INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

ELGIN, JOLIET AND EASTERN

RAILWAY

SOUTH CHICAGO, ILL.

FEBRUARY 12, 1936

INVESTIGATION NO. 2061

SUMMARY

Railroad:	Elgin, Joliet & Eastern	
Date:	February 12, 1936	
Location:	South Chicago, Ill.	
Kind of accident:	Side collision	
Trains involved:	Switch movement	: Switch movement
Engine Nos.:	307	: 309
Consist:	35 cars	: 4 cars, 3 of which ran away
Speed:	Standing	: 18 or 20 miles per hour
Track:	1 percent descending grade	
Weather:	Dark and cloudy	
Time:	11:00 p.m.	
Casualties:	1 killed	
Cause:	Cars uncoupled and ran away due to improperly constructed pin lifting lever; contributing cause was defective hand brakes on 2 of the runaway cars.	

To the Commission:

On February 12, 1936, there was a side collision between a cut of runaway cars and a switch engine on the Elgin, Joliet and Eastern Railway at South Chicago, Ill., which resulted in the death of one employee.

Location and method of operation

This accident occurred in the South Chicago yard on the Gary Division, which extends southward from 79th street to the Calumet River at the foot of 91st street. Train movements are governed by yard limit rules and by signals given to the engine crews by switchmen, yardmasters and switchtenders. The yard lies wholly within the confines of the Illinois Steel Company plant; a narrow gauge railway, within the plant, is operated by the Illinois Steel Company, but standard gauge movements are made by the Elgin, Joliet and Eastern Railway Company. Twenty-five yards, at various points on the property, are used to serve different parts of the plant; these yards are designated by letter or name and the tracks by number; connections between the yards are made by loop tracks and leads. Yard P is located on a level about 10 feet higher than some of the other yards in the plant, the tracks in this yard extending north and south. Yard B is parallel to and about 0.4 mile west of yard P, and is located on a lower level.

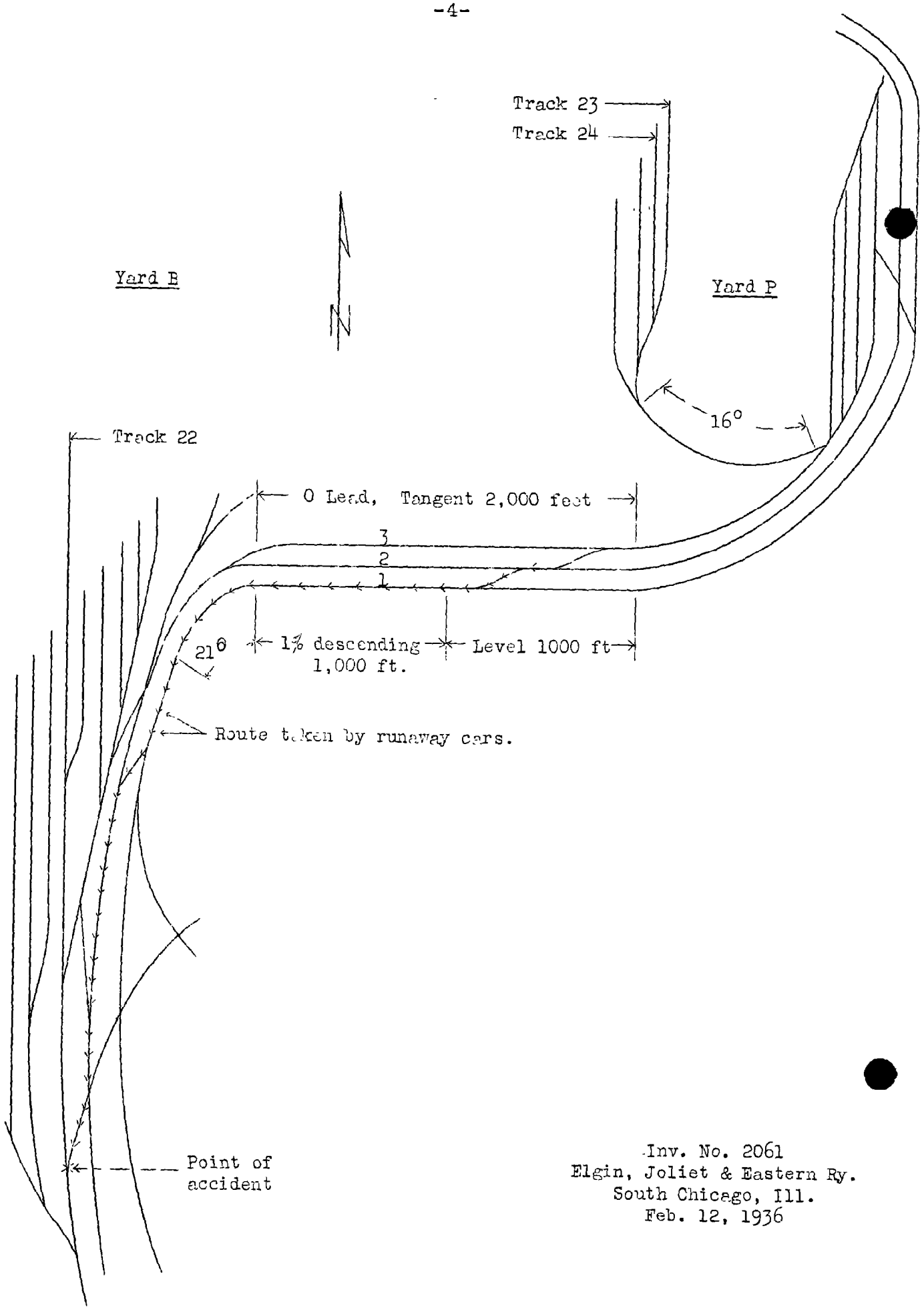
The connection between yards P and B consists of 3 tracks, extending east and west, known as O Lead. Approaching yard B on this lead, the tracks are level for approximately 1000 feet, then descend on a grade of 1 per cent for 1000 feet, and are tangent to the foot of the grade where they curve to the left on a 21° curve for a distance of 300 feet and merge with the running tracks of yard B. The 3 tracks are numbered from the south; tracks 1 and 2 are used chiefly as running tracks, track 1 being used for eastbound movements, and track 2 for westbound movements; track 3 is used as a hot-metal track and merges with track 2 at the foot of the descent. The 3 tracks are connected by crossovers near the top of the grade.

