Inv-2345

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

SPOKANE, PORTLAND & SEATTLE RAILWAY

AINSWORTH JUNCTION, WASH.

APRIL 17, 1939

INVESTIGATION NO. 2345

SUMMARY

Inv-2345

Railroad:	Spokane, Portland & Seattle	
Date:	April 17, 1939	
Location:	Ainsworth Junction, Wash.	
Kind of accident:	Head-end collision	
Trains involved:	N.P. freight	:N.P. mixed
Train numbers:	379	:347
Engine numbers:	2214	:1362
Consist:	29 cars, caboose	:1 Pullman car, :1 coach, 1 baggage :car, 6 freight cars, :caboose
Speed:	Standing	:20 m.p.h.
Operation:	Timetable and train order system	
Track:	Single; 3° curve to the left for eastward movements; level	
Weather:	Clear	
Time:	4:40 a.m.	
Casualties:	11 injured	
Cause:	Switch improperly lined immediately in front of approaching train	

To the Commission:

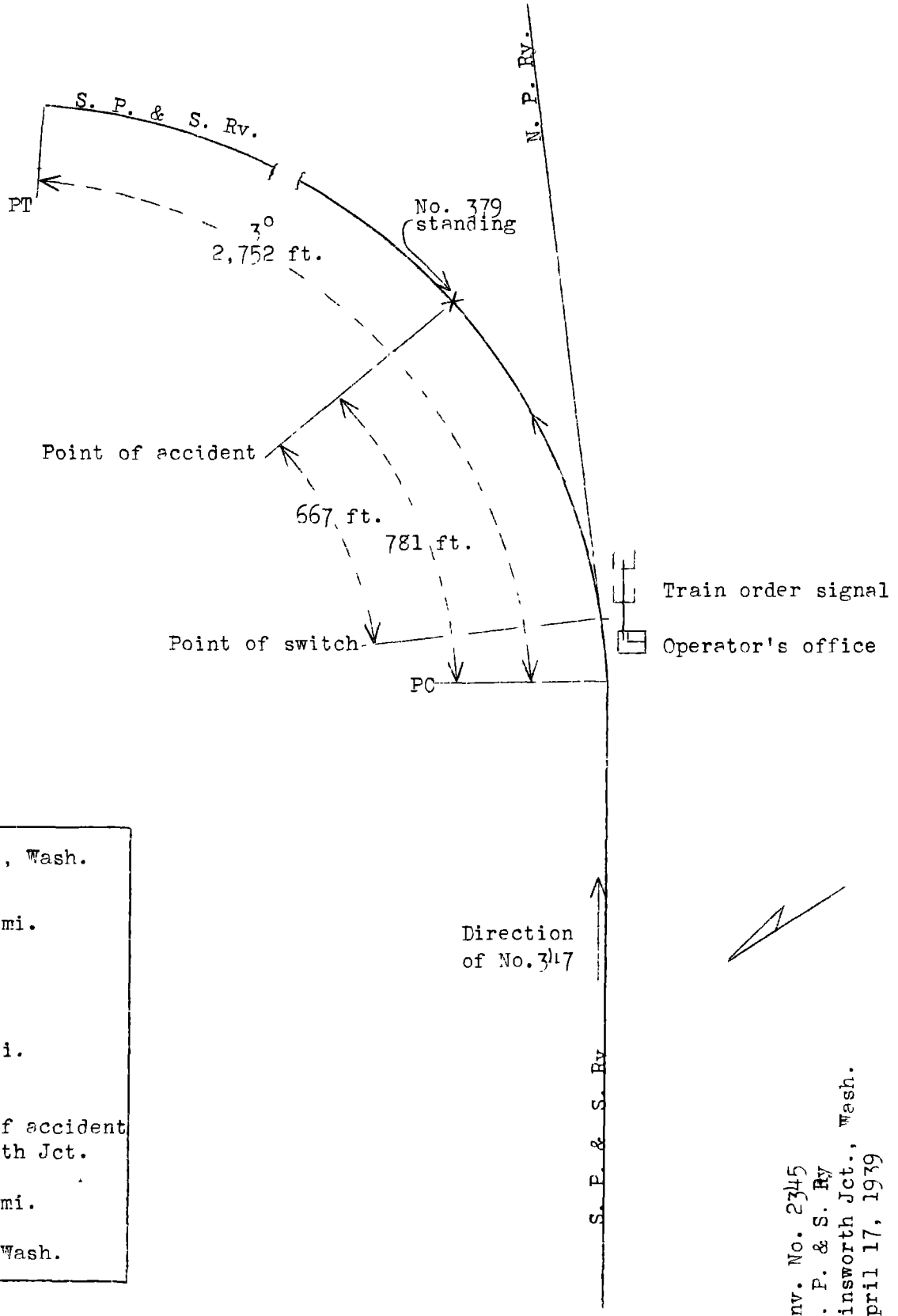
On April 17, 1939, there was a head-end collision between a mixed train and a freight train of the Northern Pacific Railway on the line of the Spokane, Portland & Seattle Railway at Ainsworth Junction, Wash., which resulted in the injury of two passengers, one trespasser, one Pullman employee, and seven train-service employees. The investigation of this accident was made in conjunction with a representative of the Department of Labor and Industries of the State of Washington.

