

ELECTRIC CAR COLLISION AT PELHAM.

THE DEAD.

George C. Andrews, died shortly after the accident as the result of his injuries.

Charles H. Gilbert, died shortly after the accident as the result of his injuries.

Mrs. Sylvia Gilbert, died in the Lowell General hospital as the result of her injuries.

Mrs. James Dillon, died in the Lowell General hospital as the result of her injuries.

Albert Collette, died at the scene of the accident.

Samuel R. Mayes (motorman on east-bound car), died in the Hale hospital, Haverhill, Mass., as the result of his injuries.

THE INJURED.

Charles Gilbert, fractured scapula.

Mrs. Charles Gilbert, leg crushed.

James Cummings, slight cuts and bruises.

Mrs. James Cummings and child, slight cuts and bruises.

Dennis Neville, slight bruises.

Mrs. Dennis Neville, slight bruises.

Dr. L. P. Caissac, face cut and generally bruised.

George Bigue, slight bruises.

Clara Palardy, severe bruises of both legs.

Maria Teresa Palardy, severe bruises of both legs.

Rose Palardy, fracture of thigh.

Mary Barron, bruises and shaking up.

George Bowler, slight bruises.

E. H. Tyrell, fractured clavicle.

Michael Glynn, severe scalp wound; back injured.

Margaret Glynn, bruises of left arm and leg.

Lavinia Lavole, bruises of head, arm and back.

Cora Lavole, general bruises.

John McCoy, slight bruises.

John Malone, bad scalp wound; back badly wrenched.

Charles Myer, severe bruises.

H. A. Spencer, slight bruises.

Mrs. H. A. Spencer, severe bruise of shoulder.

J. Ailda Dubee, general bruises.

Eugene Messier, left leg sprained; rib fractured; strained back.

Annie D. Landry, general shock.

Charles Landry, general bruises.

Arman and Armance Landry, slight bruises.

Ralph Tilton, slight bruises.

- Max Wendell Tilton, slight bruises.
Mrs. Ralph Tilton, severe shock.
George L. Griswold, general bruises.
Mrs. L. Griswold, back sprained and general shock.
F. C. Barney, slight bruises.
George M. Tuttle, bruised knee; head cut.
Fred F. Robbins, slight bruises.
Mrs. Mary Costello, compound fracture of left leg, just above ankle.
Nellie Costello, severe bruises and general shaking up.
Mrs. Louise Beauchemin, compound comminuted fracture of right tibia.
James B. Kelley, severe sprains and bruises.
Frank W. Cobb, severe bruise of back, shoulder and leg.
Annie E. Cobb, cuts and bruises; teeth loosened.
Frank Winn, cuts and bruises.
W. McDonald, left leg wrenched at the knee.
Eugene Harris, general shock.
George H. Greene, badly sprained back; general shock.
Agnes Trull, legs bruised.
Carrie B. Ingham, legs and arms badly bruised and hip sprained.
William J. Vining, left knee and shoulder sprained.
Arthur B. Graves, general bruises.
Carrie M. Barclay, general bruises and nervous shock.
John Kelley, general bruises; leg sprained.
J. H. Fairbanks, general shock.
J. Henry Welton, general shock.
P. H. Knapp (motorman of west-bound car), general bruises.
M. J. Dorgan, serious cuts and bruises about the head and legs.
Charles E. Duffin, slight bruises.
L. Belknap, slight bruises.
William Stansfield, head and nose badly cut; lower teeth knocked out and left knee badly wrenched.
William Terry, general bruises.
C. B. Gould, severe bruises on left side; fractured rib; head badly cut.
G. M. Webster, hand badly bruised and general shock.
Mrs. G. M. Webster, nervous shock and severe bruise of left knee.
Mrs. Edward Mayo, general shock; back and legs bruised.
Ida L. Mayo, head badly bruised.
Mrs. George G. Andrews, severe scalp wound; punctured wound of abdomen; general shock.
Maude A. Sleeper, general shock; strained back; left eye injured.
Joseph J. Venno (conductor on east-bound car), general bruises.
Charles H. Foss, slight bruises.
Mrs. Charles H. Foss, back and knee wrenched.

