

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE BANGOR AND AROOSTOOK RAILROAD NEAR
STATE ROAD, ME., ON FEBRUARY 25, 1934.

April 28, 1934.

To the Commission:

On February 25, 1934, there was a derailment of a freight train on the Bangor and Aroostook Railroad near State Road, Me., which resulted in the death of 1 employee and the injury of 2 employees.

Location and method of operation

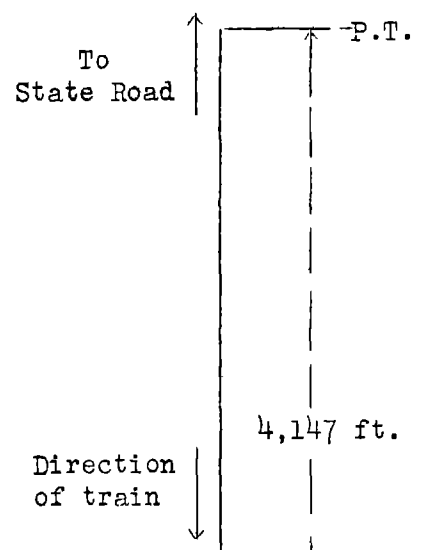
This accident occurred on that part of the Northern Division known as the Washburn cutoff, which extends between Stockholm and Squa Pan, Maine, a distance of 47.8 miles, and is a single-track line over which trains are operated by time table and train orders, no block-signal system being in use. The accident occurred at a point approximately 1.2 miles south of the station at State Road; approaching this point from the north, the track is tangent for a distance of 4,147 feet, followed by a 2° curve to the left 1,178 feet in length, the accident occurring on this curve at a point about 525 feet from its northern end. The grade is level at the point of accident.

In the vicinity of the point of accident the track is laid in a cut approximately 400 feet in length, 3 feet in depth on the west side and about 2 feet in depth on the east side, the accident occurring at about the center of the cut. The track is laid with 70-pound rails, 33 feet in length, with an average of 17 untreated cedar ties to the rail length, single-spiked and tieplated.

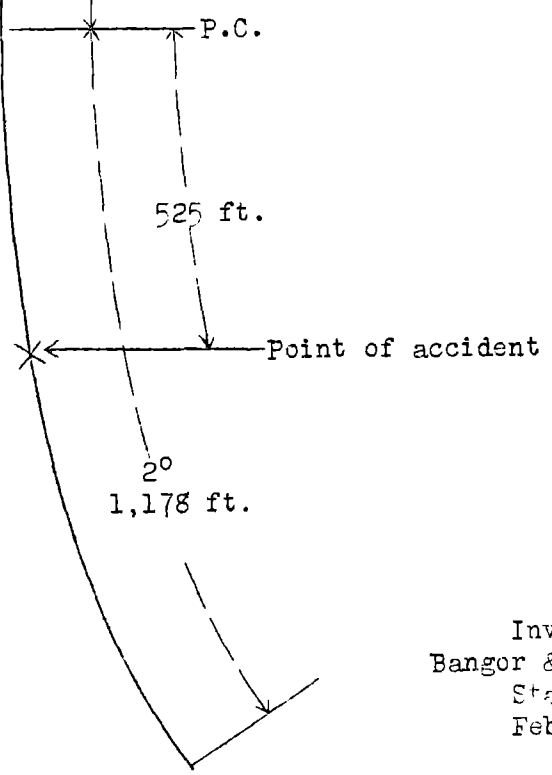
The weather was clear and the wind was blowing at the time of the accident, which occurred about 4 p.m.

Description

South-bound freight train Extra 185 consisted of five refrigerator cars, caboose, and a flanger car, hauled by engine 185 with a snow plow coupled ahead of it, in charge of Conductor Cyr and Engineman Hamilton. It departed from Van Buren, 43.2 miles north of State Road, at 12:45 p.m. and picked up 12 refrigerator cars en route, the last pickup being made at State Road. The train then departed and was derailed south of State



●	Stockholm, Maine
	26.5 miles
●	State Road
	1.2 miles
×	Point of accident
	20.1 miles
●	Squa Pan, Maine



Inv. No. 1895
 Bangor & Aroostook R.R.
 State Road, Me.
 Feb. 25, 1934

Road while traveling at a speed estimated to have been 25 or 30 miles per hour.

The snow plow was thrown to the left of the track, turned completely around, and stopped close to the east rail. The engine was partly overturned and stopped about 15 feet from and practically in line with the track, about three car lengths south of the plow; its left side was badly damaged. The tender remained coupled and at right angles to the engine with its rear truck on the roadbed. The first three cars and the front truck of the fourth car were derailed; these cars remained upright, having been driven into a high bank of snow on the west side of the track. The employee killed was the engineman and those injured were the two brakemen.

