INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2670

THE CHICAGO GREAT WESTERN RAILWAY COMPANY

REPORT IN RE ACCIDENT

AT MELBOURNE, IOWA, ON

FEBRUARY 17, 1943

SUMMARY

Railroad:	Chicago Great Western	
Date:	February 17, 1943	
Location:	Melbourne, Iowa	
Kind of accident:	Head-end collision	
Trains involved:	Freight	: Passenger
Train numbers:	62	: 15
Engine numbers:	876	: 930
Consist:	Auxiliary water car, 61 cars, caboose	: 6 cars
Estimated speed:	Standing	: 20 m. p. h.
Operation:	Timetable, train orders and automatic block-signal system	
Track:	Single; tangent; 0.13 percent descending grade westward	
Weather:	Clear	
Time:	About 12:37 a. m.	
Casualties:	4 injured	
Cause:	Accident caused by switch being opened immediately in front of approaching train	
Recommendation:	That the Chicago Great Western Railway Company install electric switch-locking at main-track facing-point switches in high-speed territory	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2678

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

THE CHICAGO GREAT WESTERN RAILWAY COMPANY

April 6, 1943.

Accident at Melbourne, Iowa, on February 17, 1943, caused by a switch being opened immediately in front of an approaching train.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On February 17, 1943, there was a head-end collision between a freight train and a passenger train on the Chicago Great Western Railway at Melbourne, Iowa, which resulted in the injury of three railway-mail clerks and one employee. This accident was investigated in conjunction with a representative of the Iowa State Commerce Commission.

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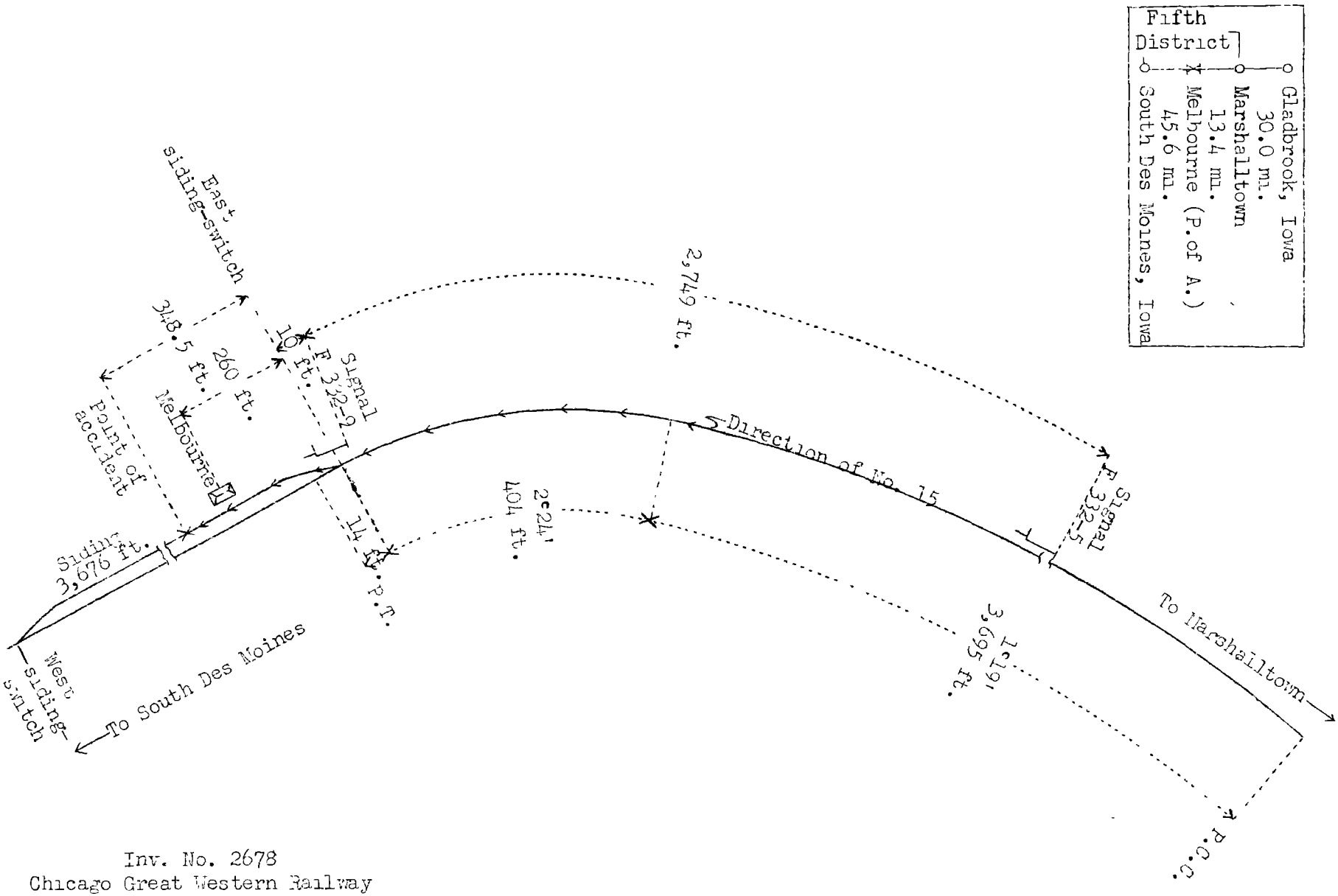
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 2678
Chicago Great Western Railway
Melbourne, Iowa
February 17, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the Iowa Division designated as the Fifth District and extending between Marshalltown and South Des Moines, Iowa, 59 miles. This is a single-track line over which trains are operated by timetable, train orders and an automatic block-signal system. At Melbourne a siding 5,676 feet in length parallels the main track on the north. The east switch of this siding is located 260 feet east of the station. The accident occurred on the siding at a point 348.5 feet west of the east siding-switch. Approaching from the east there is a compound curve to the left, the maximum curvature of which is 2°24', extending 4,099 feet to the east siding-switch and 14 feet beyond. On the siding there is a No. 12 turnout to the right 283.6 feet in length, which is followed by a tangent 64.9 feet to the point of accident and 2,656.5 feet beyond. In the vicinity of the point of accident the grade for west-bound trains is 0.13 percent descending.