Edward McCoy, back sprained; small scalp wound.
 C. C. Swain, slight bruises.
 Annie Rybershack, three ribs fractured; general shock.
 Sherman T. Smalley, bad laceration of knee; hernia.
 Mrs. Hattie A. Smalley, general shock.
 G. W. Smalley, slight bruises.
 Annie Smalley, general bruises.
 Paul Thibeault, sprain of shoulder and ankle.
 G. B. Hood, slight bruises.
 Nellie Riley, general shock.
 Job Mason, slight bruises.
 Perley Hill, severe bruises.
 Harold Hill, general bruises and head cut.
 Mrs. Lizzie Sullivan, general bruises.
 Daniel Sullivan, general bruises.
 Dennis J. Sullivan, general bruises.
 Investigation begun at Pelham, October 2, 1908, and continued at
 Manchester, October 10 and 16.
 Judge Samuel W. Emery appeared for the corporation.
 Mr. George W. Prescott of Manchester appeared for Cora Lavole
 and Paul Thibeault, injured.
 Mr. E. L. Kittridge of Milford appeared for Howard R. Fox, conduc-
 tor.
 Mr. Henry W. King of Worcester appeared for the estate of Mary
 Dillon, killed.

Witnesses:

Arthur W. Dean, Nashua, N. H.
 Franklin Woodman, Haverhill, Mass.
 Martin A. Casber, Salem, N. H.
 Richard L. Jones, Salem, N. H.
 Oral A. Stevens, Pelham, N. H.
 Howard E. Fox, Pelham, N. H.
 Everett E. Evans, Salem, N. H.
 Pliny N. Knapp, Pelham, N. H.
 John H. Welton, Pelham, N. H.
 L. J. Mansfield, Pelham, N. H.
 Otis G. Giles, Pelham, N. H.
 John E. O'Connor, Lowell, Mass.
 Robert H. Newsholme, Pelham, N. H.
 Charles S. Piper, Pelham, N. H.
 Albert Hutchinson, Pelham, N. H.
 Gage A. Fox, Pelham, N. H.
 Albert L. Jones, Pelham, N. H.
 William A. Beede, Pelham, N. H.
 Joseph J. Venno, Salem, N. H.

The Hudson, Pelham & Salem Electric Railway runs from the Merrimack river at Nashua through Hudson and Pelham to Salem and Canobie lake. At Pelham Center it connects with a branch to Lowell, Mass., the junction being formed at a Y. Near the Y is a sub-power station, car barn, block signal and telephone station and the operation of the road is directed from that point by a foreman or starter to whom the employees report for orders each day and by whom the motormen and conductors are assigned to the cars and the cars are started towards Nashua, Canobie lake and Lowell. The line is equipped with United States block signals, which, by means of colored lights, show whether the track in the several blocks is clear, and with a telephone service. In going towards Nashua from Pelham the road follows the highway 1,200 feet and then passes upon a roadway through private land, which extends a long distance. About 1,600 feet from the point where it enters private land or 2,800 feet from the Y there is a curve drawn upon a 1,100 feet radius. On both sides of this curve there is a growth of trees and shrubs, which so obstructs the view that two motormen running in opposite directions cannot see the cars they are about to meet until they are within 476 feet of each other.

On Sunday, September 6, 1903, a car left Canobie lake about 10:50 a. m. for Nashua and reached the Pelham Y at about 11:15. Another from the lake followed to the Y and passed on towards Lowell, crossing one from Lowell for the lake at a siding a short distance below Pelham, which reached the Y soon after. In accordance with the usual custom, the motormen and conductors who had taken in these cars were relieved by others who were waiting for that purpose, Motorman Pliny H. Knapp and Conductor Howard E. Fox taking the Nashua-bound car and Conductor John O'Connor and Motorman Gage A. Fox the car headed for the lake. The car for the lake then started with 34 passengers. At 10:45 a car left Main street, Nashua, for the lake with 54 adult passengers and five children in charge of Conductor Joseph J. Venno and Motorman Samuel Mayes. At Hudson Center it crossed one going in an opposite direction and its crew was told that the line was clear, which gave them the right of way to Pelham. When they approached the curve, 2,800 feet west of Pelham, they saw the car that had just left the Y coming towards them and a moment later the two coaches collided with such force that both were completely wrecked, six persons were killed or fatally injured, several were maimed and all others on the cars, except Conductor Fox, suffered injuries more or less severe. Motorman Mayes was one of those killed.

