HISTORY OF THE CASE.

This is an action brought by Martin Ruane, administrator of Patrick Ruane, deceased, to recover damages from the defendant, the Erie Railroad Company, for negligently causing the death of the decedent. The summons in this action was issued on July 26, 1911. On December 15, 1911, after a trial in the Hudson County Circuit Court before Judge Benjamin A. Vail and a jury, the jury brought in a verdict for $5,000. The trial judge on a rule to show cause why a new trial should not be granted cut the verdict to the sum of $2,200. Defendant took the case on error into the Supreme Court and that court reversed the judgment, not on the merits of the case but upon an error in the charge of the trial judge (see Ruane v. Erie R. R. Co., 83 N. J. L. 423). Plaintiff then appealed from the judgment of the Supreme Court to the Court of Errors, which affirmed the Supreme Court in its reversal of the judgment (see Ruane v. Erie R. R. Co., Court of Errors and Appeals, 90 Atlantic, 1135), the Court of Errors affirming the Supreme Court upon the reasons in the opinion of Justice Minturn, and the case was sent back to the Hudson County Circuit for a new trial.

The case was retried at the Hudson County Circuit on January 13, 1915, before Luther A. Campbell, circuit judge and a jury, and resulted in a verdict for the plaintiff of $4,000. A rule to show cause why a new trial should not be had was granted on January 15, 1915, reserving to the defendant an exception to the trial judge's refusal to direct a verdict for the defendant, and on this rule to show cause the trial judge cut the verdict from $4,000 to $2,500, but refused to grant a new trial on the

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ground that the weight of the evidence did not show that the defendant was not negligent. On March 29, 1915, plaintiff entered a rule remitting the excess of the verdict over $2,500.

Defendant then appealed from this verdict, which appeal was argued in the Supreme Court at the June Term, 1915. The Supreme Court sustained the action of the trial judge in refusing to direct a verdict. (See Opinion, pp. 301, 305, State of Case.)

The defendant now appeals from the judgment of the Supreme Court.

FACTS.

On October 21, 1910, Patrick Ruane, the decedent, was a locomotive fireman in the employ of the defendant. At 7:30 A. M. on that day he left Jersey City in company with Engineer George W. Morgan, on engine No. 957, belonging to the defendant, to go on his regular trip from Jersey City to Port Jervis. The train which they pulled was a local passenger train. About half a mile after leaving Ramsey station, which is the second station east of Suffern on defendant's railroad, there was a loud report in the fire-box, fire and water and flame flew out of the fire-box door into the cab. That before the explosion Patrick Ruane, the decedent, had been shoveling coal and attending to the fire, and when the explosion was over he had disappeared. Morgan, the engineer, found him two or three hours later in the hospital in Suffern. The defendant admits (State of Case, page 18, l. 20-28) that the plaintiff's decedent died as a consequence of the injuries received in this explosion. After the accident it was found that the crown sheet, which is the roof of the fire-box and which separates the water in the boiler from the fire, had dropped down at the left hand front corner and that some of the bolts which supported the crown sheet had been pulled out, leaving holes in the crown sheet, through which the steam and water in the boiler came through to the firebox, as a result of which fire and flame were blown out of the firebox into the cab. These facts are stated more particularly hereinafter.

I.

FIRST AND SECOND GROUNDS OF APPEAL CONSIDERED.

THERE WAS EVIDENCE OF THE DEFENDANT'S NEGLIGENCE ALLEGED IN THE DECLARATION SUFFICIENT TO JUSTIFY THE TRIAL JUDGE IN REFUSING TO DIRECT A VERDICT IN FAVOR OF THE DEFENDANT.

The first and second grounds of appeal, which will be considered in this part of the brief are the following: (1) That no negligence has been shown on the part of the defendant; and (2) that the negligence alleged in the declaration has not been proven (Case, pp. 307, 308).

It needs no citation of authority for the proposition that the only negligence the trial court could have considered was the negligence alleged in the declaration; plaintiff's and defendant's entire proof was directed to and against the negligence alleged in the declaration. Therefore the first two grounds of appeal are identical and will be considered together. They are urged together by defendant as its first reason why the trial judge should have directed a verdict (State of Case, p. 253).

The complaint alleged that the locomotive engine was carelessly and negligently constructed. The plaintiff offered no proof to sustain this allegation, and does not rest his case thereon.

The complaint further alleged negligence of the defendant in inspecting and keeping in repair the locomotive engine, and in keeping the same in a safe condition, and that defendant's negligence in this respect caused the explosion. The complaint further alleged that the explosion resulted from de-

fendant putting in use the locomotive engine without first having inspected it to ascertain whether or not it was in a safe condition to use. The case was tried out on the issue that defendant carelessly and negligently inspected and kept in repair the locomotive engine and did not keep the same in a safe condition, and negligently and carelessly put in use a locomotive engine which was defective, out of repair and unsafe for use, which condition the defendant might have discovered by proper inspection.

The plaintiff offered evidence to support these allegations. (State of the Case, pp. 3 and 4, Declaration.)

THE LAW DEFINING DEFENDANT'S DUTY.

The law on this point is found in the decision of the Supreme Court in this case, Ruane v. Erie R. R. Co., and affirmed by the Court of Errors:

> "The duty of the employer is to exercise reasonable care and skill in making inspections and tests at proper intervals. This duty is satisfied if the master uses such reasonable precautions as a man of ordinary prudence would use for the safety of himself and his workmen under ordinary circumstances. Therefore this duty is satisfied if the master exercises the same care that is ordinarily exercised and that one engaged in practical operations is not bound to make either the inspection or the tests which may be possible in a laboratory or upon a small scale and outside of the practical conduct of affairs." (Ruane v. Erie R. R. Co., 83 N. J. L. 423; affirmed 90 Atl. 1135.)

QUESTION FOR DECISION ON FIRST AND SECOND GROUNDS OF APPEAL.

The defendant's appeal is based upon the alleged error of the trial court in refusing to direct a verdict for the defendant, and in submitting to the jury the question of the defendant's liability. (Exception reserved, State of Case, pp. 7, 253, 254).

The reasons which the defendant first alleges constitute such refusal to direct a verdict an error are: (1) That no negligence was shown on the part of the defendant; and (2) that the negligence alleged in the declaration has not been proven. (Case pp. 307-308.)

The court on this appeal cannot say whether or not the negligence in the declaration was *proven* or shown. That question under Walton v. Ackerman, D. L. & W. R. R. Co. v. Shelton, and Newark Passenger Railway Co. v. Block, cited hereinafter, is a jury question.

The court on these first two grounds of appeal is limited to the decision of the question: "Was there any evidence on the whole case of the negligence complained of on the part of the defendant within the rule laid down in Ruane v. Erie R. R. Co., cited above?" If there was any such evidence, then the court properly refused to direct a verdict for the defendant, and properly submitted to the jury the question of defendant's liability.

> In Walton v. Ackerman, Court of Errors and Appeals, the case came up on error in an action of tort brought by Ackerman for damages for the killing of his horse in a collision with a horse and wagon belonging to Walton. The error assigned was that the judge refused to non-suit and refused to direct a verdict. The court said there is no error in the record.

When the plaintiff had concluded his principal evidence there was evidence of negligence on the part of the defendant's servant. Walton v. Ackerman, 49 N. J. L. 234.

In D. L. & W. R. R. Co. v. Shelton, the action was for damages because of a collision between a locomotive and a horse and buggy belonging to the plaintiff. At the conclusion of the evidence on the part of the plaintiff, defendant moved for a non-suit on the ground that no negligence by the defendant occasioning the injury had been shown. The motion was refused and exception taken, and on error the court said: *"If upon the whole case* there is evidence which in any way tends to establish the plaintiff's cause of action or defense, it is erroneous for the court to direct a verdict, and it is only when the facts proved clearly fail either to establish a cause of action or a sufficient defense, that the court can properly direct the jury as to the verdict. D. L. & W. R. R. Co. v. Shelton, 55 N. J. L. 343.

In Newark Passenger Railway Co. v. Block, the defendant in error brought an action of tort against the Newark Passenger Railway Co. to recover damages for an injury received from a car of the company running in a public street. After the evidence was all in counsel for the Railway Company requested the judge to direct a verdict in its favor. The request was refused and an exception taken. The contention was that the evidence showed that there was no negligence on the part of the defendant in error producing or contributing to produce her injury. *"WHEN IN SUCH CASES THE TRIAL JUDGE IS REQUESTED TO NON-SUIT OR TO DIRECT A VERDICT, HIS DUTY IS TO SAY*

WHETHER ANY FACTS HAVE BEEN ESTABLISHED BY THE EVIDENCE FROM WHICH NEGLIGENCE MAY BE REASONABLY INFERRED. IF NONE, THERE IS NO CASE TO GO TO A JURY, BUT IF FROM FACTS ESTABLISHED, NEGLIGENCE MAY REASONABLY AND LEGITIMATELY BE INFERRED, IT IS FOR THE JURY TO SAY WHETHER FROM THOSE FACTS NEGLIGENCE OUGHT TO BE INFERRED. In performing this function the trial judge must take care not to trench on the peculiar province of the jury to determine questions of fact and must bear in mind that *THE QUESTION IS NOT WHETHER HE WOULD INFER NEGLIGENCE FROM THE ESTABLISHED FACTS, BUT WHETHER NEGLIGENCE CAN BE REASONABLY AND LEGITIMATELY INFERRED THEREFROM BY THE JURY."* Newark Passenger Railway Co. v. Block, 55 N. J. L. (605).

The question for decision on the first and second grounds of appeal therefore is, are there any facts established by evidence on the whole case from which it may be reasonably inferred by the jury that defendant was negligent in inspecting or keeping in repair, or keeping in a safe condition for use, or putting into use in a defective and unsafe condition the locomotive engine in question; or stated conversely, are there any facts established by evidence on the whole case from which it may be reasonably inferred by the jury that the defendant did not use reasonable care and skill in inspecting the locomotive engine in question, or in keeping it in repair, or in a safe condition for use, or in putting it into use in a defective and unsafe condition.

Whether or not defendant's negligence is shown or proven, as stated by defendant in its first and second grounds of appeal, is not for this Court to consider on the authority of the above cases.

THERE WAS EVIDENCE ON THE WHOLE CASE TO WARRANT THE TRIAL COURT'S REFUSAL TO DIRECT A VERDICT FOR THE DEFENDANT AND TO SUBMIT THE QUESTION OF DEFENDANT'S NEGLIGENCE TO THE JURY.

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(1) THE CAUSE OF THE ACCIDENT, IS LACK OF WATER IN THE BOILER.

