IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE BOSTON & MAINE RAILROAD AT DUMMERSTON, VT., SEPTEMBER 10, 1918.

Feburary 25, 1919.

On September 10, 1918, there was a rear-end collision between a passenger train and a freight train on the Boston & Maine Railroad, at Dummerston, Vt., about 5-1/3 miles north of Brattleboro, Vt., which resulted in the death of 3 passengers and the injury of 25 passengers and 1 employee. The investigation of this accident was conducted jointly by the Bureau of Safety and the Public Service Commission of Vermont; as a result of this investigation the Chief of the Bureau of Safety reports as follows:

The Second District of the Connecticut & Passumpsic Division of the Boston & Maine Railroad extends between White River Junction Vt., and Springfield, Mass., a distance of 123.18 miles. Between Windsor, Vt., and East Northfield, Mass., the line on which this accident occurred, the track is used jointly by the Boston & Maine and Central Vermont Railroads. It is a signal track line, over which trains are operated by time table, train orders and an automatic block signal system. The general direction is north and south, the tracks in the vicinity of the accident following the west bank of the Connecticut River.

The signals on this line are of the two-position, two-arm, lower quadrant, normal clear type. Signals are arranged in pairs, the opposing signals being staggered about one-half mile apart, with an average distance between pairs of signals of a little less than 2 miles, this being the block length for trains moving in the same direction. Preliminary track circuits are used in order to give proper hand-on protection and a signal cannot clear for a following move until the first train has passed the second opposing signal and its preliminary section Before the distant signal arm can clear, the train must pass still another signal, so that trains running under clear signals are spaced not less than approximately 4 miles apart. On the Boston & Maine Railroad signals are placed about 200 feet into the block, so that the signal goes to stop position before the engine passes it, the "setting point" being indicated by a "block post." Switch indicators are not used, but switch boxes are used to shunt the track circuit at each switch. Rule No. 513 requires that a train before passing from siding to main line must wait a sufficient time after the switch has been thrown to allow a following train to come to a stop before reaching the switch.

Southbound signal 668 is 9,200 feet north of the point of accident and it is 9,250 feet farther to signal 686, which is located about one-half mile south of Putney Station. Signal 652 is about 120 feet south of where the rear end of train No. 82 stood at the time of collision and is 209 feet south of the south siding switch at Dummerston. From signal 652 to signal 629 is a distance of about 11,650 feet and that distance, added to the length of the preliminary section, a total of 13,700 feet, is the distance a train must travel before signal 652 can start to clear.

The signals and track circuit conditions at Dummerston siding are such that when the south switch is opened, signal 668, the first automatic signal north of Dummerston station, assumes the stop position. The opening or closing of the south switch has no effect on signal 652. The track circuit is extended onto the siding as far as the fouling point, about 165 feet north of the switch.

Approach Dummerston from the north there is a succession of short curves and tangents, the track opposite the station being on a tangent. Beginning about 200 feet south of the station there is a 5° curve to the right, 1,500 feet long, followed by a tangent at the south switch and upon which the accident occurred. This 5° curve passes through a side cut about 70 feet in depth, the slope of which is on an angle of approximately 55 or 60 degrees on the right or engineman's side of a southbound train and restricts his vision to a distance of about 550 feet from the rear of a train standing on the main track after pulling out from Dummerston passing siding through the south switch.

Beginning at block signal No. 668, and proceeding south the grade is slightly descending for a distance of about 2,000 feet, and then there is a slight ascending grade extending to Dummerston passenger station, where the grade is practically level; sout of the station there is a descending grade of .46% to .25% extending to level track south of the south passing track switch where the collision occurred.

Approximately 3/4 of a mile north of Dummerston there is a slow board restricting speed of southbound trains between the slow board and the south switch to 20 miles per hour. In time-table No. 42 there is also a speed restriction of 20 miles an hour at the south switch.

The trains involved in this accident were southbound first-class passenger train No. 82 and southbound freight train extra 6. Under the current time-table train No. 82 is scheduled to be passed at Brattleboro by train No. 98, the "White Mountain Express" However, on account of construction work in Brattleboro yard, the

passing point of these trains was changed from Brattleboro to Dummerston by joint special order No. 1, issured by the Boston & Maine and Central Vermont Railroads August 8, 1918, to become effective August 11, 1918, no supplement to time-table No. 32 being issured. A copy of this joint special order was delivered to the crews of Nos. 82, 98 and extra 6, and at the time of the accident all members of the crews, excepting the fireman of extra 6, were fully cognizant of the fact that the passing point of Nos. 82 and 98 had been changed from Brattleboro to Dummerston.