On the next preceding afternoon a heavy thunder shower swept over that section and the lightning so damaged the signals upon the entire system of which the H. P. & S. is a part that they did not

work. The superintendent and his assistants at once proceeded to repair those upon the roads east and south of Salem, thinking it best to begin there because he knew the cars would be run on 15-minute time there next day, while those west of Salem would be scheduled on 30-minute time, and he had not reached Pelham Sunday forenoon. As this was known to all those engaged in moving the cars, the situation between Pelham and Nashua was as if there had been no signal system. Both these cars were open coaches, new a year ago, equipped with the most approved machinery and safety appliances and were in perfect condition as were the road bed and track. The crews were young men of some experience and good reputation. As they were scheduled at 21.27 miles an hour the entire distance between the Nashua line and Pelham, including all stops for passengers, crossings upon sidings and other usual delays, and as they were both about five minutes late and were then running upon a level track and fenced roadway, where no crossings or obstructions were to be looked for, their speed was probably more than 25 miles an hour, perhaps 30 miles, which was not unusual upon that section.

On the third of June, 1903, the superintendent of the road issued a printed order to conductors and motormen, which contained this clause: "The practice of motormen running at an excessive rate of speed in going around curves, over special track work and down hill is hereby forbidden;" and on July 1 another which read: "When two or more cars are running in the same block, the car ahead should never stop when going down steep grades or around sharp curves; the car following must keep at least one thousand feet behind the car ahead, and in running around curves motormen will bring their car down to such a rate of speed as to enable them to have same under perfect control so that car could be stopped instantly if necessary."

Copies of these orders were furnished the men on duty September 6 and were posted in the car houses, but it does not appear from the evidence before us that these men were ever instructed as to what was deemed an excessive rate of speed or how slow they must run in order to have their cars under such control that they could be stopped instantly upon curves, or that any one had ever been disciplined for violating these rules. A fair conclusion is that it was left to the motormen's judgment to regulate the speed between Nashua and Pelham, subject to the requirement that the whole distance must be covered within the schedule time, that delays and slow progress in some places must be offset by rapid running in others, and that in running as they did around a curve, which is by no means the sharpest on the road, as they had done all summer when they had been on duty without reproof, they did not consider themselves guilty of recklessness. After the wreck the brakes and controllers

were found in positions and the wheels in conditions which proved that both motormen had done what they could to stop when they saw the danger and when it is considered that they could not see each other until they were only 476 feet apart and that they were nearing each other, with heavy loads, more than 80 feet a second, it is clear that they were powerless in the five or six seconds they had to prevent the collision. It is even more certain, if our opinion as to the speed regulation is correct, that Motorman Mayes, who died at his post of duty, and Conductor Venno, of the car from Nashua, were in no way responsible for the accident. They had the right of way. They were obeying orders. They were doing their whole duty as they had reason to understand it. The awful mistake, which caused the catastrophe, in which more persons were killed and wounded than in any other accident in the history of New Hampshire railroading, was made at Pelham when the west-bound car was started from the Y.

The foreman or starter in charge of movements there was Oral A. Stevens, who had occupied the position since the road was opened in the fall of 1902, and had had many years' previous experience upon electric roads elsewhere. He had always acquitted himself to the satisfaction of his employers and bore an excellent reputation. Sickness in his family had deprived him of sleep on Saturday night, after he had worked all day, and on Sunday morning he felt somewhat the effects of a want of rest, which may have been, and we think was, a factor in what transpired that day. Mr. Stevens had an assistant, Everett E. Evans, who was expected to take his place for about two hours while he was at dinner and after six o'clock at night. This assistant was engaged between 11 and 12 o'clock, September 6, in putting advertising fliers into the cars and appears to have paid no attention to anything else until he saw the Nashua car disappearing around the curve, when he ran to the power house and shut off the current, after it was too late.