The defendant in its brief will probably attempt to comment unfavorably upon the inability of the engineer Morgan, who was the engineer in charge of the engine on the day of the explosion, to give the cause of the accident. When asked (pages 23 and 34) what in his judgment was the cause of the accident, he said he could not explain it. On the former trial he testified "my opinion is that the engine was damaged before I took it out of Jersey City, or had been damaged by somebody else unbeknownst to me and the company, that it had been short of water or something of the kind." (Pages 24-25). He finally testified (p. 26) that he did not think in his judgment that that was the cause of the accident, and (page 27) went off into a guessing excursion, finally saying that it might have been powder in the coal. Morgan's loss of memory and inability to give the same opinion as to the cause of the accident on this trial as he did on the former trial, might possibly be accounted for by the fact that at the time of the former trial he had been discharged by the defendant and that at the

time of this trial he is again in the employ of the defendant (p. 36, l. 32).

It is of no material consequence, however, that Morgan did not testify what his opinion was as to the cause of the accident, because the case is replete with testimony of the cause of the accident given by defendant's experts.

The court on this appeal is considering all of the testimony in the case, and the causes of the accident testified to by defendant's experts tend to establish the plaintiff's case.

> "*If upon the whole case* there is evidence which in any way tends to establish the plaintiff's cause of action or the defense, it is erroneous for the court to direct a verdict." D. L. & W. R. R. Co. v. Shelton, 55 N. J. L. 343.

The defendant's experts who testified and attempted to fix the cause of the explosion were: Lester, Mansfield, O'Malley, Smith, Kuhn, Evans and Collins. These experts base their opinions as to the cause of the accident upon the physical condition of the firebox after the accident.

The crown sheet is over the firebox, the water rests on the top of the crown sheet. The crown sheet separates the fire from the water, it is the roof of the firebox. (Morgan, p. 21, l. 18-33.)

There is a space between the top of the firebox and the top of the boiler. The water flows over that space. (Kuhn, p. 138, l. 34-35.) The crown sheet is held up by bolts (p. 22, l. 3-4). These bolts run from the crown sheet to the top of the boiler. The crown sheet hangs suspended on them.) The top of the crown sheet is curved (Kuhn, p. 140, l. 1-2).

The crown sheet is an arc (Lester, p. 115).

After the accident it was found that the left hand front corner of the crown sheet had dropped down (p. 21, Morgan, l. 35-40).

166 crown bolts had pulled out of the sheet. The sheet dropped down and pulled off the heads of the bolts. It was the left front end of the crown sheet that had dropped. By the front end is meant toward the front end of the engine (Lester, p. 98, l. 1-30). 10 or 12 square feet had dropped down. It commenced toward the front of the engine. The part of the sheet which dropped was inverted about 9 inches, it didn't break off, it gradually pulled down. It worked on the plan of blowing a soap bubble. It gradually began to hang and dropped in a sort of arc. It began to hang at both edges of the point of depression, and then gradually dropped to the deepest point (p. 113). It didn't break; it pulled off the bolt heads. The sheet did not rupture at all. The sheet didn't break anywhere. The water and steam (that blew the fire out of the firebox) went through the bolt holes and not through any rent in the fabric in the crown sheet (p. 114, l. 1-11). The left front part of the crown sheet had bulged down about six inches below its natural formation (p. 236).

From the testimony quoted above, it can be seen by the court that the crown sheet is the roof of the firebox; that the water in the boiler rests upon and flows over the crown sheet; that the fire in the firebox under the crown sheet heats the crown sheet, and the water resting upon the heated crown sheet is turned into steam. That after the accident it was found that the left front corner of the crown sheet instead of being level had been blown down below its natural formation about nine inches, in somewhat the shape of a bulge or bag.

All of the defendant's experts except Evans, that is, Lester, Mansfield, O'Malley, Smith, Kuhn and Collins based their opinions of the cause of the explosion upon the water line; that is, the fatal blue line, or boilermaker's blue, around the part of the crown sheet which had fallen down. "The water line is a line of demarcation that shows where the water was at the time the accident happened, that is, the height of the water, the color of the iron changes when the water gets below the level of the crown sheet and uncovers the iron, so that the iron is exposed to the heat, with no water to protect it, it discolors it." (Lester, page 100.) At the line of demarcation where the water leaves off and the steam begins it has this fatal blue color (p. 101).

They disagree on where this blue line was. Lester (pp. 114, 115); O'Malley (p. 118, line 39), and Smith (pages 127 and 130). Each says that this blue line was all around the depression of the crown sheet. Mansfield (p. 117) and Kuhn (pages 140, 141), each say that the blue line did not extend all around the depression in the crown sheet, but was in two parallel lines extending from the front end of the firebox to the rear.

THE DEFENDANT'S EXPERTS AGREE ON THE CAUSE OF THE FALLING OF THE CROWN SHEET, ADVANCING THREE DIFFERENT THEORIES.

The defendant's experts agree on the cause of the falling of the crown sheet and assign three distinct theories therefor. The defendant's experts upon the cause of the accident were Lester, Mansfield, O'Malley, Smith, Kuhn, Evans and Collins. They testified to three distinct and separate theories. All based on lack of water in the boiler.

(1) FIRST THEORY OF ACCIDENT TESTIFIED TO BY DEFENDANT'S EXPERTS.

Lester says (p. 101), basing his opinion upon the blue water line: "In my opinion the cause of the dropping of the crown sheet of engine No. 957 is a clear case of low water, that is, water below the level of the crown sheet."

O'Malley says: "The sheet had dropped about nine inches at the lowest point and at the outer edge of this bag was a blue line. Positively in my opinion it was low water." (O'Malley, pages 118, 119.)

Smith says: "The water line was from four to six inches below the level of the top of the crown sheet. In my opinion, the cause of the accident was low water, the crown sheet overheating." (Smith, pp. 127-128.)

Kuhn says: "The water line indicated that the boiler was low in water. In my opinion the cause of the accident was low water." (Kuhn, p. 137.)

That low water, as testified to by Lester, O'Malley, Smith and Kuhn, four of the defendant's experts, was the cause of the accident, is contradicted by Evans and Collins, two of the defendant's experts.

Evans says: "An engine won't blow up from being short of water." (Evans, p. 157, line 3.)

Collins says: "Lack of water on the crown sheet would not in my opinion explode a boiler, it will burn it out." (Collins, p. 237, lines 24, 25.)

(2) SECOND THEORY OF ACCIDENT TESTIFIED TO BY DEFENDANT'S EXPERTS.

Collins says: "The feeding of water into the boiler in the condition the metal is in, at a white heat, causes the explosion. If you put a quart of water onto a white hot crown sheet, you will tear it apart. The cause of the dropping of the crown sheet was putting water onto the crown sheet when it was at an intense white heat." This opinion is based on the water line. (Collins, pages 237-238.)

This is flatly contradicted by Evans. Evans says: "You can take a crown sheet and bare it, that is, take the water away from it, and the modern crown sheet heated red hot, and turn the water on. An engine cannot blow up from that, any more than a stove will blow up when you pour hot water on the lid." (Evans, p. 157.)

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(3) THE THIRD THEORY OF THE ACCIDENT TESTIFIED TO BY DEFENDANT'S EXPERTS.

Mansfield says: "The blue line indicates scarcity of water. In my opinion the cause of the dropping of the crown sheet was scarcity of water in the boiler and allowing the sheet to become over-heated and stretched between the stays (bolts), loosening the fastenings, and the pressure from the inside pushed the sheet down." (Mansfield, p. 117.)

Evans says: "It is over-pressure that blows an engine up (page 157, lines 4-5). It is the pressure over the sheet, burning of the sheet,

and the pressure forces it down over the heads of the bolts, pulling out the plate." (Evans, p. 157.)

Thus we have upon the testimony of all of the defendant's experts, three distinct causes of the accident testified to by them, all based, except Evans', upon the blue water line, upon the location and character of which they disagree; Lester, O'Malley and Smith saying it was all around the bag in the crown sheet, and Mansfield and Kuhn saying it was not. The defendant's experts contradict each other and present three theories for the accident, to wit:

(1) Low water below the level of the crown sheet (Lester, O'Malley, Smith and Kuhn, contradicted by Evans and Collins);

(2) Feeding water onto a white hot crown sheet (Collins contradicted by Evans);

(3) Pressure of the steam on a burned crown sheet (Evans and Mansfield contrary to the opinions of Lester, O'Malley, Smith, Kuhn and Collins.)

All three of said causes resulting from a crown sheet which at some time or other has been burned, owing to lack of water in the boiler.

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(3) ON OCTOBER 19, 1910, TWO DAYS BEFORE THE ACCIDENT AND THE DAY AFTER ITS ANNUAL INSPECTION AND REPAIR, THE DEFENDANT PUT ENGINE 957 INTO SERVICE WITH A DANGEROUS AND DEFECTIVE WATER SUPPLY, THE VERY CONDITION WHICH WOULD PRODUCE THE LACK OF WATER IN THE BOILER, THE CAUSE OF ACCIDENT FIXED BY DEFENDANT'S EXPERTS.

The accident in which the decedent was killed happened on October 21, 1910. The number of the engine was 957. On October 18, 1910, three days before the accident, the engine had come out of the defendant's repair shops, where it had been sent for its annual overhauling, inspection and repair. (State of Case, Collins, page 233, line 39). This inspection is treated at length hereinafter. On October 19, 1910, the next day, this engine, No. 957, was run from Jersey City to Port Jervis by Engineer Samuel W. Evans (State of Case, p. 78).

After Evans left Jersey City on October 19th, his injector broke up as he was approaching Rutherford, which is about eight miles from Jersey City, and that from there on to Port Jervis he used his injector for a while, and then it would break up, and the fireman would have to put on the injector in the other side of the cab, and then Evans would use his injector for a while (State of Case, p. 79). The trouble was with both injectors (p. 79, lines 27 to 36). Evans first noticed the breaking up of the injector when he was approaching Rutherford, which is about eight miles from Jersey City (p. 83). The injectors are in the cab of the engine. Injector is the engineering name of the pump which draws the water from the tank or tender and forces it into the boiler. There is a hose underneath connecting the tank and the injector. (State of Case, pages 31, 32.)

Evans explains what he meant by the breaking up of his injector in the following language: "There is a tube in the injector called the combining tube. In this tube the velocity of the steam is imparted to the water, that is, where the steam and water combine. If there is any breakage, or if there is anything that interferes with the perfect combination of these two, the injector breaks up. *THAT IS, THE WATER FAILS TO GO TO THE BOILER.* It then flows down over the over-flow

pipe or goes back in the tank. That by breaking up of an injector is not meant that the injector itself is broken or that the hose is broken, *BUT THAT IT FAILS TO WORK.* That by the term is meant *THAT IT FAILS TO SUPPLY THE WATER TO THE BOILER THROUGH SOME CAUSE EITHER IN THE TANK OR IN THE INJECTOR ITSELF.* (State of Case, pages 82, 83, Evans.)