Train No. 82 consisted of locomotive 3635, 2 baggage cars, 1 combination mail and baggage car, 1 smoking car and 2 day coaches, in the order named, all the coaches being of wooden construction; it was on route from Newport, Vt., to Springfield, Mass., in charge of Conductor Biggins and Engineman Forgette. This left Newport, Vt., at 6:25 a.m., passed Putney at 1:34 p.m., 5 minutes late, entered the north end of the siding at Dummerston and arrived at the passenger station at 1:41 p.m., 6 minutes late. After receiving and discharging passengers, the train order signal being clear, the train proceeded to south end of the siding to wait for train No. 98 to pass.

Train No. 98 passed Dummerston at 1:51 p.m., 9 minutes late. When train No. 98 passed the clearing point of signal 652, approximately 2,39 miles south, and the indication of that signal changed from stop to caution, the brakeman of train No. 82 immediately opened the south switch of Dummerston passing siding and train No. 82 proceeded out upon the main line where it stopped with the rear end of the last coach 89 feet south of the switch points, to wait for the brakeman who closed the switch. About the time the signal changed from stop to caution, the flagman of train No. 82 placed a torpedo on the main track at a point about 965 feet north of on the main line. Immediately after train No. 82 had cleared the rear of train No. 82 where it stopped the siding, the brakeman closed the switch, and just after the switch was closed, train No. 82 was struck from the rear by extra 6, at about 1:56 or 1:58 p. m.

Local freight train extra 6 consisted of locomotive No. 6, 1 loaded box car, 1 empty box car and a coach used as a caboose, in the order named, and was en route from Bellows Falls, Vt., to Brattleboro, Vt., in charge of Conductor Smith and Engineman Webb. It left Bellows Falls at 12:50 p.m., arrived and took siding at Putney, at 1:20 p.m., to permit trains Nos. 82 and 98 to pass; extra 6 then made a switching movement, and left Putney at 1:50 p.m. As extra 6 approached signal 666, the indication of that signal changed from caution to clear. When extra No. 6 passed signal 668, which was also in the clear position, it was traveling at a speed considerably in excess of 20 miles an hour and this rate of speed continued to a point near Dummerston station, where the train slowed down slightly. After passing the station the train picked up speed again, and no reduction was made until the explosion of the torpedo placed by the flagman of train No. 82; the brakes were applied in emergency just before the collision occurred.

The force of the collision caused coach 665, the second coach from the rear

in train No. 82, to telescope coach 702, used as a smoking car, for about two-thirds of its length and the two coaches came to rest with coach 665 slightly above coach 702. Nearly all of the killed and injured were taken from the smoking car. Coach 683, the last coach in train No. 82, was also badly damaged.

Conductor Higgins, of train No. 82, stated that they pulled into the north end of Dunmerston siding, arriving there about 5 minutes late. After stopping at the station the train pulled down to the south end of the siding and waited for No. 98 to pass. After leaving Dunmerston station the conductor went into the baggage car and he was there when the collision occurred. After No. 98 passed he looked at his watch and it was about 1:50 p.m.; 3 or 4 minutes later the top arm of signal 652 dropped, the head brakeman then opened the switch and their train immediately proceeded out upon the main line. When they got out on the main line he looked at his watch and it was 1:56. His train had cleared the switch and had just come to a stop when the collision occurred. He did not hear Extra No. 6 approaching and the first he knew of the accident was the shock of collision. He said they had made this move a number of times and it had been their practice to move out of the siding as soon as the top arm of Signal 652 cleared. He had given his flagman no particular instructions, but the flagman's practice had been to place a torpedo on the main track about 500 feet north of the switch, a short distance back of the rear of their train while standing on the siding, and this he did on the day of the accident. He said he knew the requirements of Rule No. 513; he knew that the throwing of the south switch would set signal 665 at stop and he understood that it would also set signal 652 if train No. 98 had not cleared the block.