It was a remarkable combination of circumstances that caused this accident. If neither car had been late or if either had been a minute earlier or a minute later, if the signal system had not been struck by lightning, or if the superintendent had commenced to repair at east of Pelham, if Mr. Stevens' family had not been sick, if he had asked his assistant to do his work that morning, if some other men had been put upon the car instead of Fox and Knapp, it would not have happened. Some of these conditions can be regarded as providential dispensations, but not all. The accident was not unavoidable. Some one was to blame.

Immediately after the accident the officials and counsel of the corporation conducted an examination, in the course of which they took the depositions of Starter Stevens and Conductor Fox of the ill-fated

Nashua-bound car, copies of which were furnished the board. The statements of these men, especially Mr. Fox, made at that time, differ materially on some points from those made by them at the hearing before this board and each man contradicts the other as to the most important facts. Presumably they have not a very distinct or fixed recollection of what they did at the Y that morning, but their testimony is to this effect: Mr. Stevens says: When the car from the lake arrived at Pelham and was run upon the west side of the Y and when its crew was shifted by his orders, he was in his proper place inside the Y and, seeing that a pane of glass behind the motorman had been cracked, he went upon the car and arranged a newspaper so as to prevent the glass from jarring out. When he had done this he says he stepped to the ground, saying to the motorman as he went, "That's all right," meaning the glass, and then crossed the Y about 100 feet to the lake-bound car from Lowell, stepped upon the running board and said to Conductor O'Connor and Motorman H. A. Fox, who had taken their positions and were ready to go, "All right, boys, go ahead," and, having done this, dropped to the ground, turned and saw to his amazement that the Nashua-bound car had left while his back was towards it and was just disappearing around a curve, 1,200 feet away. Crying out to his assistant, "For God's sake go and pull out the circuit breaker," he ran after the Nashua car and followed it, shouting as he went, until he heard the crash caused by the collision. His suggestion is that Knapp and Fox of the Nashua car either mistook his remark that the glass was all right or his order to the lake-bound car to go ahead for an order to them to start for Nashua. On the other hand Mr. Fox swears that when Stevens had fixed the pane of glass he stepped to the ground and about five or six feet from the car and said distinctly, "All right, Fox." He swears further that when they started for Nashua the car from Lowell had not arrived so that Stevens could not possibly have given the order to its crew as he says he did and that when he said, "All right, Fox," he stood nearly facing the Nashua car and saw it leave. Mr. Evans, the assistant starter, testifies that when he had put fliers in the Lowell car he got off and noticed that the car for Nashua had left and that it then occurred to him that the one from Nashua had not come in and he asked Stevens if it had come, that Stevens appeared surprised and said "No," and that then he (Evans) started for the power house to shut off the current. He corroborates Stevens as to the arrival of the Lowell car but contradicts him as to the discovery that the Nashua car had gone, which he says was by him and not by Stevens. Mr. Knapp, the motorman on the Nashua-bound car, swears positively that after Stevens had fixed the glass and left the car he said, when five or six feet away, "All right, Nashua, go ahead," that the conductor, Fox,

then gave the two bell signal to start and that he did start, supposing that he had orders to do so and that was sufficient. He also swears that the Lowell car had not arrived when they went.

John H. Welton, a passenger on the Nashua car, swears that while he sat in the car at the Y he heard some one say, "All right, go ahead." Otis G. Fox, the conductor who took the Nashua car in from the lake and was relieved by Fox and was standing near the Y, testifies that the car from Lowell did not arrive until the Nashua car left, that when the Nashua car started he asked Stevens if the one from Nashua had come in and that Stevens said, "No," and ran down the track, and that he (Giles) then told Evans to run and shut off the power. John O'Connor, motorman on the car from Lowell, testifies that when he reached the Y he did not see the Nashua-bound car but soon after saw Stevens run up the road. Robert H. Newsholme, the conductor who took in the car from Lowell, swears that Stevens told John E. O'Connor, his motorman, that the Nashua car for the lake was ahead of them. Albert Hutchinson, motorman on the car from Lowell, corroborates Mr. O'Connor. Gage A. Fox, the conductor who relieved Mr. Newsholme, says the car for the lake did not start until the Nashua car had gone. Albert L. Jones, a spare conductor, thinks the car from Lowell had not come in when the Nashua car started and says Stevens told O'Connor that there was a car ahead of him on the way to the lake.