In stating his opinion as to the cause of the trouble Evans said *THE BREAKING UP, THAT IS, THE FAILING TO SUPPLY THE WATER TO THE BOILER IN THIS CASE WAS IN THE TANK.* (State of Case, bottom of page 82 and top of page 83.) From the way the injector broke up *THE TROUBLE WAS in the TANK, SOME OBSTRUCTION OF THE FLOW OF WATER FROM THE TANK TO THE FEED PIPE.* (State of Case, bottom of page 79.) That is the result of my experience (State of Case, p. 80). Evans has been a locomotive engineer since 1882 (p. 78). "As the water gradually went down in the tank that day this suction that is constantly in operation when the injector is at work drove these particles that got in the tank down in the strainer (State of Case, p. 161).

INDISPUTABLE CONCLUSIONS TO BE DRAWN FROM THE DEFENDANT'S EXPERTS' TESTIMONY AS TO THE CAUSE OF THE ACCIDENT AND THE DEFECTIVE CONDITION OF THE WATER SUPPLY TESTIFIED TO BY EVANS.

It is plainly to be seen from the above testimony that plaintiff established the following indisputable facts. That on October 19, 1910, the day after this engine 957 had come from the shops, and the day after the completion of its annual inspection, overhauling and repair, and on its first trip,

Evans, the engineer, had the trouble with his injector which he testified to as set out above, and that his injector broke up and failed to supply the water from the tank to the boiler; that the trouble was in the tank, some obstruction to the flow of water from the tank to the feed pipe, and that this trouble would and did stop the flow of water from the tank to the boiler. This failure of the injector to work would produce a lack of water in the boiler, the identical situation which the defendant's experts testified would produce either or all of the three causes of the accident which they testified to, that is: (1) low water below the level of the crown sheet; (2) over-pressure of the steam acting upon a burned crown sheet caused by the low water; and (3) if the injector started working again, as Evans testified it would after the steam blew back the obstruction or as it was carried by the sway of the tender, and wash of the water would cause the feeding of water onto a hot crown sheet, the second cause of the accident testified to by defendant's experts. (Evans, top of page 162.)

DEFENDANT'S LACK OF PROOF OF PROPER INSPECTION AT PROPER INTERVALS CONCLUSIVELY SHOWS DEFENDANT'S NEGLIGENCE.

The defendant attempted to relieve itself of its liability for placing engine 957 into service in its conclusively proven defective condition as to the water supply from the tank to the boiler, by attempting to prove two inspections: (a) the annual inspection and repair, which ended on October 18th, three days before the accident, and which has been referred to briefly above; and (b) an inspection at Port Jervis after the engine arrived there on the trip of October 19th, and before it left there on the trip of October 20th, when Evans brought it from Port Jervis to Jersey City again.

(3) THE ANNUAL INSPECTION ENDING ON OCTOBER 18TH PROVES DEFENDANT'S NEGLIGENCE.

The defendant sought to avoid the consequences of this proved defective water supply in engine 957 by proof of the annual inspection, overhauling and repair of the engine, which ended on October 18th, three days prior to the happening of the accident.

It was the rule of the company that all boilers must be inspected once a year (Smith, p. 129). This engine was due for inspection (pages 129, 130).

The rule was that engines should come in once a year, and that this engine was in for the yearly overhauling (Haley, p. 226).

The witnesses who testified to this inspection on behalf of the defendant were: Smith, Buckley, Olean, Haley and Collins. An examination of the testimony of these witnesses shows that *THE ONLY ONE WHO ACTUALLY KNEW ANYTHING ABOUT THIS ANNUAL INSPECTION WAS THE WITNESS COLLINS.*

ELIMINATION OF DEFENDANTS WITNESSES WHOSE TESTIMONY PROVES OF NO VALUE ON THE ANNUAL INSPECTION.

HUGH SMITH, foreman of boiler makers, whom the defendant will quote as testifying; "The engine was put to the hardest sort of a test" (pages 128), knew absolutely nothing of his own knowledge about the inspection or overhauling of the engine. He testified (p. 128) that he did not have anything directly to do with the inspection or overhauling of the engine; that the engine was there but that other men worked on it; that he did not have anything to do with the tests, but to see that it was

done; that some men working under him made the tests; and (p. 129) that he didn't make the inspection himself. It is thus seen, and an examination of Smith's testimony (pages 126 to 132) shows conclusively that he knew nothing, and testified to nothing concerning this annual inspection, and that therefore his testimony on that point is of no value as proof of inspection.

BUCKLEY was foreman of the cab work. He testified (page 132) that he supervised the work that was done on the boiler fixtures, including the injectors. Buckley's testimony is also valueless. He testified (page 133) that he did not examine any part of engine 957, he simply supervised the work and produced a report checked up by him after the work was done, which report is made out after the work is finished and the engine put in service: that Olean does the work on the cab fixtures and did the work on this engine. An examination of Buckley's testimony shows that he testified to nothing of any value to the defendant concerning this annual inspection, and that on page (134) he said: "I don't make the inspection myself." He did testify that the examination which he supervised included the check valve, which pertains to the injectors. This is the valve which retains the water in the boiler after the injectors force it into the boilers (page 133). Buckley didn't do the work on this check valve, if any work was done, and testified to nothing concerning it. His testimony therefore must also be disregarded and valueless as proof of the annual inspection.

OLEAN'S testimony (pages 135, 136) is limited to the following: that he examined the engine under the orders of Mr. Buckley in gauge cocks, tested the steam gauge, examined the water glass cocks and examined the box; that he set the pop valves, and that the above work examined by him was fixed up

all right. An examination of Olean's testimony will convince the court that very little reliability is to be placed upon it, and that he testified to nothing connected with the water supply in which plaintiff proved a defect by the testimony of Evans, and omitted to testify concerning the check valve which Buckley said Olean examined.

HALEY witnessed the testing of the boiler on engine 957 at the end of the annual inspection (page 221). His testimony is limited to the fact that he looked at the gauge to see that it had the right pressure on when Collins examined the boiler, that was about all he did on the engine. That he didn't know of any inspection as it was up to Mr. Collins to make the inspection. That he didn't have anything to do with the inspection. That he was just there to witness that Collins had the right pressure on the boiler (page 222). All Haley testified to was that he was present when a hydrostatic test was made by means of a water pump to test the pressure on the boiler. His testimony therefore also proves nothing as to inspection or examination or repair of the water supply, and must also be disregarded as worthless upon that point.

The remaining witness who testified as to this inspection was Patrick Collins, the man who actually made the inspection of the boiler, so far as any inspection was made. Collins testified that he was an inspector of boilers, and made a report of the inspection of engine 957 beginning October 12 and ending October 18, 1910. That the inspection took nearly a week, and that he removed about 25 stay bolts and 120 or 130 flues, and that he examined the crown sheet and found it in first-class condition. That is the limit of his testimony as to the inspection, examination and repair of the engine. He did testify (page 235) that the engine was in perfect condition to run as a first-class engine, but this is merely a conclusion on his part. He did also tes-

tify (same page) that the engine could not leave the shop until she was in perfect condition. This is not testimony of inspection. *AN EXAMINATION OF COLLINS' TESTIMONY WILL NOT REVEAL ANY INSPECTION OF THE TANK OR OF THE HOSE WHICH CONDUCTED THE WATER FROM THE TANK TO THE INJECTORS, OR OF THE INJECTORS.*

These witnesses, Smith, Buckley, Olean, Haley and Collins, are all the witnesses who testified concerning the annual inspection which ended on October 18, 1910.

The engine came into the shop about October 12, 1910, for its annual inspection, overhauling and repair. (Collins, p. 238.)

It was there for the annual test and boiler inspection. The orders are that all boilers must be inspected once a year. (Smith, pages 128, 129, Haley, page 226.)

Nearly a week was spent on the inspection, overhauling and repair (Collins, p. 234). Collins, the only witness who knew about the inspection or had any part in it, removed and renewed 120 or 130 flues and 25 stay bolts. This is the extent of the work which was done on the engine.

That when an engine comes in for its yearly test it is given a general overhauling, and the rule is that it is to be tested up to see if there are any other repairs to be made; that the order is to make such examinations as would tell what repairs ought to be made, and that this engine was in the repair shop under those orders and for that purpose, and that the object of the general overhauling is to make sure that the engine is in good order so that it can go out on the road and do its work. (Haley, p. 227.)

ABSOLUTELY NO PROOF OF INSPECTION OF WATER SUPPLY.

There is not a word of testimony by any of the witnesses, Smith, Buckley, Olean, Haley or Collins, who testified about this annual inspection, testifying to any inspection, examination or repair of the tank, or of the hose that connects the tank and injectors, or of the injectors. It is true that Buckley testified (page 132) that he supervised the work that was done on the boiler fixtures, including check valve on the injector, and that the inspection slip signed by him includes one part that pertains to the injector, to wit, the check valve, which is the valve which retains the water in the boiler after the injectors force it into the boiler (Buckley, p. 133). This would not correct the trouble which Evans had in getting water into the boiler. Furthermore, Buckley did not make an examination or do any work on the check valve himself (p. 134, line 17). What was done was done by Olean, "Olean done the work." (Buckley, p. 133.) An examination of Olean's testimony (pages 135, 136) shows that he did not testify concerning any examination, inspection or repair of a check valve.

Therefore for an indefinite time, probably since the last annual inspection in 1909, there was in the tank or in the hose which connects the tank and the injectors, this obstruction, which prevented the flow of the water from the tank to the boiler that Engineer Evans testified to, and the natural and normal result would be to lower the water in the boiler and to produce the causes which defendant's experts testified to, produced the explosion. The outstanding fact in all this testimony of the annual inspection given by defendant's witnesses is, that the overhauling of this engine after it came in from perhaps a year's service, did not include an examination of or inspection of the tank or the hose

which conducts the water from the tank to the boiler or the injectors which force the water from the tank into the boiler. In other words, the most vital thing connected with this engine, and the one which all of the defendant's experts testify is the cause of the accident, was not inspected for. That this was an inspection and examination which could have been made without great cost or trouble and was not an inspection or examination which could be made only in a laboratory, or upon a small scale outside of the practical operation of a railroad will be shown in a subsequent part of this brief.

The defendant therefore, so far as the annual inspection which ended on October 18th is concerned, plainly failed to exercise reasonable care and skill in making an inspection or test of the water supply of engine 957. The defendant plainly did not use such reasonable precautions as a man of ordinary prudence would use for the safety of himself and his workmen under the circumstances. (Ruane v. Erie R. R. Co., supra.)