Summary of evidence

Fireman Michaud stated that his train was traveling at a speed of 25 or 30 miles per hour when the train struck a high snow drift on the right side of the track. The brakeman called out that they were off the track and he thought they all noticed it about the same time, the engineman immediately applying the air brakes in emergency. After being derailed the snow plow traveled a distance of about two car lengths. There was a light wind blowing at the time, but the snow was not drifting, Fireman Michaud saying that it was packed dry and hard and about 6 or 7 feet in depth on the right rail, with very little snow on the left rail. He also stated that this snow plow had become derailed on two other occasions when being handled on trains on another portion of the line, but each time the plow was on the rear of the train.

Head Brakeman Pinette stated that they had encountered a few drifts of snow en route but no unusual amount until they reached State Road, when some difficulty was experienced on leaving that point on account of drifting snow. He thought the snow at the point of accident was about 4 or 5 feet in depth on the right rail, sloping to a depth of about 1 foot on the left side of the track. When the plow struck this drift the cab of the engine was filled with flying snow which at once turned to steam on contact with the boiler butt, making it impossible to see, but he heard a crash and at once called a warning to the engineman.

Trainmaster Dow, who arrived at the scene of the accident about 8:30 p.m., said the snow in the cut was from 15 to 18 feet in depth on the right side, 7 or 8 feet in depth on the west rail, and about 4 or 5 inches in depth on the east rail. It was his opinion that when the plow struck deep snow on the right side the plow was forced to the left, where there was

very little snow. The last train movement was a north-bound train about 23 hours prior to the time of the accident. Trainmaster Dow stated that it was uncommon for snow plows to be derailed; he could recall of only four on the Northern Division during the winter, and this was the third derailment of this particular plow, although on the other two occasions the plow had been on the rear end of the train.

Master Mechanic Baker stated that after the derailment of this snow plow in a rock cut on the Ashland Branch, which was the second time it had been derailed, he arranged for General Car Inspector Hackett to go to Fort Kent and examine the plow, which was done on February 4, but the inspector found nothing wrong with it. Master Mechanic Baker said that he still was not satisfied and examined the plow himself, on February 5, the forward truck being removed for the purpose, but without finding anything wrong. The point or bit of the plow at that time measured $2 \frac{7}{8}$ inches above the rail, as against the standard minimum measurement for this type of plow of $2 \frac{3}{4}$ inches. Master Mechanic Baker further stated that this plow had been given a thorough inspection on November 13, 1933, at which time the bit was 3 inches above each rail.

Roadmaster Wood accompanied Trainmaster Dow to the scene of the accident and found three broken rails behind the tender and some bent rails under it. The track was in good condition for that time of the year, however, with the gauge about $\frac{1}{4}$ inch above standard and the elevation about $\frac{1}{4}$ inch less than standard, and he could not find any track condition which could have contributed to the occurrence of the accident. The section of track between Mapleton and Washburn, a distance of 8 miles, which includes the territory in which the accident occurred, is one in which the snow drifts badly, although the point at which the accident occurred is not as bad as some of the others. On the day of the accident section men had been over the track on their way to State Road and one of the men informed him that the snow on the west rail was about 5 feet in depth at its deepest point.

Superintendent Daggsett stated that the snow plow involved had been in service practically all winter, being used on one of the regular trains. It was out of service, however, from February 2 to 10 for examination by the general car inspector and the master mechanic. It then made its regular run on February 10, but due to that train being taken out of service, the plow was not again used until February 21, and its next and last movement was on the day of the accident. After previous derailments of this plow it was returned to service without any repairs having been made.

The snow plow involved in the accident was known as a Portland plow, and was of wooden construction, weighing 30,100 pounds, built in 1896. The front truck, of all metal construction, was similar in appearance to an engine truck, and had wheels which were smaller than those on the rear truck. The bearings on the front truck were 4 inches in diameter and 6 inches in length, the bearing and journal boxes being on the inside of the wheels. The rear truck was of wooden construction, appeared to be strong and in good condition, and was the type of truck that was built at the time this plow was originally placed in service. It could not be ascertained, however, if these were the original trucks. While this plow and others of similar type on this railroad are becoming obsolete and are being replaced by plows of modern design, a combination of plow and flanger, there is apparently nothing fundamentally wrong with this type of plow, as they have been used for nearly 40 years in a section of country where efficient snow-clearing equipment is considered essential for the successful and continuous operation of trains.

There had been no snow on the day of the accident but there was an accumulation of $11\frac{1}{2}$ feet in the vicinity, and in the cut, where the plows had thrown snow to one side, the snow was from 12 to 15 feet in depth. There had been more or less continuous cold weather, permitting no crust to form on the snow, with the result that the wind on the day of the accident had blown snow in on the west side of the track, this snow packing in quite hard.

Conclusions

This accident was caused by deep hard-packed snow on the west rail of the track.

The snow had drifted to a depth of 5 or 6 feet on the right or west rail but there was only a few inches on the left rail and it was apparent that the manner in which this snow had drifted resulted in forcing the front end of the plow to the left, derailing it and causing the derailment of the train. This plow had been derailed on two previous occasions during the winter and because of this fact it had been given unusually careful examination about 3 weeks prior to the accident; nothing wrong was discovered at that time, nor was it discovered after the accident that any defective condition had existed.

Respectfully submitted,

W. J. PATTERSON,

Director.