Engineman Forgett, of train No. 82, stated that he was substituting for another engineman and that was his first trip on this run. He said they pulled into the north siding at Dunmerston, set the switch, then pulled up to the station. He said they were at the station 13 or 14 minutes before they started to pull down to the south end, at 1:40 p.m. When they arrived at the south switch they stopped about an engine length north of the fouling point, to wait for No. 98 to pass. About two minutes after No. 98 passed the head brakeman walked down to the switch, unlocked it and stood watching signal 652 and when the top arm started to drop the brakeman threw the switch and they started right out. He did not think there was an interval of more than 2 minutes from the time they started to pull out onto the main line until the collision occurred. In pulling out upon the main line he applied the brakes once to slow up, then released them, and made another application when they were almost out; he had not released the brakes when the collision occurred. They had just cleared the switch when the fireman yelled to him and he jumped down from his seat. He did not hear the whistle of Extra 6 nor the explosion of a torpedo. He did not remember that he had been in Dunmerston siding twice under similar circumstances, but stated that it was his custom to come out of a siding as soon as the switch was thrown. He said he knew the requirements of Rule 513, but had not considered that the rule applied to their movement at Dunmerston; he thought 4 or 5 minutes would have been a sufficient length of time for them to have waited after throwing the switch. He said he did not know that throwing the south switch set signal 665, but thought it set the signal ahead of him and that this was the reason the brakeman did not open the switch earlier.

Fireman Guertin of train No. 82 stated that when they had moved down to the south switch at Dummerston and stopped into clear, the enginemen was watching the block, the signal cleared, the brakeman threw the switch and it was about 2 minutes from the time the switch was opened until they were out on the main line. He was watching for a proceed signal from the rear when he saw Extra 6 coming around the curve and jumped just as his engine was coming to a stop. He heard no torpedo explode.

Brakeman Graves, of train No. 82, stated that after No. 98 passed, at 1:50 p.m., he went back, with flag and torpedoes, and at a point about 500 feet from the switch, two car lengths or more north of the rear of his train as it stood on the siding, he placed a torpedo on the rail. At that time there was no sign of the approach of extra 6 and he then started toward the rear of his train. His train had started to move forward before he reached it and he had to run to catch it. He boarded the train, crossed the rear platform and was just starting to get o ff at the switch when he heard the explosion of the torpedo. Looking back, he saw Extra 6 approaching around the curve at a speed he estimated at over 30 miles an hour. He yelled to the head brakeman and they both jumped. While he had not been instructed to do so by the conductor, it had been his practice to protect the movement of his train in pulling out of the siding by placing a torpedo on the main track; each time they had made this move he had put down a torpedo at approximately the same point. On the day of the accident, however, he had extra 6 in mind and thinking they would be through with their station work at Putney, he went up the track farther than usual, going back as far as he could to put down the torpedo and allow himself time to get back to the train and close the switch before the train started. He said he intended to put down two torpedoes, but saw the rear of his train moving and did not think he had time to do so.

Head Brakeman Riley, of train No. 82, stated that when his train stopped at the switch at Dummerston he walked back from the engine and stayed opposite the baggage car until No. 98 passed. When the top arm of signal 652 dropped, after the passage of No. 98, he threw the switch for the main line, but did not give the enginemen any signal to proceed; he though they were about 2 minutes in pulling out upon the main line. The rear end of his train had just cleared the switch, he had thrown the handled over and was just about to drop it into place when he heard the brakeman shout and looking back, saw extra 6 approaching at a speed of 30 or 35 miles an hour; he did not think their speed was reduced much, although steam was apparently shut off. He heard no torpedoes or whistle signal. He said he had been instructed by his enginemen and conductor to always wait until the top arm of signal 652 dropped before throwing the switch.

Baggageman Hackett, of train No. 82, stated that No. 98 had been by about 6 minutes and they were waiting for it to clear the block. The block cleared and after throwing the switch they pulled out on the main line and were almost immediately struck by extra 6. He heard no torpedo nor warning whistle.

Conductor Davis, of extra 6, stated that he understood No. 98 was to pass No. 82. at Dummerston and assumed that his engineman had the same understanding.