DEFENDANT TURNED ENGINE 957 OUT FROM ANNUAL INSPECTION IN A HURRY BECAUSE IT WAS SHORT OF ENGINES.

Defendant's negligence in failing to inspect the tank and water supply of engine 957 is further accentuated by the testimony of Evans, defendant's own witness, as to the condition of engine 957 when put into service on the morning of October 19, 1910, the day after the completion of the annual inspection on October 18, 1910.

> "She had been turned out in a hurry." (Page 78, lines 40-41.)

> "Being short of engines they turned her out on my run." (Page 79, lines 14-16.)

(4) ACTUAL NOTICE GIVEN TO DEFENDANT BY EVANS OF THE DEFECTIVE WATER SUPPLY.

When Evans, the engineer who had charge of the engine on October 19th, the first trip after it came from the repair shop, arrived in Port Jervis on that day, after having the trouble set out above with his injector that he described, he made the following report in the Engineers' work book:

> "Engine 957. Glass put in; left front window. Right foot front engine truck cellars gone, and wheel very hot; couplers O. K.; *TANKS CLEANED OUT ROUND TANK VALVE AND STRAINER PUT IN TANK; CLEAN OUT HOSE STRAINERS, PACK BLOWER VALVE; ALSO LEFT STEAM RAM OF INJECTOR.* (Evans, p. 154.)
>
> (Signed) EVANS.

Evans made this report in writing in the work book on his arrival at Port Jervis and signed it (p. 155). The defendant will attempt to make a point of the fact that the engine was not left in Port Jervis for the purpose of cleaning out the tank or putting a strainer in the tank or cleaning out the hose strainers, or cleaning out the injector, but because the wheel was hot. Evans so testified (page 154, lines 4 to 12) that it was a burned wheel the engine was left in Port Jervis for. He also testified to this on (page 80). This testimony of Evans that the engine was left in Port Jervis because of a burned wheel is belied by his further testimony and by the written report above quoted from the work book. He testified (page 154) that it was the custom to make a report of anything that needed attention (lines 39, 40), and (lines 6 and 7): *"I AM POSITIVE THAT I INDICATED ON THE BOOK THAT THERE WAS SOME OBSTRUC-*

TION BETWEEN THE TANK AND THE ENGINE." This report of Evans therefore gave actual notice to the company that the engine was in such condition that the tank should be cleaned out around the tank valves; that a strainer should be put in the tank; that the hose strainers should be cleaned out, and that the left steam ram of the injector should be packed, all of which is part of the apparatus which supplies the water from the tank to the boiler, and the engine was left in Port Jervis on October 19th by Evans to have these repairs made. The testimony of Evans (page 154, lines 5 to 8) is very significant. "I am positive that I indicated on the book that there was some obstruction between the tank and the engine." We have then this defective engine with its defective apparatus which supplies the water from the tank to the boiler left in Port Jervis on October 19th to have that defect remedied.

(5) NO INSPECTION OF WATER SUPPLY BY DEFENDANT AFTER ACTUAL NOTICE. DEFENDANT'S NEGLIGENCE PROVED BY PORT JERVIS INSPECTION ON OCTOBER 19 AND 20, 1910.

The defendant again sought to avoid its liability for the decedent's death by proof of inspection and repair at Port Jervis on October 19th and October 20th. Again there was no inspection of the tank or of the hose which connected the tank with the injector, and the defendant failed entirely to clean out the tank around the tank valves, and failed entirely to put a strainer in the tank or clean out the hose strainers. The witnesses for the defendant who testified as to the Port Jervis inspection and repair, in the order in which they testified, were: Holt, Barbour, Riggs, Schumacher, Mitchell, Willman, Kirchner, and Hadrick. All of these witnesses, except Holt, Hadrick and Schumacher, had

absolutely nothing to do with the inspection of the engine or the inspection of the tank, or hose connecting the tank with the injectors, or the injectors. This is shown by the following statements of the work which they did and an examination of their testimony.

ELIMINATION OF DEFENDANT'S WITNESSES WHOSE TESTIMONY DOES NOT TOUCH THE WATER SUPPLY.

Barbour (page 167) put a glass in the window of the cab. That is the limit of his testimony. Riggs (page 171) was a box-packer; his work consisted in putting oil waste into the boxes, into the box part of the engine works, and that has nothing to do with the injectors. That was the limit of his testimony. Mitchell (pages 181-182) was a machinist's helper. He cleaned the engineer's brake valve, which is a valve on the engine which is used to stop trains with, make a reduction in the air. That was the limit of his testimony. Willman (page 183) repaired a cylinder cock, which is located on the bottom part of the engine cylinder and has nothing to do with the injectors. Kirchner (page 184) was a pipe fitter, and he cleaned out the sand pipes, and that had nothing to do with the injectors, the sand pipes being used to keep the engine from slipping. That was the limit of his testimony. It is seen therefore that all of these witnesses had nothing to do with the examination, inspection or repair of the water supply of the engine.

DEFENDANT'S WITNESSES, SCHUMACHER, HOLT AND HADRICK, PROVE DEFENDANT'S NEGLIGENCE.

The three remaining witnesses, who testified concerning the Port Jervis inspection, were: Schu-

macher, Holt and Hadrick. A careful examination of the testimony of these three witnesses is most important because the defendant relied upon these three witnesses to prove the inspection which would relieve it from liability, whereas in fact their testimony shows conclusively defendant's negligence.

SCHUMACHER was an engine inspector at Port Jervis. He testified from an inspection book (page 172) showing an alleged inspection of this engine by him on October 20th, the day before the accident. The following testimony, on pages 172, 173, 174, 175, and 176, given by Schumacher, is nothing but an exposition of what his duties were, and not testimony of what he actually did in inspecting the engine. "Refreshing your recollection by reference to the inspection book, can you tell whether you did any work on engine 957? A. No, sir; I inspected the engine; that is what I had to do with the engine; I reported this work to the round-house foreman's office, and the round-house foreman's clerk copied it off and turned it over to the round-house foreman; that is all I know about it." (Page 172.) After I inspected the engine I went in the office and reported this work (page 173). It does not appear in Schumacher's testimony what this work is that he refers to. "I crossed the engine, looked the engine all over, if there is anything loose or broke, or lost off, or any leak anywhere. When I get through with that I go in the office and make the report out, and the round-house foreman's clerk copies it off and turns it over to the round-house foreman; that is all; the round-house foreman distributes it around among the men that is working for him. I inspect and report what work is to be done. There is a pit where the engine stands over, and I go under and look all over the engine, if there is anything lost on it or broke off that is reported in the office, when I get through

looking over engine I go there and put everything I find wrong with the engine (page 174). *I DON'T EXAMINE THE TANK.* I see what is wrong with the wheels and *WHAT YOU CAN SEE UNDERNEATH AND AROUND THE ENGINE, THAT IS ALL I LOOK AT. I DIDN'T LOOK AT ANYTHING ON THE INSIDE OF THE ENGINE. I DO NOT DO THIS WORK THAT I REPORT, I JUST HAND THAT OVER AND SOMEBODY ELSE IS SUPPOSED TO DO IT.* I inspect and examine for leaks, and look over the whole engine to see if there is leaking. I don't try to get inside of the fire box and see in there, it is only outside, if there is any leak the water runs down; if there is any water or leak anywhere (page 175). I don't inspect particularly for leaks, but of course if there is any water running down anywhere from the boiler, from a seam, or anywhere, why, I report that (page 176). I start on the pilot; I go all the way around. The fire box is right in front of me. If there is a leak anywheres, a steam leak or water leak, you can see it without going any further. When I speak of leaks I means leaks where the water is dropping down on the ground. A leak that you can see by walking around the engine or getting under the truck and looking around; that is the leak I mean (page 177). By the foregoing examination of Schumacher's testimony and by a reading of his testimony (pages 172 to 177) the court will see that Schumacher did not testify to any examination or inspection which he made. He identified the inspection book (page 172) but this book was not offered in evidence. His testimony is entirely a statement of what his duties were and the manner in which he was supposed to perform his work. He didn't testify at any place concerning any inspection or examination of the engine made by him. The most significant part of his testimony is found on page 175, lines 8 and 9: *I DO NOT EXAMINE THE TANK.* A reading

of Schumacher's testimony will disclose the further fact that he testified to nothing concerning an examination of the tank or the hose which connects the tank with the injectors, or of the injectors; therefore so far as Schumacher's testimony is concerned it is entirely valueless on the point of proper inspection at Port Jervis.

HOLT is the witness upon whom the defendant places its reliance for proof of the inspection of the injectors at Port Jervis, after Engineer Evans turned the engine in for repairs and inspection of its water supply on October 19th. Holt's duties (page 163) were to handle injectors, cock valves, safety valves, water glasses, and so on. It is thus seen at the beginning of his testimony that his duties did not comprise inspection of the water supply or of the tank. He testified (page 165) that he packed the blower valve and also the left steam ram of the injector; that he examined the injectors, which examination consisted of taking them apart, looking at the tubes, then after they were together again trying them to see that they worked properly, and that they worked all right. This is the limit of his testimony. While the plaintiff does not place his reliance upon a failure of the defendant to inspect the injectors or repair them, he does place his reliance upon the failure of the defendant to inspect the water supply of the engine. It is important at this point to consider that notwithstanding Holt did the work he testified to on the injectors and tried them after putting them together again, and that they worked all right, it was not nevertheless in the light of Evans' testimony a proper inspection of the injectors. While examining this point the testimony of the witness Hadrick (page 201) that he tried the injector by pumping air after Holt did the work on them, should also be considered here, because the same objection that it was not a proper inspection is applicable upon the fol-

lowing testimony of Evans. Evans, on October 19th, ran this engine, with this defect in the water supply, as far as Rutherford, a point eight miles from Jersey City (page 83), before he had trouble with the injector and before it broke up, and he explains this situation in the following language:

> "The water in the tank varies so much, and it is from one side to another. There are places where an injector will break up because the water is flushed away from there. The left hand injector might work good for miles under those circumstances. Then the water gets obstructed in there and the right injector will work all right. That was the trouble that day. As the water gradually went down in the tank this suction that is constantly in operation when the injector is at work drove these particles that got in the tank down in the strainer. Then when the injector breaks up, the steam blows back and it blows that away from the strainer, and the injector might work again." (Pages 161, 162, Evans.)

Evans' testimony therefore shows an actual operation on the road is necessary to determine if the injectors work properly. This is also shown by the testimony of Buckley (page 132). "The injectors are tested after the engine is put in service." The inspection of the injectors made by Holt and Hadrick therefore, while not the important point in plaintiff's case, was not a proper inspection.