Tracks 23 and 24 in yard P are stub tracks which can be entered from the south only, and join O Lead via a 16° curve to the left.

The weather was cloudy at the time of the accident, which occurred at 11:00 p.m.

Description

Switch engine 309, in charge of Foreman Collins and Engineman



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Nitsche, moved 4 gondolas from tracks 23 and 24 in yard P, and pushed them down track 2 of O Lead; after entering O Lead, the train from east to west, was made up as follows: Engine 309, EJ&E gondolas 30724, 20769, 22745 and 20182, loaded with metal slabs; the train proceeded westward on track 2, moving at a speed of 6 or 8 miles per hour until near the crossover leading to track 1; the air brakes were then applied on the engine and the cars parted between EJ&E 30724 and 20769; the 3 west cars of the cut proceeded through the crossover and down the grade on track 1, ran through a double-slip switch, the north end of which was set for track 22 in yard B, and while moving at a speed estimated to have been between 18 and 20 miles per hour sideswiped engine 307 which was standing on track 22 in yard B.

Switch engine 307, in charge of Foreman Schrage and Engineman Woodruff, had pulled 35 cars from yard P through track 2 of O Lead and had been stopped about 2 minutes, with engine 307 standing on track 22 in Yard B, when the left side of the tank was struck by car 20182.

The left drivers of engine 307 were raised about 6 inches off the rail and the front trucks of the tender were derailed and the tank nearly overturned; the left side of the cab was badly damaged. Car 20182 stopped with its front end wedged in the gangway of engine 307 and the lead pair of wheels derailed; none of the other equipment was derailed by the collision. The employee killed was the fireman of engine 307.

Summary of evidence

Foreman Collins stated that his engine picked up four loads from tracks 23 and 24 in yard P and was placing them on track 1 of O Lead; as the cars were being shoved toward the crossover connecting tracks 2 and 1, at a speed of 4 to 6 miles per hour, Switchman McGowan was setting the hand brake on car 30724 and some part of the hand brake apparatus of this car came in contact with the pin lifting lever, uncoupling the cars. Foreman Collins was on the ground at the time, and when the cars became uncoupled he ran and caught the nearest car. Switchman Shea had set the hand brake on car 20182 and had dropped off to get another car, and as the cars passed him he caught the last of the three runaway cars and was attempting to set the hand brake on this car when Foreman Collins overtook it. Foreman Collins then hurried for the hand brake on the next car ahead; as it was on the farther end of the car he had to climb over the load; by the time he reached it the cars were rounding the curve at the foot of the grade and he got off. He stated that the move was being made in the usual manner; the hand brakes were not tested before the move was made; it being assumed the brakes are in working order when there are no bad order cards on the cars. In making moves of this character it is customary for a man to ride the lead car if the

hand brake on that car is in good condition; if the brake on the lead car is not good he goes back until he reaches a car with a good brake; Foreman Collins was unable to say whether or not this occurred frequently.

Switchman Shea stated he lined the switches for track 1 on O Lead, then set the hand brake on car 20182 and got off to catch another car. About that time the three cars broke off and he got on the last car of the three and attempted to set the brake but was unable to move it in either direction, while Foreman Collins tried to set the brake on the next car ahead. After the accident Foreman Collins informed him there was a key missing in the rachet wheel of the brake he had tried to set, and in the presence of Assistant Yard Master Dunbar, Switchman Shea examined car 22745 and found there was no key in the rachet wheel. He also said the move was being made in the customary manner and that at times 15 or 20 loaded cars are moved down the grade ahead of the engine and that 3 or 4 good hand brakes will hold them.