He did not look at his watch while at Putney, but asked the operator there regarding these two trains and was informed that both were on time. They departed from Putney at about 1:50 p.m., approximately 7 minutes after No. 98 left. Leaving Putney, as he was entering the caboose, he looked at the signal and noted that it had cleared. He said there was no appreciable reduction of speed at their train approached signal 668 and he did not see that signal as they passed it. Their speed approaching Dummerston station was between 30 and 35 miles an hour; he heard the engineman sound the station whistle and pass the station the engineman slowed down so the conductor could throw off a way-bill there. He estimated they passed the station at about 25 miles an hour and after throwing off the way-bill he went inside the caboose and was making out time reports when the accident occurred. He said they passed Dummerston at 1:57 p.m.; he did not looke at his watch, but later asked his rear brakeman, who told him. He one called the position of the signals and as the caboose of their train had no cupola, the signals could be observed only by looking out of the window or from the platform and none of the trainman did this. He heard no torpedoes but felt the brakes being applied, followed not more than 20 seconds afterwards by the shock of collission. The conductor said he did not think they were traveling at any excessive rate of speed and he made no effort to check it, as he considered Engineman Webb qualified to regulate the speed. He did not recall the restriction of the speed board located north of Dummerston nor the time-table restriction of speed at the south switch. He said the brakes were all working, as he helped test them and they had no trouble with them on this trip.

Engineman Webb, of extra 6 stated that after coupling on the train at Putney he applied the brakes, then released them and heard the triple release on the caboose. The next time he had occasion to use the brakes was coming around the curve at Murder Hollow between Putney and Dummerston, when they operated properly. Coming out of Putney and approaching signal 666 he observed that the red arm was down and the yellow arm was up, but the yellow blade started to drop before he passed it. His fireman called the indication of this signal to him as clear and he acknowledged it. Signal 668 was in the caution position when he first saw it, but as they approached the block post the yellow arm started down and had cleared just before he reached there; after passing the block post and when his engine was about 50 feet distant both arms went up together. From the signal south of Putney depart to Murder Hollow they did not exceed a speed of 20 miles an hour, but after receiving a clear indication at signal 668 their speed increased to about 30 or 35 miles an hour and he maintained this speed until he came to the speed board, where he slowed down; he sounded the station whistle signal and after passing the station he increased speed. His train was traveling at a speed of from 25 to 30 miles an hour when, rounding the curve south of the station, at a point about 6 or 7 car lengths from the switch, he ran over a orpedo. He immediately closed the throttle but it flew back open and he again closed it; at the same time glancing out the cab window, he saw the rear end of No. 82 and immediately applied the brakes in emergency, but could not stop his train in time to avoid the collission. He stated that his engine brake was in good condition and the train brakes were working satisfactorily. Engineman Webb stated that he was aware the passing point of Nos. 82 and 98 had been changed from Brattleboro to Dummerston; also he was familiar with the speed restriction for freight trains and with the location of the slow board. He said he had No. 82 in mind, but when he saw signal 668 clear he assumed it was

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it was No. 82 just leaving the clearing point for block 668. Engineman Webb said he could not deny that he exceeded the speed limit, as he came at a speed faster than that called for.

Fireman Coughlin of extra 6 stated that at Putney the only conversation he had with Engineman Webb was to remark to him that they were waiting for No. 98. He said he usually calls all signals, but as they were leaving Putney he was working on his fire and did not notice the position of signal 686 ver distinctly; he thought it indicated clear and called this indication to his engineman, who acknowledged it. He got a glimpse of signal 668 as they were approaching it and thought that it also indicated clear and called the indication to the engineman, who waved his hand in acknowledgment. He said he could not state positively about the signal indications. Their speed between Putney and Dummerston was between 30 and 35 miles an hour, but approaching Dummerston station the engineman sounded the whistle, slowed down, and they passed the station at a speed of about 15 or 20 miles an hour, after which speed was again increased to about 35 miles an hour. He got down to put on some coal, heard the whistle, then the engineman called to him to jump. The engineman made an emergency application of the brakes at the same time sounded the whistle and the collision occurred about a half minute after. The fireman did not think the engineman saw the extra more than 30 seconds before the collision and did not think the speed of the train was checked by the brake application. He said the brakes were all right, but the throttle of their engine was not much good and did not hold.

Flagman O'Connor of extra 6 stated that the air brakes were tested at Putney by the conductor, assisted by the head and middle brakemen and just previous to the collision they took hold in good shape. He estimated their speed from Putney to Dummerston at from 30 to 35 miles an hour. He heard no torpedoes; their speed was about 30 miles an hour when the engineman sounded the whistle and the brakes were applied in emergency.