The balance of testimony and the probabilities are against Mr. Stevens. Whatever he may have intended to say and whatever words he may have used, there is no doubt that those who heard him understood that he gave an order to start for Nashua. His own course afterwards is best explained upon the assumption that he had for the moment forgotten that the car from Nashua, which was overdue, had not arrived, and that he said and did just what he would have done if it had passed, leaving the line clear. He knew that the Nashua-bound car was ready to start and that it was time for it to go. He certainly did not say anything to its crew that could be construed as an order to wait. He knew that the line was not clear and it was his duty to see that the waiting car did not go. He was in a position, close to the motorman and conductor, where he could and should have advised them to wait. Instead, he made a remark, which, under the circumstances, meant to them to go ahead. It seems to us that if he had been as vigilant, alert and careful as a man in his place should have been, there would have been no accident. He may have done as well as he could. We assume that he did but under the circumstances, when he had been without sleep more than 30 hours, when twice as many cars were running as usual and half of them were manned by spare men when the signal system was not working, that was not sufficient. This

does not exonerate Conductor Fox and Motorman Knapp. They had less responsibility than Mr. Stevens, for it was their duty to obey his orders provided they had no reason to think that by so doing they were running their cars into danger, but knowing, as they did, that the signal system had been rendered useless, knowing, as they admit they did, that a car from Nashua was due during the time they had been waiting there to take the one to Nashua, knowing that if it had arrived they could hardly have failed to see it and that they had not seen it, it was very stupid and careless in them to act upon an order by Stevens, however direct and explicit, without making an inquiry or a suggestion which would direct his attention to the matter, even if he had told them in so many words the line was clear, it was their duty to wait until they had good reason to believe he was not mistaken. As Mr. Fox admits in his deposition, they did not think or reason at all. They simply did what they supposed they were told to do, regardless of consequences. Such men are sadly out of place upon an electric car where the safety of passengers depends upon the reasoning and caution of those who operate it.

Authority to regulate the construction of electric roads and the speed of cars upon highways is vested by law in the mayor and aldermen of cities and the selectmen of towns and it is questionable whether these matters are within our jurisdiction when such roads are built upon private land, but in making this report we feel it our duty to state some indisputable facts and base upon them certain recommendations.

On such electric roads as the Hudson, Pelham & Salem the bulk of the travel is for pleasure, and passengers have no need to be carried through the country at a high rate of speed. Many of them would be better satisfied with a moderate rate and all of them are presumably willing to be carried safely.

On such roads the business is on summer Sundays and holidays several times as heavy as on other days and cars are run two or three times as often. This necessitates the employment of a large number of motormen and conductors who do not have regular work on the cars and who generally lack long experience and training, and sometimes have very little. Even if they are capable of handling cars under ordinary circumstances, they have not the judgment, the self control and the nerve that are essential in emergencies.

Collisions of electric cars almost universally occur on curves where their crews can see ahead but a short distance owing to trees or other obstructions.

With these facts in view we recommend:

(1) That the running time between the Nashua line and Pelham be extended from 23 to at least 30 minutes, which will give eight minutes additional time in which to round the many curves, and

that there be a corresponding extension on other sections of the line.

(2) That the management of the road issue specific instructions as to the rate of speed around the curves and wherever else the view is obstructed and see to it that they are obeyed.

(3) That wherever it is practicable the curves be eliminated and the growth and other instructions upon the sides of the road be removed so that motormen can see each other a long distance away when the cars are running in opposite directions upon the same track.

(4) That the duties of those having control of the movements of cars at the Pelham Y and other junctions be more specifically and explicitly defined in the orders of the superintendents and that there be employed to execute such orders a sufficient number of experienced and capable men to see that cars do not move by mistake when travel is congested and one man cannot give the attention necessary to all that are coming and going.

HENRY M. PUTNEY,
ARTHUR G. WHITTEMORE,
Railroad Commissioners.