Location and Method of Operation

The accident occurred on that part of the Vancouver Division designated as the Third Sub-division which extends between Yardley and Pasco, Wash., a distance of 152 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable and train orders, no form of block system being in use except between Ainsworth Junction and Pasco, a distance of 2.8 miles, where a block clearance card was used which gave the train holding this card absolute right over trains in the opposite direction.

Between Snake River Junction and Pasco, a distance of 26.2 miles, N.P. trains are operated over the line and governed by the rules of the S.P.& S. At Ainsworth Junction, the Ninth Sub-division of the Idaho Division of the N.P. connects with the S.P.& S. The accident occurred on the S.P.& S. track at a point 667 feet east of the switch connecting these two railways. Approaching the point of accident from the west there is a tangent approximately 1½ miles in length, followed by a 3° curve to the left 2,752 feet in length; the accident occurred on this curve at a point 781 feet from its western end. The grade is level.

The switch at Ainsworth Junction is a facing-point switch for east-bound trains, and is equipped with a spring rail frog having a No. 15 turnout. The switch stand, of the "G.N." high-mast type, is located on the south side of the track; it is equipped with an oil-burning lamp and an arrow-shaped single-blade target, pointed downward. The lens is 5 inches in diameter and its center is 8-3/4 feet above the head block; it displays a green aspect when the switch is lined for a through movement on the S.P.& S. track, and a red aspect when lined for the N.P. track, at which time the target also is displayed. The normal



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position of this switch is for a movement on the S.P.& S. track. This switch is manually operated by the operator at the junction. The operator's office is a one-story building with the door on the east side and is located about 10 feet west of the switch.

A double train-order signal is located at the junction; the upper arms govern movements to and from the S.P.& S. line, and the lower arms govern movements to and from the N.P. Trains en route to the N.P. call for the switch by sounding one long, one short, and one long blasts of the whistle. Trains from the N.P. stop at the junction.

Rule 98 of the operating rules of both railroads provides:

> Trains must approach the end of two or more tracks, junctions, railroad crossings at grade, and drawbridges, prepared to stop, unless the switches are properly lined, signals indicate proceed, and track is clear. Where required by rule or law, trains must stop.

Rule 104(A) reads in part as follows:

> ***
> After using a switch, it must be seen that points fit and it is properly secured and locked. If lock is missing or defective, immediate report must be made to train dispatcher.
> ***

The telegraph is used in dispatching trains in the territory involved.