Head Brakeman Riley of extra 6 stated that he was riding in the caboose and their speed from Putney to Dummerston was 30 or 35 miles an hour. Just after they passed around the curve he heard a torpedo explode, then the brakes were applied in emergency and the collision followed within half a minute.

Middle Brakeman Jones of extra No. 6 estimated their speed at 30 miles an hour, except passing the station, when the engineman slowed down. When at a point about 8 telegraph poles from the point of accident he heard a torpedo explode, and estimated their speed when they struck at 25 or 30 miles an hour.

Bridge Foreman St. Croix stated that on the day of the accident he was working on Bridge 60, which is about 200 feet south of signal 668 and was on the east side of the track as extra 6 approached. He said that as the extra came around the curve, which is about 500 or 600 feet from signal 668, the signal was in the stop position and when the train was about at the fouling point the top arm of the signal dropped

and then went right up again, while the lower arm stayed up. When the extra passed him it was traveling at a much higher rate of speed than the other trains.

Bridge Carpenters Pennock, Brennan and Hackett corroborated their foreman's testimony and said that extra 6 did not slacken speed as it passed.

Section Foreman Galvin, in charge of Section 19, between Brattleboro and Dummerston, stated that on the day of the accident he was working with three men about half a mile south of the south switch of Dummerston passing siding, right beside signal 647, the northbound signal. He saw the brakeman of train No. 82 set the switch and the train immediately moved out, a little more than 2 minutes from the time No. 98 passed, and came to a stop on the main line with the engine about half way between signal 647 and the south switch. He could hear extra 6 approaching the other side of Dummerston station and wondered why it did not reduce speed, which he estimated at 30 miles an hour, and the collision followed. He did not remember hearing a whistle sounded, but just an instant before the collision occurred he heard the explosion of a torpedo.

In the investigation of this accident an inspection of all signals involved was made and the relays tested. The switches in the block in which the accident occurred were tested for shunt and found to cut out the track circuit properly. When opened, the mechanisms were found in very good condition and the shunt boxes were clean. The signals worked freely and the clutch coils of signal 668 showed no signs of residual magnetism. The tests made, together with the testimony, justify the conclusion that the signal apparatus was in good working order and did not fail to perform its proper functions at the time of the accident. It is apparent from the evidence in this case that extra 6 passed signal 668 before the south switch of Dummerston siding was opened.

The investigation disclosed a conflict in the testimony regarding the signal indication displayed by signal 668 for Extra 6. The statement of the engineman of the engineman of that train is to the effect that the single cleared just before his train reached it, and the fireman stated that although he was not certain of the indication displayed he called the signal clear. The members of the bridge gang who were working near were positive in their statements that the top arm of signal 668 cleared as extra 6 approached, and that the signal indicated caution when the train passed the block post. If extra 6 had passed signal 668 after the south switch at Dummerston was opened, that signal would have indicated stop, while if it passed that signal before train No. 98 passed the clearing point for signal 652, signal 668 would indicate caution. In view of the positive and unquestioned evidence that the south switch was opened as soon as the top arm of signal 652 cleared as well as the evidence furnished by members of the bridge gang that signal 668 was in the caution position for extra 6, that train must have passed signal 652, and signal 668 was therefore in the caution position. This conclusion appears to be thoroughly established, Engineman Webb's statement to the contrary notwithstanding.

From tests conducted after the accident, it was found that a train similar to extra 6 on the day of the accident, proceeding at 32.7 miles an hour, could have been brought to a stop within a distance of 600 feet and within 16 seconds

after exploding a torpedo placed 965 feet from the rear end of train No. 82 as it stood on the main line. It was also found that, with an engine the same type as was used on extra No. 6 on the day of the accident, looking out of the cab window from the engineman's side, a clear and unobstructed view of the rear of a train as No. 82 stood at the time of accident could be obtained at a point 546 feet north of the point of collision, from which point signal 652 could also be seen distinctly.

The primary cause of this accident was failure of the crew of train No. 82 to wait a sufficient length of time after opening the switch before moving their train from siding to main line, in violation of Rule 513, for which Conductor Driggins and Engineman Forgette are responsible. A contributing cause was the failure of the crew of extra 6 to properly heed and comply with signal indications, speed restrictions and torpedo signal, for which Conductor Davis and Engineman Webb of that train are responsible.