The remaining witness who testified on the Port Jervis inspection is Hadrick, round-house foreman at Port Jervis. Hadrick's testimony is divided into three parts: testimony concerning inspection of the injectors, testimony of an alleged inspection of the tank, and testimony concerning work slips which

made up the work book of the round house. Hadrick testified (page 197) that he had a man working on the injector examining it; that that man was Mr. Holt; that he saw Mr. Holt working on the engine (page 198); that he was not present when Holt did the work (page 200); that he tested the injector after Holt got down. That he saw him on the engine. That he did not know whether he was working on the injectors or packing a valve, and the testimony which has been heretofore quoted concerning the trying of the injector after Holt finished his work. On the point of the inspection of the injectors therefore Hadrick's testimony is valueless because he knows nothing about it, and his testimony is limited to the fact that he tried the injectors after Holt told him that he had finished his work on them, which as shown by Evans' testimony is not a proper inspection.

THERE WAS NO INSPECTION OF THE TANK OR WATER SUPPLY AT PORT JERVIS ON OCTOBER 19 OR 20, 1910.

The only mention in the case in the testimony of any witness of any examination or inspection of the tank is in the testimony of Hadrick (page 197, line 37; and page 198, lines 3 to 16) as follows:

"A. I had a man working on the injector, examining it; also had a man clean the tank (page 198).

"Q. Do you recollect who it was that had something to do with the boiler; do you recollect the name I mean?

"A. You mean the tank?

"Q. I should have said the tank?

"A. Why, Jost.

"Q. Did you see any of the men working on the engine?

"A. Seen Mr. Holt.

"Q. Do you recollect seeing Mr. Jost?

"A. Why, I seen him coming from the engine, but I didn't see him do the work.

"Q. You don't know what work he actually did then?

"A. I know he was to clean the tank.

"Q. I mean you didn't see him do it?

"A. I did not." (Page 198.)

The court in reading defendant's brief must bear in mind that there is no testimony anywhere in the case except that quoted immediately above, given by Hadrick, concerning any examination, inspection or cleaning of the tank. The defendant may mention slips of work alleged to have been done on the tank, and which slips are copied in the boiler book. This book was offered in evidence, but finally ruled out (pages 249, 252, State of Case). In fact the court at the trial did not examine this book and does not know what it contained. The court said (page 251, line 20), "I don't know myself what the record contains." The ruling out of this book is not one of the grounds of appeal.

An examination of the testimony given by Hadrick, quoted in the last paragraph, shows that his testimony is limited to the following: That he had a man clean the tank; that that man's name was Jost; that he saw Jost coming from the engine, but that he didn't see him do the work; that he didn't know what work he actually did, and that his

knowledge was limited to the fact that he knew he was to clean the tank.

The court therefore must bear in mind that this testimony given by Hadrick is not evidence of the examination, inspection or cleaning of the tank around the tank valves; that it is not evidence that a strainer was put in the tank; that it is not evidence that the hose strainers were cleaned out, all of which were reported as necessary to be done by Evans (page 154), and that nowhere in the case is there any testimony of inspection, examination or cleaning of the tank around the tank valves, or the placing of a strainer in the tank, or of the cleaning out of the hose strainers, all of which were called for in Evans' report which he wrote in the work book (page 154).

The defendant, therefore, after it had received actual notice of this defective water supply and obstruction in the tank which interfered with the operation of the injectors and caused them to break up, and prevented the supply of water to the boiler, and in the face of the following testimony of Evans (lines 5 to 8, page 154), "I am positive that I indicated on the book that there was some obstruction between the tank and the engine"; and in the face of the actual written report made by Evans of this instruction and of the necessity of cleaning out the tank around the tank valves and putting a strainer in the tank and cleaning out the hose strainers, sent this engine 957 out again from Port Jervis in charge of Engineer EVANS on a trip to Jersey City on October 20th with this obstruction in the tank to the flow of the water between the tank and the boiler, which is exactly the cause that would result in low water in the boiler and produce all of the causes which defendant's experts testified caused the accident. The next day, October 21, 1910, Engineer Morgan and Fireman Ruane took

this engine out from Jersey City, and after every precaution that Morgan's experience of thirty years as an engineer tells him is necessary for the proper working of his engine, the crown sheet is blown down and Ruane is killed.

This inspection of the water supply of the engine and the cleaning out of the tank around the tank valves, the placing of a strainer in the tank and the cleaning out of the hose strainers, was an examination, inspection and repair that the defendant could have made in the practical operation of its railroad. It was not an inspection or test that was possible only in a laboratory, or upon a small scale and outside of the practical conduct of affairs. This is shown by Evans' report in the work book when he demanded that this work be done. If it were not work that could be done easily and in the usual course of railroad operation Evans would not have requested this inspection and repair to have been made. The defendant offered no proof that this inspection and repair could not be made.

CONCLUSIONS ON THE FIRST AND SECOND GROUNDS OF APPEAL.

The plaintiff upon the testimony examined in the foregoing part of this brief made out a case sufficient to justify the trial court in refusing to direct a verdict for the defendant, and in submitting the question of defendant's liability to the jury.

The first two grounds as above stated on which defendant alleges error in the trial court in refusing to direct a verdict for the defendant, and in submitting the question of defendant's liability to the jury, which have been heretofore considerd, are: (1) because no negligence was shown on the

part of the defendant; and (2) because the negligence alleged in the complaint or declaration was not proven. As stated before it needs no citation of authority that this court cannot decide on this appeal the question raised in the second ground of appeal, that the negligence alleged in the declaration was not *proven,* that is a question of the weight and preponderance of the evidence and is for the jury under D. L. & W. R. R. Co. v. Shelton, 55 N. J. L. 343, and Newark Passenger Railway Co. v. Block, 55 N. J. L. 605. The legal obligation as to proof which the plaintiff was obliged to sustain and did sustain largely on the testimony of defendant's own witnesses is laid down in the following cases, which have been heretofore mentioned.

> "If upon the whole case there is evidence which in any way tends to establish the plaintiff's cause of action, it is erroneous for the court to direct a verdict, and it is only when the facts proved clearly fail either to establish a cause of action or a sufficient defense, that the court can properly direct the jury as to the verdict. D. L. & W. R. R. Co. v. Shelton, 55 N. J. L. 343. (In the above case this ruling was made on a motion to non suit.) The power to direct a verdict is identical with and rests upon the same foundation as the power to non suit. Newark Passenger Railway Co. v. Block, 55 N. J. L. 605.
>
> "When the trial judge is requested to non suit or direct a verdict his duty is to say whether any facts have been established by evidence from which negligence may be reasonably inferred. If none, there is no case to go to a jury; but if from facts established negligence may be reasonably and legitimately inferred it is for the jury to say whether from those facts negligence ought to be inferred."

Newark Passenger Railway Co. v. Block, 55 N. J. L. 605.

Therefore the legal obligation as to proof which the plaintiff was obliged to sustain under those cases and under Ruane v. Erie R. R. Co., 83 N. J. L. 423, affirmed 90 Atl. 1135, in order to justify the trial court's refusal to direct a verdict for the defendant, and the only question for this court to decide on defendant's first two grounds of appeal is:

> "Upon the whole case is there evidence which in any way tends to establish, or are any facts established by evidence from which it may be reasonably inferred that the defendant did not exercise reasonable skill and care in inspecting and testing engine 957 at proper intervals?"

And in deciding this question the court should bear in mind the admonitions laid down in Newark Passenger Railway Co. v. Block, and in Moore v. Central Railroad Co., as follows:

> "In performing this function (that of saying whether any facts have been established by evidence from which negligence may be reasonably inferred) the trial judge must take care not to trench on the peculiar province of the jury to determine questions of fact, and must bear in mind that the question is not whether he would infer negligence from the established facts, but whether negligence can be reasonably and legitimately inferred therefrom by the jury." Newark Passenger Railway Co. v. Block, 55 N. J. L. 605.

> "The court should be extremely cautious on the subject of interfering with the province of the jury, who by the principles and plan of our

jurisprudence have exclusive jurisdiction over the facts of the case." Moore v. Central R. R. Co., 24 N. J. L. 824.

The testimony examined upon the first two grounds of appeal raised by defendant shows conclusively that there is upon the whole case evidence which tends to establish the fact that the defendant did not exercise reasonable skill and care in inspecting and testing engine 957 at proper intervals, and also that facts have been established by evidence from which it may be reasonably inferred by a jury that the defendant did not exercise that reasonable care and skill in inspecting and testing engine 957 at proper intervals required of defendant under Ruane v. Erie R. R. Co. supra.

The plaintiff therefore has in the case and has established the following:

1. That on October 19, 1910, two days before the accident and the day after the completion of the annual overhauling inspection and repair of engine 957 (Smith, pages 128, 129, 130; Haley, pages 226, 227; Collins, page 238), and after nearly a week was spent on its inspection, overhauling and repair (Collins, page 234), and on its first trip thereafter in charge of Engineer Evans as he was approaching Rutherford, eight miles from Jersey City, his injector broke up and failed to work and the water failed to go to the boiler (Evans, pages 82, 83); that the trouble was in the tank, some obstruction to the flow of the water from the tank to the feed pipe (page 79), and the suction drove the particles in the tank down in the strainer (page 161). That Evans was positive, as his report shows, that he indicated on the work book that there was some obstruction between the tank and the engine (page 154). That the breaking up of this injector and the failure of the water to go to

the boiler indicated to Evans, an engineer of thirty-three years' experience, that there was an obstruction between the tank and the engine, and he made report in the work book on his arrival at Port Jervis that the tank should be cleaned out around the tank valves, a strainer should be placed in the tank, and the hose strainers should be cleaned out (page 154). Plaintiff by the above testimony established beyond a doubt engine 957, two days before the accident, in service, after coming from its annual inspection, overhauling and repair, with a dangerous defect in its water supply, which led Evans to make demand for the inspection and repair of the water supply which he reported in the work book.

2. Plaintiff next has the utter failure of the defendant at the annual inspection ending on October 18, 1910, to prove inspection, examination or repair of the water supply of engine 957. The testimony of defendant's witnesses, Smith, Buckley, Olean, Haley and Collins, who testified concerning this annual inspection, has been examined above under the title of *the annual inspection,* and their testimony and the testimony of all the witnesses in the case makes no mention, and there is no testimony of any inspection or examination of the tank or of the hose connecting the tank with the injectors, or of the injectors at the annual inspection ending on October 18th, three days before the accident. At that annual inspection, as has been seen under the above title, there was no cleaning out of the tank around the tank valves, they did not put a strainer in the tank, and there was no cleaning out of the hose strainers, all of which on October 19th, the day after, Evans reported as so necessary to be done. Plaintiff has therefore established engine 957 on October 18, 1910, without any inspection or examination or test of its water supply for an indefinite time prior to the annual in-

spection on October 18th, with this dangerous defect in its water supply.