The weather was clear at the time of the accident, which occurred about 4:40 a.m. According to the U.S. Weather Bureau at Spokane, the sun rose at 4:56 a.m. on the day of the accident.

Description

No. 379, a west-bound N.P. third-class freight train, consisted of 29 cars and a caboose, hauled by engine 2214, and was in charge of Conductor Rolison and Engineman Garman. This train departed from Snake River Junction, 23.4 miles east of Ainsworth Junction, at 3:50 a.m., according to the train sheet, 2 hours 30 minutes late, passed Snake River, 0.2 mile beyond and the last open office, at 3:59 a.m., 2 hours 38

minutes late, and had just stopped approximately 667 feet east of Ainsworth Junction switch when it was struck by No. 347.

No. 347, an east-bound N.P. mixed train, consisted of one Pullman tourist sleeping car, one coach, one baggage car, six freight cars, and a caboose, in the order named, hauled by engine 1362, and was in charge of Conductor Wilkins and Engineman Schanno. At Pasco, the crew received clearance form A together with Block Card, Order No. 7, authorizing their movement from Pasco to Ainsworth Junction. No. 347 departed from Pasco at 4:30 a.m., according to the train sheet, on time, passed Ainsworth Junction at 4:39 a.m., 2 minutes late, and instead of entering the N.P. track it continued on the S.P.& S. track, because of the switch having been thrown immediately in front of the train, and collided with No. 379 while traveling at a speed estimated to have been about 20 miles per hour.

The engines became locked together and were badly damaged. The front pair of driving wheels of the engine of No. 347 was raised by the engine truck which was demolished. The engine cab was demolished, having been telescoped by the tender which was badly damaged and partially derailed. The train broke in two between the tender and first car. The first four cars were somewhat damaged, but were not derailed, except the rear truck of the third car. The rear end of No. 347 stopped 74 feet east of the switch points. The engine and the first four cars of No. 379 were driven back a distance of 21 feet by the impact which apparently caused the fifth and sixth cars to jack-knife to the left of the track. The rear end of the tender telescoped the first car. None of the remaining equipment of No. 379 was damaged except the fourth and the ninth cars, which were slightly damaged; the rear truck of the fourth car was derailed.

The employees injured were the engineman, the fireman, and the head brakeman of No. 379, and the engineman, the fireman, the conductor, and the flagman of No. 347.

Summary of Evidence

Engineman Garman, of No. 379, stated that as his train approached Ainsworth Junction the operator was standing outside his building and gave a stop signal, which he acknowledged; the train-order signal governing his train displayed a red aspect. He then saw the operator turn around, throw the switch for a movement to the N.P. track, and give No. 347 a proceed signal with his flashlight. As his train neared

the switch he observed that it displayed a red aspect; he extinguished his headlight, stopped the train, and did not again see the operator. Just before the engine of No. 347 reached the switch he saw the switch light change to green, and No. 347, traveling at a speed of about 18 miles per hour, struck his train which had been standing about 40 seconds.

Fireman Griffith, of No. 379, stated that as his train stopped, the engineman raised the question as to what train was approaching, and he crossed over to the engineman's side of the cab to identify the train; at that time No. 347 was about 25 or 30 car lengths distant. He observed the stop indication of the train-order signal but did not look at the switch light. He then stepped back on the deck and the engineman called out a warning.

Head Brakeman Joy, of No. 379, was on the fireman's seatbox and, on account of being on the outside of the curve, was not in position to see the train-order signal, the switch light or the approaching train until immediately prior to the collision when he saw the rays of the headlight.

