars and a caboose. At Dewitt Yard, 45.98 miles west of Utica, a terminal air-brake test and a mechanical inspection were made. This train departed from Kirkville, 42.19 miles west of Utica, at 4:15 p. m., according to the dispatcher's record of movement of trains, passed Signal Station 34, 11.48 miles west of Utica, at 5:33 p. m., passed signal 23974, which displayed proceed, and while moving at a speed estimated as 25 or 30 miles per hour the rear truck of the twenty-ninth car became derailed at a point 1.9 miles west of the station at Utica.

The derailed car continued in line with the track throughout a distance of 1.59 miles eastward and the general derailment occurred at the guard rail of a trailing-point switch. The twenty-ninth to thirty-fourth cars, inclusive, were derailed

and three were destroyed. The thirty-first car struck Signal Station 31, located 1,161 feet west of the station, and damaged it badly. The front trucks of the thirty-fifth and thirty-sixth cars were derailed and these cars were badly damaged.

It was snowing at the time of the accident, which occurred about 5:50 p. m.

The employee killed and the employees injured were in Signal Station 31.

Track Data

After the accident, examination of the track disclosed that the first mark on the track structure was a broken bond wire outside the south rail of track No. 4. Then dragging marks appeared intermittently in the snow outside the south rail throughout a distance of 4,312 feet to a highway grade crossing where the west end of the plank outside the south rail was gouged. At this point marks indicated that a truck was derailed with its north wheels inside the north rail and the south wheels outside the south rail. These marks continued in line with the track a distance of 1.59 miles to the point where the general derailment occurred.

Throughout a distance of 335 feet immediately west of the first mark of derailment, the greatest variation in the gage of the track between two adjacent stations 30.1 feet apart was 1/8 inch, and in superelevation, 1/8 inch. At the point of derailment the gage was 4 feet 8-1/2 inches and the superelevation was 1-1/2 inches.

Mechanical Data

The first car to become derailed was MRUX 72045, a refrigerator car. Its capacity and load limit were, respectively, 70,000 and 73,000 pounds. At the time of the accident this car was loaded with 38,476 pounds of dressed meat, and its gross weight was 100,676 pounds. The truck side-frame involved was on the right side of the rear truck. It was a Bettendorf, single-piece, cast-steel, U-section type, and had integral journal boxes for 5 by 9-inch journals. The truck side-frame was manufactured in May, 1930, by the American Steel Foundries Company and its identification markings were GATX-21587, C-ARA 29PSF, 5-30. The truck had similar side-frames on each side. The bolster was a 12-inch cast-steel type, and had an integral center plate and box-type roller side-bearings. The last record available indicates that the truck side-frame which failed was welded and annealed in June, 1941, at the car shop

of the Union Refrigerator Transit Line, Argentine, Kansas.

After the accident the right side-frame was found to be broken through the compression member and the tension member at points, respectively, 20-3/8 inches and 8-1/8 inches ahead of the center-line of the rear journal box. The fracture in the compression member was new and there was no evidence of defective metal. The fracture in the tension member was 10 percent old break through the outside wall and 20 percent through the inside wall.

Examination of the side frame disclosed that the chemical composition of the metal was as follows:

Carbon	0.354
Manganese	0.70
Phosphorous	0.038
Sulphur	0.013
Silicon	0.32

Discussion

As Extra 2774 East was moving on a 1°02' curve to the left at an estimated speed of 25 to 30 miles per hour the rear truck of the twenty-ninth car became derailed to the right at a highway grade crossing 1.9 miles west of the station at Utica.

This car had been inspected about 46 miles west of Utica, and no defective condition was found. The enginemen and the front brakeman said that en route they looked back at intervals on either side of the train but observed no indication of defective equipment; however, because of snow blowing, visibility was restricted to about 900 feet. No member of the crew at the rear of the train observed any defective condition prior to the accident. The flagman said that when the train passed each open office he was on the rear platform and received no signal to indicate any defective condition of his train. The first any member of the crew of Extra 2774 was aware of anything being wrong was when the train air brakes became applied in emergency and the train stopped abruptly.

The investigation disclosed that a truck side-frame of the twenty-ninth car had failed at a point 2.7 miles west of the station at Utica, then at a point 0.81 mile farther east the side-frame struck a crossing plank and the truck became derailed. The truck remained in line with the track throughout a distance of 1.59 miles to the point of general derailment.

Chemical analysis of the metal of the failed truck-side disclosed that it met specifications; however, there was

porosity present. The fracture through the compression member was new, but 10 percent of the cross-sectional area of the outside wall of the tension member and 20 percent of the inside wall were old breaks. The fracture of the tension member occurred 8-1/2 inches ahead of the center-line of the rear journal box. The old fracture extended from the beaded edge downward 1-5/8 inches in the outside wall and 1-5/4 inches in the inside wall. The fracture of the bottom part was new; however, sand holes were present and a gas pocket, which was 1/8 inch wide at the top and 3/8 inch wide at the bottom, extended throughout this member 1-1/2 inches inward from the outer surface. Areas adjacent to the fracture of the tension member indicated that welding had produced added cross-sectional area to the beading and that the old fractures had originated in this built-up portion. Near the front journal-box, several cracks were found in the beaded portion of the tension member but there was no evidence of fracture at these points. Throughout the side-frame considerable oxidation existed and fractures that had not opened could not be detected by ordinary inspection.

According to data submitted by the carrier, the last heavy repairs given the truck in question were in May, 1941. The record indicates that metal had been added to the side-frame at that time and then annealed. According to the code of rules adopted by the Association of American Railroads for the interchange of cars, metal may be added to worn surfaces by welding process, if 80 percent of the cross-sectional area of the original metal remains. In this instance the application of new metal to the side frame met the specifications.

Cause

It is found that this accident was caused by a broken truck side-frame.

Dated at Washington, D. C., this twenty-ninth day of March, 1942.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.