The automatic block-signal system is arranged on the overlap principle and consists of double-location home signals at sidings, approach signals in approach to home signals, and intermediate signals between stations. Approach signal F 332-5 and home signal F 332-9, governing west-bound movements, are located, respectively, 2,759 and 10 feet east of the east siding-switch at Melbourne. These signals are of the one-arm, two-position, upper-quadrant, semaphore type. Signal F 332-5 is approach lighted and signal F 332-9 is continuously lighted. The night aspects and corresponding indications and names of these signals are as follows:

	Night Aspect	Indication	Name
Signals (F 332-5 (F 332-9	Green	Proceed	Clear Signal
Signal F 332-5	Yellow	Approach Home Signal with Caution	Caution Signal
Signal F 332-9	Red	Stop	Stop Signal

Operating rules read in part as follows:

104. * * *

Conductors are responsible for the position of the switches used by them and their brakemen, * * *. When practicable, the engineman must see that the switches near the engine are properly set.

* * *

The maximum authorized speed for passenger trains is 60 miles per hour.

Description of Accident

No. 62, an east-bound second-class freight train, consisted of engine 876, 1 auxiliary water car, 32 loaded and 29 empty cars and a caboose. This train entered the siding at Melbourne and stopped about 12:05 a. m. to clear for No. 12, an east-bound first-class passenger train. At 12:15 a. m. the engineer copied train order No. 5, Form 19, reading as follows:

> No 62 Eng 873 take siding
> and meet No 15 Eng 930 at
> Melbourne instead of west
> passing track Marshalltown

About 22 minutes later No. 62 was struck by No. 15.

No. 15, a west-bound first-class passenger train, consisted of engine 930, one mail car, one baggage car, one coach, two Pullman sleeping cars and one tourist sleeping car, in the order named. All cars were of steel construction. At Gladbrook, 30 miles east of Melbourne, the crew received a clearance card and copies of three train orders, of which one was train order No. 114, Form 19, reading as follows:

> No 12 Eng 928 take siding
> and meet No 15 Eng 930 at
> Melbourne

At Marshalltown, 13.4 miles east of Melbourne, the crew received a clearance card and copies of three train orders, of which one was train order No. 5, Form 19, previously quoted. This train departed from Marshalltown at 12:16 a. m., according to the dispatcher's record of movement of trains, 1 hour 1 minute late, passed signal F 332-5, which displayed proceed, passed signal F 332-9, which displayed stop, and while moving at an estimated speed of 20 miles per hour it entered the siding at the east switch and struck the engine of No. 62 at a point 348.5 feet west of the east siding-switch. The air brakes of No. 15 had been tested previously and had functioned properly en route. There was no condition of the engine that obscured the vision or distracted the attention of the employees who were on the engine.