3. The defendant, by Evans' report in the engineers' work book (page 154), and his request therein that the tank be cleaned out around the tank valves and that a strainer should be put in the tank, and that the hose strainers should be cleaned out and the left steam ram of the injector packed, had actual notice of the defective water supply in this engine and had actual notice of the necessity of inspecting and repairing it. Evans was positive that there was some obstruction between the tank and the engine (page 154); some obstruction of the flow of the water from the tank to the feed pipe. The work book in which this report was made was introduced by the defendant and the defendant had Evans testify therefrom (page 154), thus bringing home to the defendant actual notice of this dangerous defect in the water supply of engine 957, and actual notice of the defendant's failure to inspect and examine and repair the water supply of this engine at its annual inspection ending on October 18th.

4. Plaintiff next has the failure of the defendant, after receiving actual notice of the necessity for the work reported by Evans on the water supply, to make the inspection, examination and repairs called for by Evans in the work book. The testimony of witnesses upon whom the defendant relied to prove the inspection and testing at Port Jervis has been examined above under the title of *THE PORT JERVIS INSPECTION* and it was there shown, and the court can see by reading the testimony of those witnesses, that the only work which was done on the water supply of engine 957 at Port Jervis was the packing of the left steam ram of the injector by Holt (page 165), and the taking apart and examining of the injectors by

Holt, and putting them together again, the trying of the injectors by Holt (page 165) and Hadrick (page 201) while the engine was quiet, which according to the testimony of Evans, as has been seen (pages 161, 162), and Buckley (page 132), was not a proper inspection and test of the injectors because owing to the wash and sway of the water in the tank actual operation on the road is necessary to determine if the injectors worked properly. As has been shown above under the title *THE PORT JERVIS INSPECTION*, the only witness in the entire case who made any mention or testified to anything concerning the tank was Hadrick, and the examination of his testimony (page 197, line 37, and page 198, lines 3 to 16) revealed him as testifying that he had a man clean the tank and that he saw Jost coming from the engine, but he didn't see him do the work; that he didn't know what work he actually did, and that all he knew was that Jost was to clean the tank, and that he didn't see him do the work. The plaintiff has proved beyond doubt by the absence of testimony from the case which the defendant would have introduced had the work been done, that defendant did not clean out the tank around the tank valves, did not put a strainer in the tank, and did not clean out the hose strainers after Evans reported the obstruction between the tank and the engine, and after Evans by his report in the work book communicated to the company actual notice of the necessity for this work and repair on the water supply. The defendant sent this engine out of Port Jervis on October 20th without doing this work (Evans, page 92), and the next day, October 21st, the crown sheet was blown down and Ruane was killed. The testimony of Evans and his report in the work book (page 154) by which he requested this work to be done, shows that it was not an inspection or test or repair which was only

possible in a laboratory, on a small scale and outside the practical conduct of affairs.

5. Plaintiff has established beyond doubt by the testimony of the witnesses examined in the foregoing part of this brief, and it is admitted by defendant, that the physical result of the accident was the falling of 10 or 12 square feet of the left front end of the crown sheet on engine 957 on October 21, 1910, and the separation of the fallen part of the crown sheet from about 166 crown bolts which support that part of it (Lester, page 98); that the water and steam from the boiler passing through the bolt holes in the fallen part of the crown sheet (Lester, page 114) to the fire box forced the fire and flame out of the fire box and into the cab (Morgan, page 16); that Ruane, who had been attending to his duties as fireman up to that time, disappeared when the explosion took place, and was found by Morgan three hours later in a hospital at Suffern (Morgan, pages 17 and 18), the defendant admitting that Ruane died as a result of these injuries. (Case page 18.)

6. The causes for the accident testified to by the defendant's experts: (1) low water below the level of the crown sheet (Lester, O'Malley, Smith, contradicted by Evans and Collins); (2) feeding water onto a white hot crown sheet (Collins, contradicted by Evans); and (3) pressure of steam on a burned crown sheet (Evans and Mansfield contrary to the opinions of Lester, O'Malley, Smith, Kuhn and Collins), *ALL OF WHICH OPINIONS ARE BASED UPON THE LOW WATER IN THE BOILER BELOW THE LEVEL OF THE CROWN SHEET*, either directly according to opinion number (1) causing the accident; or according to opinion number (2) permitting the crown sheet to become white hot from absence of water, or according to opinion number (3) permitting the crown sheet to become

burned and thereby weakened so that the pressure of the steam drives it down. All of which opinions as shown above under the *TITLE CAUSE OF ACCIDENT* are based upon the presence of the boilermakers' blue water line, which all of them testified comes from low water in the boiler below the level of the crown sheet. *THUS PLAINTIFF HAS AS THE CAUSE OF THE FALLING OF THE CROWN SHEET ANY ONE OF THE THREE CAUSES TESTIFED TO BY THE DEFENDANT'S EXPERTS, ALL BASED UPON LACK OF WATER IN THE BOILER, THE VERY CONDITION WHICH THE OBSTRUCTION BETWEEN THE TANK AND THE ENGINE DISCOVERED AND REPORTED BY EVANS AND WHICH THE DEFENDANT FAILED TO INSPECT FOR OR REMOVE AFTER ACTUAL NOTICE THEREOF, WOULD PRODUCE.*

SUMMARY ON FIRST AND SECOND GROUNDS OF APPEAL.

Plaintiff thus has in the case to justify the trial judge's refusal to direct a verdict for the defendant: (1) engine 957, which caused the death of Ruane, with a dangerous defective water supply on October 19, 1910, two days before the accident, and the day after the completion of the annual overhauling, inspection and repair of the engine, that obstructed the flow of water from the tank to the boiler and caused the breaking up of the injector; (2) defendant's failure to prove, at the annual inspection, overhauling and repair of this engine ending on October 18, 1910, any inspection or examination of the tank or the water supply from the tank to the boiler, which inspection or examination could readily have been made and which was not such a

test that could be made only outside the practical operation of a railroad; (3) in addition to defendant's failure to inspect at proper intervals, actual notice of this defective water supply and of the necessity for cleaning out the tank around the tank valves, putting a strainer in the tank, and cleaning out the hose strainers, communicated to the defendant by its employee, Evans, on the work book kept for that purpose, and under orders to write in that book all things that needed attention at the end of his trip; (4) defendant's failure, notwithstanding such actual notice, to clean out the tank around the tank valves, or to put a strainer in the tank, or to clean out the hose strainers; (5) the falling of part of the crown sheet, resulting in Ruane's death; and (6) the three causes of the falling of that part of the crown sheet testified to by the defendant's experts set out above; all of which opinions except that of Evans are based on the boilermakers' blue water line which comes from low water in the boiler below the level of the crown sheet, the very condition which would normally and naturally result from the obstruction between the tank and the boiler which the defendant failed to inspect for, and which the defendant failed to remove after actual notice thereof, and which made the defendant guilty of the specific negligence which would normally and naturally lead to the falling of the crown sheet by which Ruane was killed.

Upon the whole case therefore there is evidence which not only tends to establish, but does establish beyond doubt: (1) that the defendant did not exercise reasonable care and skill in making inspections and tests at proper intervals of the water supply of engine 957; and (2) that the defendant, after actual notice of the obstruction between the water supply and the boiler and the necessity of inspecting and making the repairs that Evans called for, failed to make that inspection and do

that work, and did not use such reasonable precautions as a man of ordinary prudence would use for the safety of himself and his workmen under the circumstances.

And furthermore, that by defendant's negligence to exercise such reasonable care and skill and failure to use such reasonable precautions, it failed to discover and neglected to remove after actual notice, the dangerous and defective water supply, the normal and natural result of which, according to Evans, is a stoppage of the flow of water from the tank to the boiler, which is the specific thing which would produce low water below the level of the crown sheet and produce the water line, upon the presence of which defendant's experts testify concerning the three causes of the accident.

The trial judge therefore was right in refusing to direct a verdict for the defendant and in submitting to the jury the question of defendant's liability, and this court should hold on the first two grounds of appeal that there was evidence of the defendant's negligence complained of in the declaration sufficient to justify the trial judge in submitting the question of defendant's negligence to the jury.

DEFENDANT'S NEGLIGENCE APPEARS AS A MATTER OF LAW BECAUSE OF DEFENDANT'S FAILURE TO INSPECT THE INNER SURFACE OF THE CROWN SHEET AFTER RECEIVING NOTICE OF THE OBSTRUCTION IN THE TANK.

By Evans' report in the work book the defendant was put on notice of the existence of an obstruction in the tank which prevented the flow of water to the boiler (Evans, page 154).

Low water in the boiler below the level of the

crown sheet is the cause of the "blue line" which marks a defective or burned crown sheet. (See "Cause of Accident—Testimony of Defendant's Experts.)

This blue line cannot be seen by an inspection of the fire box because it is on the inner or upper surface of the crown sheet. (Evans, page 156, lines 31-38; page 158, lines 12-18.)

Defendant by Evans' report was put upon notice of an obstruction in the tank which prevented the flow of water to the boiler and was thereby put upon notice as to possible defects in the crown sheet.

It was defendant's duty to inspect the inner surface of the crown sheet for indications of defects which would come from low water in the boiler.

The master is required when put upon notice as to the possible existence of defects to employ unusual and extraordinary tests. Stassett v. Taylor, 82 N. J. L., top of page 633 (Court of Errors and Appeals).

The defendant made no inspection of the inner surface of the crown sheet after being put on notice on October 19, 1910, by Evans' report in the work book as to the existence of possible defects therein. (See "Port Jervis Inspection.")

It appears as a matter of law therefore that defendant did not exercise the care and diligence required of it under Stassett v. Taylor, above, and that defendant was negligent.

II.

THIRD AND FOURTH GROUNDS OF APPEAL CONSIDERED.

THE EVIDENCE IS NOT IN SUCH CONDITION THAT THE TRIAL COURT WOULD HAVE BEEN JUSTIFIED IN DIRECTING A VERDICT FOR THE DEFENDANT AND REFUSING TO SUBMIT DEFENDANT'S LIABILITY TO THE JURY, ON THE GROUND THAT THE ACCIDENT WAS CAUSED BY THE NEGLIGENCE OF MORGAN, THE ENGINEER, OR THE NEGLIGENCE OF THE DECEDENT.

The third and fourth grounds of appeal which defendant urges as reasons why the trial judge's refusal to direct a verdict in favor of the defendant was error and why he erred in submitting the question of defendant's liability to the jury are:

> (3) Because the cause of the accident was negligence on the part of Morgan, the engineer, a fellow servant of plaintiff's intestate.
>
> (4) Because the negligence that caused the accident was that of plaintiff's intestate.
>
> (State of Case, page 1, Grounds of Appeal, page 308, Motion to direct verdict, pages 253, 254.)