Rule No. 513, of Rules for Government of the Operating Department of this road, reads as follows:

> "Trains about to enter a track protected by block signals, after the switch has been opened which will cause the automatic signal to indicate Stop, will not enter the main track until sufficient time has elapsed to allow a train, that may have passed or be approaching the signal, to come to a stop before reaching the switch."

In conformity with this rule, it was the duty of the crew of train No. 82 before proceeding out upon the main line to leave the switch open for a sufficient length of time for the extra to have proceeded from signal 666 to the south switch.

The testimony given at the investigation indicates that subsequently to August 11th, up to the day of the accident it has been the practice of the crew of No. 82 to throw the switch and pull out upon the main line the moment the home blade or top arm of signal 652 began to lower, which was clearly in direct conflict with Rule 513. Instead of waiting for the top blade of signal 652 to clear after the passage of No. 98 before the south switch was open, had the south switch been opened as soon as train No. 98 passed, signal 666 would not have cleared and the accident would undoubtedly have been averted; further, after the switch was opened, had train No. 82 waited a sufficient time, as required by rule, the accident would not have occurred. The testimony in this case indicates that it was the practice of the crew in charge of train 82 to disregard this rule, and discloses the necessity for more specific instruction and thorough examination of employees in regard to rules and their duties.

The indication of signal 666, as extra No. 6 passed it, being caution, it was the duty of Engineman Webb to "proceed, prepared to stop at next home signal," according to Rule 501. Signal 652 was only about 180 feet south of the rear of train No. 82 as it stood at the time of the collision, and it is apparent from all the facts and circumstances that had Engineman Webb complied with this rule, he would

no doubt have been able to stop his train in time to avoid the collision. An examination of the throttle lever and quadrant subsequent to the accident of disclosed that they were in good condition. It is apparent from the evidence that Engineman Webb ont only disregarded the caution indication of signal 668, but failed to regard the speed limit as indicated by the speed board located north of Dummerston failed to comply with special time-table speed restrictions, and failed to act promptly in reducing the speed of his train after exploding the torpedo placed by the flagman of train No. 82. Conductor Sawin is responsible in that he failed to take any action to cause a reduction in train speed which he knew was in excess of the maximum speed permitted or authorized by rule.

At the investigation it was found that the brakes on extra No. 6 were in good condition and had the rules been complied with by those in charge of this train the collision would have been averted.

Fireman Coughlin is also at fault, on the basis of his own testimony for calling both signals 686 and 668 clear when as he stated he was not certain of the indications of those signals. While it may have been no bearing in this case, such practice is to say the least misleading.

While a contributing cause of this accident was the disregard of the caution indication of signal 668 by engineman Webb, that rule of the Boston & Maine Railroad governing the obervance of the caution indication, reading "Proceed, prepared to stop at next home signal," leads directly to a minimizing of the value of the caution indication. This rule permits the engineman to use his judgment as to when he sahll begin to reduce speed in anticipation of a possible stop at the next signal. The danger in this interpretation of the caution indication has been pointed out in previous reports of accidents investigated by this Bureau. The interests of safety demand such modification of this rule as will cause the caution indication to be recognized as being as positive in its indication and requiring as definite action on the part of the engineman as does the stop indication.

Conductor Sawin entered the service in 1881, was promoted to conductor in 1885 and had been on this run about one month. He had received 20 demerit marks for responsibility on the occasion of a previous collision and reprimanded once for a careless switching movement.

Cngineman Webb entered the service as fireman in February 1905, was promoted to engineman in February 1912. This was not his regular run, but he had been on it about two weeks. He had been discharged once for running his train, which was an extra, on the time of a regular train and on four occasions had received demerit markes for running past signals.

Conductor Briggins entered the service in August, 1888, and had been a passenger conductor since May, 1910. He had been on this run since February. His record showed that he was reprimanded once for failure to obtain a clearance card and on two occasions had failed to properly read train orders, being once penalized for this oversight, and once reprimanded for failure to register a signal.

Engineman Forgette entered the service as fireman in November, 1903, was promoted to engineman in July, 1911, and had a fair record. On the day of the accident he was making his second trip on this particular run.

At the time of the accident the crew of extra No. 6 had been on duty about 6 hours, with a period off duty of about 16 hours. Engineman Forgette and Fireman Guertin, of train No. 52, had been on duty almost 4 hours, the remainder of the crew about 3 hours, all having had over 20 hours rest.

RWL.