IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE OREGONWASHINGTON RAILROAD \& NAVIGATION COMPANY, UNION PACIFIC SYSTEM, NEAR BLALOCK, ORE., ON OCTOBER 10, 1925.

On October 10, 1925, there was a derailment of a passenger train on the line of OregonWashington Railroad \& Navigation Company, Union Pacific System, near Blalock, Ore., which resulted in the death of 1 employee, and injury of 11 passengers and 13 railroad and Pullman Company employees. This accident was investigated in conjunction with a representative of the Public Service Commission of Oregon.

## Location and method of operation

This accident occurred on the Fourth subdivision of the First Division, which extends between The Dallas and Umatilla, Ore., a distance of 89.5 miles; in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The accident occurred at a point about 1 mile west of Blalock; approaching this point from the west there are about 3,000 feet of tangent, followed by a 30 'curve to the left 522 feet in length, and then tangent track to the point of accident approximately 3,000 feet distant. The grade is Practically level. The last eastbound automatic block signal, $\mathrm{H}-1275$, is located approximately 4,000 feet west of the point of accident.

The track is laid with 90 -pound rails, 33 feet in length, with 18 to 20 treated fir ties to the rail-length, tie-plated, single-spiked, and ballasted with gravel to a depth of about 10 inches below the ties.

The weather was dark and it was raining at the time of the accident, which occurred at 8.25 p.m.

## Description

Eastbound passenger train No. 26 consisted of one baggage car, two chair cars, two Pullman tourist cars, a dining car, two Pullman sleeping cars and one observation car, in the order named, hauled by engine 3222, and was in charge of Conductor Dalrymple and Engineman Wall. All of the cars were of all-steel construction excepting the tourist cars, which had steel vestibules and under-frames. This train departed from The Dallas at 7.05 p.m., on time, passed Biggs, 23.7 miles from Blalock, at $7: 58$ p.m., 13 minutes late, and was derailed at a point 1 mile west of Blalock at 8:25 p.m., while traveling at a speed estimated to have been about 50 miles an hours.

The engine and tender were derailed, to the left, the engine coming to rest on its left side to the left of the track, about 425 feet beyond the point of derailment. The first car came to rest in an upright position about 50 feet ahead of the engine, with its head end about 117 feet from the track; the first chair car followed the baggage car and came to rest in an upright position with its head end about 73 feet from the track. The next four cars and the forward truck of the first Pullman car were also derailed to the left but remained upright on the road bed. The employee killed was the fireman.

Summary of evidence
Engineman Wall, of train No. 26, was interviewed while in the hospital and due to injuries was only able to make a short statement. He said he saw Track Watchman Papas west of the point of accident and that signal $\mathrm{H}-1275$ was displaying a clear indication at the time his train approached and passed it. He said the headlight was burning brightly and that he saw nothing on or about the track as his train approached the point of accident, and had no warning of the accident, his first knowledge of it being when the engine gave a severe lurch and left the rails, throwing him from his seat and making it impossible for him to close throttle or make any effort to stop the train. Engineman Wall estimated the speed of his train at the time of the derailment to have been about 50 or 55 miles an hour.

The statements of the other employees of train No. 26 were to the effect that the weather was dark and that it was raining at the time of the accident, which occurred without any previous application of the air brakes; their estimates of the speed of the train varied from 40 to 50 miles an hour. Flagman Adamsen also said it afterwards broke, resulting in the rail being $41 / 4$ inches out of gauge at that particular point. It was considered Probable that the rail did not break until it was encountered by engine 3222.

Track Watchman Papas said that some time previous to the accident he was at the block signal east of the point of accident and heard a noise which he thought was made by a falling rock; he walked over the track several times, but found it clear. When train No. 26 was about due he walked westward to meet it and he said he was three or four telegraph poles east of the westbound signal west of the point of accident when the train passed him. At about this time he heard some more noise, but was not sure whether it was due to a falling rock or to the passing train.

Roadmaster Hamlin stated that the track in the vicinity of the point of accident was patrolled by watchmen both day and night, the watchman being required to meet all regular eastbound trains at the west end of their section of track and to meet all westbound trains at the east end of their sections, and he said he made frequent tests to see that this was done. He also stated that no trouble had been experienced with falling rocks in this vicinity during the past five years.

Master Mechanic Doran said he examined the tires, flanges and running gear of engine 3222 and found no marks indicating that the engine had encountered an obstruction on the track, as was at first supposed. The throttle and brake valve were found in a position indicating that Engineman Wall had made no effort to stop the train. He said engine 3222 had been recently overhauled and was in first-class condition.

Careful inspection was made of the wheels, flanges and running gear of engine 3222 but nothing was found which would have caused or contributed to the accident. The signal system was also carefully checked and was found to be in good condition, and in subsequent tests displayed proper indications.

Westbound freight train extra 2146 had passed the point of accident at about 4 p.m., and at that time nothing unusual was noted.

## Conclusions

This accident was caused by a large rock rolling down the slope south of the track and striking a rail on the north side of the track in such a manner as to bend it out of gauge and to result in the derailment of the train when this bent rail was encountered.

Apparently the rock struck the track only a short time before train No. 26 approached, as the track-walker passed the point of accident shortly before it occurred. Engineman Wall said be passed the track-walker at signal H-1275, located about 4,000 feet west of the point of accident, and that this signal was displaying a clear indication; apparently the rail was only bent at this time, and finally broke under engine 3222.

At the time of the accident the night was dark and it was raining, and although the headlight of engine 3222 was in good condition and burning brightly yet it did not appear that the defective track condition could have been detected.

All of the employees involved were experienced men; at the time of the accident the engine crew had been on duty 5 hours and 35 minutes and the train crew 4 hours and 55 minutes, previous to which they had all been off duty 22 hours or more.