From a west-bound engine moving in the vicinity of the point of accident the view of signal F 332-9 and the east siding-switch is materially restricted, because of buildings adjacent to the track and track curvature.

The force of impact moved No. 62 backward about 18 feet. Engines 876 and 930 stopped, badly damaged, upright and in line

with the track. The front ends were telescoped together and all wheels of engine 930 were above the rails. The sixth car of No. 62 was demolished, the seventh car was derailed and badly damaged, and the eighth car was slightly damaged.

It was clear at the time of the accident, which occurred about 12:37 a. m.

The employee injured was the fireman of No. 15.

Data

The east siding-switch at Melbourne is provided with a stand 8 feet high, located approximately 6 feet north of the north rail of the main track. The spindle is equipped with a lower-quadrant, semaphore-type target, which is 2 feet 9 inches in length. No light is provided on the switch stand. When the switch is lined for the main track the target is displayed in a diagonal position. When the switch is lined for the siding the target is displayed in a horizontal position.

Discussion

No. 62, an east-bound second-class freight train, was on the siding at Melbourne to clear for No. 12, an east-bound first-class passenger train, and to meet No. 15, a west-bound first-class passenger train. No. 15 was required by train order to hold the main track east of the fouling point of the west siding-switch at Melbourne and to meet No. 12. No. 15 entered the siding at the east switch and struck No. 62.

As No. 15 was approaching the approach signal, located 2,759 feet east of the east siding-switch, the speed was about 35 miles per hour, and the signal displayed green. The enginemen were maintaining a lookout ahead. When the engine passed the approach signal, the home signal was momentarily visible to the fireman, and he observed that the latter signal displayed green. The home signal again became visible to the fireman when the engine reached a point about 600 feet east of it, but the aspect had changed from green to red. The fireman called the indication to the engineer, and they thought No. 12 had entered the track circuit west of the west siding-switch. The engineer made a service brake-pipe reduction in preparing to stop clear of the west siding-switch. Soon afterward the enginemen saw stop signals being given with a white light from a location near the east siding-switch. The engineer immediately moved the brake valve to emergency position but the distance was insufficient to stop his train short of the east siding-switch or No. 62. The speed of No. 15 was about 20 miles per hour when the collision occurred.

The front brakeman of No. 62 said that soon after his train stopped on the siding he overheard a conversation between the conductor and the engineer relative to No. 15 and No. 12 meeting at Melbourne. He assumed that his train would move westward

on the siding and that No. 15 would enter the siding at the east switch to meet No. 12. He therefore proceeded to the switch to line it for No. 15 to enter the siding. When No. 15 reached a point about 700 feet east of the switch, the brakeman lined the switch for the siding. Soon afterward he became alarmed because of the speed at which No. 15 was moving, and gave stop signals. He said no member of his crew had instructed him to operate the switch. The conductor and the engineer of No. 62 had communicated with the train dispatcher while their train was at Melbourne, but they said they were not aware that No. 12 and No. 15 were to meet at that station and they had not discussed the matter with the front brakeman. The enginemen, who were on the engine, and the conductor, who was on the station platform, were not more than 350 feet west of the east switch, but they were not aware of the action taken by the front brakeman until after the accident occurred.

During the 12-year period prior to this accident, the Commission has investigated thirteen accidents which resulted from switches being thrown immediately in front of approaching trains, similar to the accident here under discussion. These thirteen accidents resulted in the death of 23 and the injury of 218 persons. In ten of these accidents, the trains involved had passed automatic signals displaying indications that permitted the trains to proceed. The other three accidents occurred in non-automatic signal territory. All the switches in question were of the hand-throw type and were located on high-speed tracks. If the switches had been equipped with electric switch-locking, these accidents would have been averted. If the switch in this case had been equipped with electric switch-locking, the brakeman would not have been able to throw the switch immediately in front of the approaching train, and this accident would not have occurred.

Cause

It is found that this accident was caused by a switch being opened immediately in front of an approaching train.

Recommendation

It is recommended that the Chicago Great Western Railway Company install electric switch-locking at facing-point main-track switches in high-speed territory.

Dated at Washington, D. C., this sixth day of April, 1943.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

(SEAL)

Secretary.