Switchman McGowan stated that he was riding on the car next to the engine as they were being shoved down O Lead; he set the hand brake on this car as tightly as he could and when the air was set on the engine approaching the crossover, the 3 head cars broke away and started down the grade.

Engineman Woodruff of engine 307 stated that his engine had been standing about 2 minutes when the collision occurred and he had no warning of impending danger.

Statements of Acting General Yard Master McDonald and Assistant General Yard Master Dunbar were to the effect that this was an ordinary switching move and that the air is not coupled when making such moves.

Chief Car Inspector Hilbrich stated that car 30724 is equipped with a Klasing lever-type hand brake and an improved Carmer push-down type uncoupling lever. When applied, the pin lifting arm on the B end should be provided with an offset to clear the clevis and bell crank of the hand brake mechanism; however, on this car this section of the lever had no offset at the time of the accident; the B-1 brake beam, a bottom rod and a spring plank were all bent upward, which allowed an excessive movement of the bell crank and permitted the clevis to engage the pin lifting lever and release the lock block. He had no record of this lever having been changed and it was his opinion the lever had been replaced while the car was on a foreign line; as a repair of this kind is not billed against the car owner he would have no record of the matter. The last record covering inspection of the car prior to the accident showed that it came off the repair track at South Chicago on

February 4, 1936. He also inspected car 20769 after the accident; this car was derailed at the damaged switch while attempting to pull the cars away from engine 307. He found wheel marks on the brake pulling bracket and the bracket bent to such an extent that the hand brake could not be tightened; he thought this probably occurred during the derailment after the accident, as the trucks were slued and it would be necessary for them to move but 6 or 8 inches in order to come in contact with the bracket.

Since the accident occurred, instructions have been issued requiring all movements down the grade on O Lead to be made with the cars behind the engine.

Discussion

Engine 309 picked up four loaded gondolas in Yard P and moved them, without the air being coupled or the hand brakes tested, which is the usual procedure when no bad order cards are attached to the cars. There are no instructions requiring the use of air brakes when making movements in South Chicago yard which is not traversed by any public crossing, and it is not the practice to couple the train line. The intended move was to shove the cars below the crossover and spot them on track 1 of O Lead, a short distance above the 1 percent descending grade. Switchman McGowan was riding on the car ahead of the engine and set the hand brake on that car; Switchman Shea had set the hand brake on the lead car and dropped off to catch another. When the air brakes were applied on the engine approaching the crossover, the cars parted between the first and second cars ahead of the engine and the 3 lead cars broke away and rolled toward the incline. Switchman Shea caught the last of the 3 cars as it passed him and attempted to set the hand brake on that car but found that it was inoperative. Foreman Collins overtook the cars and attempted to set the hand brake on the second car, but that too was inoperative. On this cut of three cars there was therefore only one operative hand brake, which was inadequate to control their speed on the descending grade.

Car 30724 is an all-steel, 100,000 capacity gondola built by the E.J.& E. Ry. Co., in 1930 and is equipped, on the B end, with a Klesing lever type hand brake, and with Carmer push-down type uncoupling levers on both ends. In designing the pin lifting lever for the B end, on cars of series 30600-30899 of the E.J.& E. Ry., it was foreseen that under some conditions the vertical connection of the Klesing brake might foul the lever, and to eliminate this possibility a 6 inch bend was provided in the lever. However, a pin lifting lever without this offset had been applied to the B end of this car, and a bent brake beam, a bent bottom rod and a bent spring plank were also found on the B end of the car. These latter defects caused an excessive upward movement of the bell crank and clevis, allowing the

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clevis at the end of the vertical rod to engage the pin lifting lever and free the lock block of the coupler. Repair track records indicated this car came off the repair track, after undergoing light repairs, in South Chicago Yard on Feb. 4, 1936, and the car records disclosed that the car had not been moved out of the yard between that date and the time of the accident. In view of these facts it appears that the improperly constructed pin lifting lever was on the car when it left the repair track and an adequate inspection at that time should have revealed the condition.

Steps have been taken to curtail the use of push-down type uncoupling devices to the extent that under Rule 3, Sec. C, Par. 9, of the interchange rules adopted by the A.A.R., it is provided that rotating type uncoupling levers similar to the type shown on Plate B of the Safety Appliance specifications, will be required on all cars built new or rebuilt on or after Aug. 1, 1933, in order to render them acceptable from the car owners, and a foot note to this rule contains a recommendation that when cars built prior to August 1, 1933, receive Class 1 general repairs and new couplers are applied, rotating type uncoupling levers should be applied.

The investigation disclosed three safety appliance defects on the four cars involved, all of which should have been repaired before the cars were moved, except for such movement as may have been necessary to make these repairs; had this been done, or had the air brakes on the cars been used during this movement this accident would no doubt have been prevented.

Conclusion

This accident was caused by a train parting, allowing 3 cars to break off and run away, due to the bell crank clevis of a hand brake becoming engaged with an improperly constructed pin lifting lever; a contributing cause was the defective condition of the hand brakes on two of the runaway cars.

Respectfully submitted,

W. J. PATTERSON

Director.