These two grounds of appeal should be considered together. They formed the second and third reasons on which defendant moved for a direction of verdict in its favor. The fourth ground urged, to wit, that the accident was caused by the decedent's negligence is based on the same conten-

tion as the third ground, that the accident was caused by the negligence of the decedent's fellow servant, both of them being based upon defendant's claim that the low water in the boiler, which is fixed by defendant's experts as the cause of the accident, was occasioned by the neglect of Morgan and by the neglect of Ruane, who the defendant claims was under the same duty to watch the water in the boiler as Morgan was.

The cause of the falling of the crown sheet as shown in the preceding part of this brief under the heading *CAUSE OF THE ACCIDENT* is low water. The defendant cannot get away from the testimony of its experts Lester, Mansfield, O'Malley, Smith, Kuhn, Evans and Collins, that the crown sheet was blown down because of low water in the boiler. As shown heretofore all of their opinions, except Evans, were based upon the presence of the blue water line which is produced by low water in the boiler (Lester, p. 100; Mansfield, p. 117; O'Malley, bottom of p. 118, top of p. 119; Smith, p. 127; Kuhn, p. 137; Collins, p. 237; Evans testified he was not capable of discussing the blue mark, p. 158. Low water is therefore beyond question fixed by defendant's experts as the cause of the falling of the crown sheet.

DEFENDANT'S THEORY AND THE ANSWER THERETO.

Defendant's theory of the case is that this low water in the boiler which caused the falling of the crown sheet was occasioned by the negligence of Morgan and Ruane on the day of the accident, October 21, 1910.

THERE IS NO TESTIMONY THAT MORGAN OR RUANE LET THE WATER GET BELOW THE LEVEL OF THE CROWN SHEET.

There was no testimony given by any witness that Morgan was responsible for the accident, and that the accident actually occurred by his letting the water get low in the boiler below the level of the crown sheet on the day of the accident. The following shows how far the testimony goes on this point. Morgan testified that it was the engineer's duty to work the injector so that it supplied water to the boiler (page 19). Mansfield testified that on a locomotive engine the engineer has control of the water so as to determine whether it is to be kept above or below the level of the crown sheet (page 117). Smith testified that the engineer has control of the water on the engine (page 128). This is as far as any of the testimony in the case goes (and is all the testimony) upon the point of the low water actually being occasioned by Morgan or Ruane on the day of the accident. *NONE OF THE DEFENDANT'S EXPERTS TESTIFIED THAT MORGAN OR RUANE DID ACTUALLY LET THE WATER IN THE BOILER GET BELOW THE LEVEL OF THE CROWN SHEET ON THE DAY OF THE ACCIDENT.*

DEFENDANT ASKS THE COURT TO INFER CONTRIBUTORY NEGLIGENCE. THIS IS A JURY QUESTION.

The defendant asks the court to infer from the evidence that Morgan did let the water in the boiler get below the level of the crown sheet on the day of the accident. The defendant will ask the court to make this inference because defendant will say that the water must have gotten below the crown sheet on the day of the accident while the engine was in Morgan's charge, because the facts in the

case show that it could not have happened prior to the day of the accident, and because the evidence demonstrates the crown sheet could not have been weakened by burning prior to the day of the accident. The defendant will probably ask the court to base that inference on the following: (1) that the engine was thoroughly overhauled at the annual inspection ending on October 18th, and the crown sheet in perfect condition at that time; (2) because Evans and Rose both testified that on October 19th and October 20th, the two trips made by this engine between the time it came out of the shops and the day of the accident, they did not at any time have low water in the boiler or permit the crown sheet to be burned; and (3) because of the evidence of defendant's witnesses who testified that prior to the day of the accident there were no indications of leaks or cracks or blisters, bulging or bagginess on the crown sheet, some one or all of which conditions must have been present and visible had there been according to plaintiff's contention any prior burning of the crown sheet, and that these facts amount to a demonstration that the cause of the accident was the burning of the crown sheet while the engine was in charge of Engineer Morgan on October 21st.

An examination of this testimony upon which the defendant will probably attempt to base this demonstration will convince the court that no such demonstration is possible.

1. THERE WAS NO PROOF THAT THE CROWN SHEET WAS IN PERFECT CONDITION WHEN THE ENGINE WAS PUT IN SERVICE ON OCTOBER 19TH.

The first point upon which defendant seeks to demonstrate to the court that the low water in the boiler was caused by Morgan's negligence or that

of Ruane on October 21st, the day of the accident, is, because the crown sheet could not have been burned prior thereto for the reason that the engine had been completely overhauled and the boiler inspected when it was put into service on October 19th, and that the crown sheet was in perfect condition. The witnesses who testified to the annual inspection were Smith, Buckley, Olean, Haley and Collins. As has been shown by the examination of their testimony heretofore (under title ANNUAL inspection) Smith did not make the inspection and knew nothing about it personally. Buckley did not make the inspection, but simply signed a report that Olean did the work. Olean inspected the engine so far as the steam gauge, water glass cocks and the pop valves are concerned and did nothing else. Haley simply witnessed the pressure on the boiler when the hydrostatic test was made, and the only witness who knew anything about the annual inspection from personal knowledge was Collins, all of which is shown above under the heading *ANNUAL INSPECTION*. Collins testified that he removed about twenty-five stay bolts and 120 or 130 flues, and that he examined the crown sheet and found it in first-class condition (p. 235). From this testimony of Collins that the crown sheet was in perfect condition the defendant asks the court to infer that if there had been any prior burning of the crown sheet Collins would have noticed the same.

THE ANSWER. The answer to this contention of the defendant is that the crown sheet could have been burned prior to and at the time of Collins' examination thereof, and have the blue mark thereon, and Collins according to the inspection made by him would have not been able to see it. Evans testified (pages 156, 158) that the blue mark referred to is what is left when an engine has been left bare of water, and that it would not show on

the outside (page 156, line 32-33), and that in speaking of the appearance of the blue mark upon the crown sheet is meant the inside of the crown sheet between the inner and outer shell, and that engineers never see the crown sheet (p. 158). It is impossible to see it; that the inside shell next to the water cannot be seen except in shop inspections (p. 158, lines 12 to 17). Collins did not see the inside shell where the blue mark was at the annual inspection. The bolts which hold up the crown sheet run from the top of the crown sheet, up to their support in the boiler. The heads of the bolts and the bottom of the crown sheet only are visible. In order to get at the top of the crown sheet over which the water flows it would be necessary to strip the boiler naked. Collins testified (page 243, lines 1 to 15) he did not strip the boiler naked, that he only stripped the firebox naked, and explains definitely thereby his testimony given on page 234, by which he meant as he says on page 243, that he only stripped the firebox naked; and speaking of the firebox as the thing which he examined thoroughly inside and out. Therefore at the end of the annual inspection on October 18th, three days before the accident, the crown sheet was not proven to be in a perfect condition. On the contrary there is no proof that the crown sheet was not burned on that day or prior thereto, and this absence of proof when taken in consideration with the other evidence considered in the first section of this brief, that there was that obstruction in the tank which would cause low water in the boiler and did obstruct the flow of water to the boiler on October 19th, and that low water is the cause of a burned crown sheet and of the dropping of this crown sheet, the inference which the defendant asks or will ask this court to draw, that the burning of the crown sheet and its consequent falling could not have happened by defendant's negligence prior to

the accident, because on October 18th it was in perfect condition, falls to the ground.

THE FURTHER AND COMPLETE ANSWER to this contention by defendant is, that between the time of the completion of the annual inspection on October 18, 1910, during which time Collins' alleged examination of the crown sheet was made, and the time of the first run of the engine in charge of Engineer Evans, on October 19, 1910, engine 957 had to be put into service by building a fire in the firebox, placing water in the boiler and supervising the amount of water kept in the boiler; the engine had to be run from the repair shop to the engine house, and the engine was sent out on a test run prior to the first run in charge of Evans, prior to October 19, 1910. Furthermore, the fire and water in the boiler had to be attended to during the night of October 18, 1910, and a sufficient supply of water kept in the boiler to prevent the burning of the crown sheet.

> "The general custom is when we go to the engine for a run to find the water and steam and coal and everything all prepared. Usually it is all prepared." (Page 22, lines 38-40; page 23, lines 1-7.)

> "I suppose she had been out on a test run the day before and being short of engines had turned her out on my run." (Page 79, lines 14-17.)

Defendant made no attempt to produce the employees who had charge of the fire, water and steam in engine 957, between the completion of the inspection on October 18, and the first run, in charge of Evans, on October 19, 1910, and made no attempt to produce the employees who had charge of the engine on its test run with the obstruction in the

tank and defect of water supply testified to by Evans, as set out in the first section of this brief.

Defendant's endeavor to prove that the crown sheet was in perfect condition when the engine was put into service on October 19, 1910, falls to the ground for the matters above set forth.

(2) MORGAN AS WELL AS ROSE AND EVANS SAYS THAT ON OCTOBER 21ST HE DID NOT BURN HIS CROWN SHEET.

The next point on which the defendant will probably ask the court to say that the crown sheet was burned by low water in the boiler by reason of Morgan's negligence on October 21st, and that it could not have been burned prior thereto is, that Evans and Rose, who used the engine on October 19th and October 20th, both testified that on neither date did they have low water in the boiler or permit the crown sheet to be burned.

Evans testified that on the trip to Port Jervis on October 19th he did not at any time have low water in the boiler or on the crown sheet, and that he did not at any time let the water get below the level of the crown sheet (Evans, pp. 84, 86).

Rose testified (page 142) that on the trip to Port Jervis on October 19th the engine was not at any time low in water, and that the crown sheet was not at any time burned on that day. The credibility to be attached to Rose's testimony was a question for the jury. Rose testified that he recollected engine 957 and when cross-examined put the date of the accident as October 26th. If the rest of his testimony is as accurate as his recollection of the date of the accident, no credibility could be attached to it at all.