Conductor Rolison, of No. 379, stated that just as the train stopped he felt a jar, realized that something was wrong, and looked at his watch; it was 4:40 a.m., and he checked his watch with Flagman Garbett who also stated that it was 4:40 a.m. Conductor Rolison then proceeded to his engine and continued to the operator's office. The rear end of the caboose of No. 347 was standing on the frog. The switch was lined for the N.P. track and it apparently was locked, although he did not pull on the lock to make sure it was locked. The switch lamp was displaying a red aspect for the N.P. track. He asked the operator, who was standing on the platform, if that was the way the switch was lined, and the operator replied in the affirmative. The statement of Middle Brakeman Lewis corroborated that of the conductor regarding the position of the switch after the accident. He stated in effect that the hasp and the lock were in their normal positions but he was unable to say whether the lock was locked.

Engineman Schanno, of No. 347, stated that the air brakes on his train were in good operative condition and the headlight on his engine was burning. As he approached the whistle board at Ainsworth Junction he sounded the station whistle signal. The speed of his train was about 45 miles per hour, and he made a 15-pound brake-pipe reduction. He then sounded the signal for the switch and saw the red aspect of the switch light. The operator gave him a proceed

signal with either a flashlight or an electric lantern, and he released the air brakes when in the vicinity of the road crossing, located 1,203 feet west of the switch. The speed of his train at that time was about 25 miles per hour; he placed the brake valve in running position and the speed was increased slightly after that, possibly to about 30 miles per hour as he neared the switch. When he was about 6 or 8 feet from the switch light he saw it flicker and change. He warned the fireman, applied the air brakes in emergency, and jumped off. He did not see any other light at the switch, but he did not pay any attention to whether there was any one there as he was too busy in trying to stop the train and in getting off. He estimated the speed of his train to have been about 20 miles per hour at the time of the accident. After the accident he saw that the switch was lined for the N.P. track.

Fireman Baesen, of No. 347, stated that approaching Ainsworth Junction he saw the proceed indication of the train-order signal; he could see both the semaphore arm and the green signal light, but he did not see the switch light. He heard the engineman sound the various signals and apply the air brakes.

Head Brakeman Baker, of No. 347, stated that approaching Ainsworth Junction, hearing the engineman sound the whistle signal, he went out on the rear steps of the second car in the train. He then heard the engineman call for the switch. He saw the operator give his engineman a proceed signal, and when about 300 or 400 feet from the switch he again looked ahead, but at no time did he see the switch light; he stated that his view probably was obstructed by the smoke and steam from the engine and also by the operator when he gave the proceed signal. As they neared the switch he started back to the second step and just after they passed over the switch points he looked down and saw that they had entered the wrong track, but he did not see the operator or the switch light. About 10 minutes after the accident he went back to the switch, found it lined for the N.P. track and it appeared to be locked; however, he did not touch it.

The statements of Conductor Wilkins, of No. 347, corroborated those of the engineman as to the operation of the train from Pasco to the point of accident. He was on the rear platform of the coach when he felt the car turn toward the left. Between 5 and 10 minutes after the accident he reached the switch; he saw that it was lined for the N.P. track and he then entered the operator's office and found him talking over the telephone. He asked the operator how

the switch happened to be in that position, and the operator replied that he had lined it that way and had given his train a proceed signal. He then asked the operator how it was possible for his train to have entered the S.P.& S. track, and the operator stated that he did not know, but he had not touched the switch since and that no one else had been in the station with him. Conductor Wilkins stated that he did not see any one else around the station at that time, except bridgemen and passengers from his train.

Flagman Dysart, of No. 347, stated that as they neared Ainsworth Junction he stood on the rear platform of the caboose; he could not see the switch target on account of smoke and steam coming back over the side of the train. As he passed the station there was no one in sight. He then started to cross over to the left side of the platform to look up the track, when the collision occurred, and he was knocked through the doorway into the caboose. He was in a somewhat dazed condition for a minute or two and was not able to leave the caboose. About three or four minutes after the accident he looked back toward the switch. It was then becoming daylight and he saw the target, which indicated that the switch was lined for the N.P. track, and there was no one there when he saw it. He could not see the switch light.

Operator Brown, on duty at Ainsworth Junction, stated that he reported No. 909 as having passed there at 4:18 a.m., and after that train had cleared the switch he placed it in its normal position for a movement on the S.P.& S. track, and locked it. At the time he reported this train to the dispatcher he received a block card, order No. 5, for No. 379, and the dispatcher explained to him that he would possibly annul this block card. It was later annulled. He then heard the dispatcher issue the block card to No. 347 at Pasco. He went outside, could hear No. 379 approaching, and he placed the westward train-order signal governing that train in the stop position. The switch at that time was lined for the S.P.& S. track. When No. 379 reached a point where he could see the light in the engine cab, he gave the engineman a stop signal with his red lantern and the engineman acknowledged the signal. He turned and unlocked the switch, threw it for a movement to the N.P. track. At that time No. 347 was about 1½ or 1-3/4 miles distant. He placed the lock through the eye in the lever of the switch, but was not certain that he locked it, although it is his practice to do so. As No. 347 approached he gave the engineman a proceed signal, and the engineman acknowledged it, having previously whistled for the switch. He then went inside his office,

sat at his desk and through the window watched No. 347 approach from the west. When the engine was approximately 75 feet from him he reported the train by at 4.39 a.m. Dispatcher Moore acknowledged it, and Operator Brown thought that he told the dispatcher that No. 379 was standing there. The dispatcher replied, "O.K., copy a card." Operator Brown inserted the number "8" on the card which he had previously filled out. He then heard a terrific crash, turned around in his chair, saw the caboose lights of No. 347, but was unable to determine their location; he jumped up, looked through the doorway, and saw that No. 347 had entered the S.P.& S. track. During this time he had left the telegraph key open. He rushed to the telephone and asked Central to give him the chief dispatcher; he also telegraphed Dispatcher Moore to come to the telephone. He was not sure at first to whom he was talking, but was under the impression that it was Assistant Chief Dispatcher Monahan. He reported the accident and asked for a wrecker, doctors, and an ambulance. After this conversation had taken place, which consumed about 4 or 5 minutes, he went outside and saw Conductor Wilkins, about a car length from the rear of his train, walking toward his office. The switch at that time was set for the N.P. track and it was locked. Conductor Wilkins entered the office and went to the telephone, but before using it, he turned, looked at the signals and asked the operator if that was the way everything was, and the operator replied in the affirmative. Operator Brown stated that he did not touch the switch after first lining it for the N.P. track, that he did not line it back after No. 347 entered the S.P.& S. track, and that he was unable to say who did so. He did not have any reason to believe that any one would do it, and he did not see anybody around there. He stated that he had had sufficient time to throw the switch back for the N.P. track after the accident before Conductor Wilkins arrived at the switch, although he could not have been at the telephone and outside at the same time. He thought it would take him about 2 minutes to leave his office, unlock and throw the switch, and return. He said he did not leave the office, however, until 4:44 or 4:45 a.m. Operator Brown further stated that after No. 909 had passed there was no occasion for any confusion. He was positive that he lined the switch back to its normal position after the passage of that train.

Operator Brown is 27 years of age, and has been employed as an operator on the S.P.& S. since November 26, 1936; he has been in service at Ainsworth Junction since January 8, 1939, and his hours were from 2 a.m. to 10 a.m.

Dispatcher Moore stated that block card, order No. 5, was issued to the operator at Ainsworth Junction for engine

2214, No. 379, authorizing its movement from Ainsworth Junction to Pasco, with special instructions reading, "This card is annulled at 4:40 a.m." This card was made complete at 4:20 a.m. At 4:28 a.m., however, he issued block card, order No. 6, annulling block card No. 5. Dispatcher Moore then issued to the operator at Pasco block card, order No. 7, authorizing the movement of engine 1362 east, No. 347, from Pasco to Ainsworth Junction. Operator Brown then reported No. 347 as passing Ainsworth Junction at 4:39 a.m. He checked the time with his clock and it was correct; he entered it on the train sheet, reached for the train-order book which was on the shelf above his table, and cleared the block-card record. He then started to issue to Operator Brown block card No. 8 to move No. 379, which was about 30 seconds after he had received the "OS" on No. 347, and he had given only the card number when Operator Brown interrupted and sent something to the effect that there is going to be a wreck here; he did not know the exact words, but there were only two or three. The operator's key then remained open and he was out of communication with the operator for about 45 seconds. Dispatcher Moore thought that he left his chair and told Assistant Chief Dispatcher Monahan what the operator had told him. The operator then said, "Phone" and closed his key. Dispatcher Moore answered the telephone and the operator informed him that No. 347 had struck No. 379. Dispatcher Moore then called in the assistant chief dispatcher to the telephone, and subsequent details were handled by the latter.

Trainmaster Mattson, of the N.P., arrived at Ainsworth Junction at 5:15 a.m. Operator Brown called his attention to the fact that the switch was lined and locked for the N.P. track, and the switch target was displaying a red aspect. The operator told him that the switch had not been handled since No. 347 passed over it. After looking over the wreckage, Trainmaster Mattson unlocked the switch, lined it for the S.P.& S. track, and carefully noted the fit of the points; he then threw it back and forth several times, and left it lined in its normal position. The switch was in good condition, and the light was burning.

Roadmaster Schulstrom, Track Supervisor Straughan, and Section Foreman Yomagiw, of the S.P.& S., made a careful examination of the switch after the accident. All fastenings, rails, frog, and guard rails were undisturbed; the switch points fitted properly in either position. The switch light was removed and it was found that it could be placed on the staff only in its proper position.

Flagman Burke, of No. 909, stated that he was on the rear platform of the caboose as his train passed Ainsworth Junction, and the operator, who was standing on the platform in front of his office, gave him a "highball" as the caboose passed him. Flagman Burke then turned and went into the caboose and did not look back.

Observations of Commission's Inspectors

Two days after the accident, the Commission's inspectors conducted a test to determine the distance the switch light could be seen by the engineman of an approaching east-bound train. This test was made under similar weather conditions and about the same time of morning that No. 347 approached Ainsworth Junction on the day of the accident. The same type of engine also was used. This switch light was first seen distinctly when 1,357 feet from it.

Examination of the switch by the Commission's inspectors disclosed it to be in the condition as stated by other witnesses. There was no indication that it had been run through or damaged.

Discussion

The investigation developed that the switch had been properly lined for the movement of No. 347 to the N.P. track, that No. 347 approached under control, and after the proper signals had been given, it continued at a speed of from 25 to 30 miles per hour. The switch was thrown immediately in front of No. 347 when the engine had practically reached it, and the entire train passed over the switch points and stopped on the S.P.& S. line with the rear end on the frog. After the accident the switch was found lined for the N.P. track. The switch was not run through or damaged in any way. So far as could be determined by this investigation, there was no one other than the operator in the vicinity of this switch immediately prior to the accident. As the switch is located only about ten feet from the operator's office it seems incredible that this switch could have been operated without the operator's knowledge, although the evidence is conclusive that the switch was thrown to the position for a movement to the S.P.& S. track just prior to the accident, and then lined back for a movement to the N.P. track after the accident. The statement of the dispatcher that when sending an order the operator interrupted him with information to the effect that there was about to be a wreck and then was out of communication for a brief interval was not satisfactorily explained by the operator.

The operations of this switch as described by the operator do not correspond with the operations indicated by other evidence and as disclosed by the occurrence of this accident. The operator had full control of this switch, and it was his duty under the rules to see that the switch was properly lined and locked for the intended movement and that the switch points fitted properly; had he done so this accident would have been averted.

Conclusion

This accident was caused by a switch being improperly lined immediately in front of an approaching train.

Respectfully submitted,

W. J. PATTERSON,

Director.