THE ANSWER. The answer, so far as directing a verdict by the trial court is concerned, is found

in Morgan's testimony, in which he also says, that on the day of the accident he did not have low water at any time, and that his crown sheet was not burned by him on that day, thus presenting a jury question. Morgan testified that he was an engineer of thirty years' experience (page 13) ; that he had not driven this particular engine for sixteen months (p. 14) ; that there was sufficient water in the boiler when he started and that he knew that by testing the water glasses and the gauge cocks (page 14) ; that because on the morning of the accident there was a special order that there was no water at Harriman, where it was usual to take water on that train, that he took great caution to have water because he expected to make a long run to Greycourt on account of no water at Harriman, and that Greycourt is the third station west of Harriman (page 15). That on his way up to Suffern he tested the condition of the water in the boiler from time to time; that for that purpose they have three gauge cocks on the boiler and a water glass, and that the gauge showed that the water was working properly (pages 18 and 19) ; that there was no interruption of the flow of the water from the boiler to the engine on the day of the accident prior to the accident, and that the water was flowing freely and the injectors working freely at all times up to the time of the accident (page 19). That he tried his gauge cocks at Allendale, which is four or five miles away east of the scene of the accident, and that there he tested his water gauges to see that the flow of the water was all right. It is thus seen that Morgan has testified that he had plenty of water in his boiler and knew this by making the proper tests, and that there was a proper flow of water from the tank to the boiler at all times up to the time of the accident. Morgan thereby flatly denies that he was the cause of the low water in the boiler and presents a question for the jury to decide as to whether he is to be believed, or

whether Evans and Rose are to be believed, or whether the crown sheet fell by reason of the pressure of the steam on its weakened condition, owing to a burning at a time prior to the commencement of the annual inspection on October 12th, when the engine was sent to the shops.

Furthermore, Morgan tested the water after the accident and found water in his tank (page 23); and Smith (page 126) testified that, after the accident and after the holes in the crown sheet had been made by the pulling out of the bolts, there was still water left in the boiler.

THE FURTHER ANSWER is that on the night of October 19, 1910, at the end of Evans' trip to Port Jervis, and on the night of October 20, 1910, when Evans arrived in Jersey City again with engine 957 Evans and Rose left the engine at the turntable with fire in the fire box, and steam in the boiler, to be taken in charge by other employees. This is the custom testified to by Morgan and not contradicted. (Morgan, page 22, lines 20-28.)

On the morning of October 20, 1910, at Port Jervis and October 21, 1910, at Jersey City, Evans and Morgan, respectively, found the engine ready for them with fire in the fire box. This was according to the custom testified to by Morgan, and not contradicted. (Morgan, page 30, lines 1-14.)

Defendant made no attempt to produce the witnesses who had charge of the engine during these times.

Whether or not there was water on the crown sheet at these times does not appear.

(3) LEAKS, CRACKS OR BLISTERS, BULGING OR BAGGINESS WOULD NOT HAVE BEEN PRESENT OR COULD NOT HAVE BEEN SEEN HAD THERE BEEN ANY PRIOR BURNING OF THE CROWN SHEET.

The next point upon which the defendant will ask the Court to infer that the crown sheet was burned by low water in the boiler caused by Morgan is, that the evidence of numerous inspectors at Port Jervis and Jersey City show that there were no indications whatever of a prior over-heating, that is, that there was no leak, no crack or blister, no bulging or bagginess, some one or all of which conditions must have been present and must have been visible if there had been any such prior burning of the crown sheet.

The first question to be ascertained therefore is, who were the numerous inspectors at Port Jervis and Jersey City who testified to these indications of a prior burning? The Port Jervis witnesses for the defendant are Holt, Barbour, Riggs, Schumacher, Mitchell, Wilman, Kirchner, Bradley, Simpson, Hadrick, Haley and Gavin. An examination of the testimony of these witnesses in the preceding part of this brief under the title *PORT JERVIS INSPECTION* showed that none of them examined the firebox or the crown sheet. Holt did some work on the injectors; Barbour put a glass in the window of the cab; Riggs put some oil waste in the box part of the engine works; Schumacher was supposed to inspect the engine for leaks, but his testimony, as the court will recall, was largely an exposition of what his duties were, and his inspection was only for leaks on the outside, and that he didn't try to get inside of the firebox and see in there, and that when he speaks of leaks he means leaks where the water is dropping down on the

ground, a leak that could be seen by walking around the engine or getting under the truck and looking around (page 177); Mitchell cleaned the engineer brake valve; Wilman repaired a cylinder cock; Kirchner cleaned out the sand pipes; Bradley was the round-house foreman's clerk and testified to work slips and the manner of keeping records, and nothing further; Simpson was clerk to the boilermaker foreman, and his testimony was limited to the manner of keeping records in the round-house. Hadrick was the round-house foreman, and the limit of his testimony was that he tried the injectors; Gavin testified to the death of Collins, in order that his testimony might be read. It is thus seen that none of the foregoing witnesses examined the crown sheet at Port Jervis. Their testimony is examined in full in the preceding part of this brief under the title *PORT JERVIS INSPECTION.*

LEAKS. The only witnesses who testified concerning the absence of leaks in the firebox were Evans, Rose, Licracle and the plaintiff's witness, Morgan.

Evans testified (page 88) that on the morning of October 19th *HE DID NOT SEE* a leak in the firebox, either outside or inside, and (pages 93 and 94) on the trip of October 20th he didn't see a leak anywhere. It is very significant that Evans did not testify that there was no leak on both these days, but does testify that he did not see any leak; there might have been a leak and he not have seen it, as he says himself the fireman would have seen it and notified me of it (page 94).

Rose testified (page 143) that there was no leak in the crown sheet or in the firebox when they left Port Jervis on October 20th.

Licracle testifies (page 152) that he looked at the firebox on the morning of the accident, and there was no leak there.

Morgan testified (page 38) that he did not think there was a leak on the morning of the accident.

Schumacher testified (page 175, lines 14-15) that he did not look at anything on the inside of the engine. "I don't try to get inside the firebox and see in there, it is only outside, if there is any leak the water runs down" (page 175, lines 33 to 38). "When I speak of leaks I mean leaks where the water is dropping on the ground" (page 177, lines 7-9).

The testimony on which the defendant would have the court infer that there could have been no burning of the crown sheet prior to the accident because of the above testimony of the absence of a leak, which would have been present and visible had there been any burning of the crown sheet, is the following: Morgan (page 37): If the water is low down the crown sheet will get hot, and if the water is then let back it will start the engine leaking; the crown bolts will start leaking. Lester (page 104): A very slight over-heating of the surface will loosen the threads of the bolts so that the sheet will *almost* invariably leak. Mansfield (pages 117, 118): If there is lack of water in the boiler it would make the crown sheet weaker if it becomes over-heated, and if there had been any weakening it would result in leaking around the bolts, Smith (page 131): The sheet might become weakened enough to cause the bolts to leak. And Lester (pages 112, 113): That the leaks, as an effect of the crown sheet having been burned or overheated, is a condition that can be discovered by ordinary observation by an experienced engineer or fireman.

THE ANSWER. This is flatly contradicted by Smith (page 131): *AN ENGINEER WOULD*

NOT NOTICE THE LEAK BECAUSE THE DRY STEAM COMES OUT AND BURNS OFF, until the sheet gets so over-heated it collapses over the heads of the bolts. After it gets over-heated it gives way; after the heat required to drive it over the bolts, it drives down, but it is leaking. But the steam takes it up, the steam blows off, the steam is dry, and that takes off the leak.

Therefore it makes no material difference whether or not a leak would have been present in the firebox or the crown sheet, if according to the plaintiff's theory the crown sheet had been burned at a prior time, because the leak, if there, could not have been discovered according to Smith. Therefore the contradiction of the testimony of Lester and Mansfield with that of Smith presents another jury question.

THE FURTHER ANSWER IS that the testimony is not that the leaks *MUST* be present but that they *MIGHT* be present had there been an overheating of the crown sheet.

CRACK OR BLISTER. The next indication of a prior burning of the crown sheet, which the defendant insists would have been present or visible, is a crack or blister. Morgan testified (page 38): That on the morning of the accident when he inspected the firebox before leaving there was no crack or blister on the crown sheet: and Rose testified (page 143) that there was no crack or blister when they left Port Jervis on October 20th.

The testimony on which the defendant would have the court believe that had there been a prior burning of the crown sheet it would have been visible, because a crack or blister would have resulted, is the following: Morgan (p. 38): If the water was drawn off and then left back again it would

leave a blister and crack. Lester (page 103): It would probably result in a rupture of the plate, tear the plate possibly; putting cold water on the hot plate would be like pouring hot water on the top of a stove.

THE ANSWER. This is contradicted by Lester himself, who from the testimony quoted (page 103) it is seen did not testify that a rupture of the plate *MUST* result, but that it *PROBABLY* would result; and by Evans, who testified (page 157): you can take a crown sheet and bare it and the modern crown sheet heated red hot and turn the water on. Steel under those conditions will be softened. The crown sheet is steel tested to a tensile strength of 50 to 75 pounds per square inch; and by the falling of the crown sheet itself.

THE COMPLETE ANSWER. The testimony of the defendant above quoted that a rupture, crack or blister would result, could not be more flatly contradicted than by what actually happened to the crown sheet when the accident did occur on October 21st. Lester testified (page 114), that the crown sheet did not rupture at all; it did not break anywhere. The water and steam went through the bolt holes and not through any rent in the crown sheet (page 114, lines 3-17). The contention of the plaintiff therefore that a crack or blister or rupture of the plate would have been present had there been a prior burning, is flatly contradicted, and presents another jury question.

BULGING OR BAGGINESS. The next indication of a prior burning which the defendant insists would have been present and visible had there been a prior burning is bulging or bagginess, which is the same thing. Lester (page 111): This bagginess which has been talked about is what also might be called a sort of bulging, a dropping down

slightly between the bolts. Defendant again rests upon the absence of bulging or bagginess. Morgan (pages 30, 31): I do not think I saw any wavy condition in the crown sheet; and Rose (page 144) when asked whether or not there was any bulging or bagginess on the sheet on October 20th when they left Port Jervis, answered: "The crown sheet was in first-class condition when we left Port Jervis."

The testimony upon which the defendant will insist that had there been a prior burning of the crown sheet this bagginess or bulging must have been present and visible is the testimony of Lester (page 110, lines 12-21) *"there might have been some bag."*

THE ANSWER. It is thus seen by the testimony (lines 12 to 21) that the bagging or bulging simply *MIGHT* have been present had there been a prior burning of the crown sheet, and not, as the defendant will claim, *MUST* necessarily have been present.

SUMMARY ON THIRD AND FOURTH GROUNDS OF APPEAL.

The defendant's contention is, that the low water in the boiler resulting in the overheating of the crown sheet and the explosion was caused by the negligence of Morgan, the decedent's fellow-employee, or by the decedent's negligence.

The defendant sought to establish this contributory negligence, by demonstrating that it could not have been the defendant's negligence, by tracing engine 957 from the annual inspection ending on October 18, 1910, to the time Morgan took charge of the engine on the morning of October 21, 1910, the day of the accident, and by showing during that time:—

1. That the crown sheet was in perfect condition when the engine was put into service on October 19, 1910.

2. That Evans and Rose, who ran the engine on October 19th and 20th, 1910, both testified that on neither day did the water get below the level of the crown sheet, nor was the crown sheet burned.

3. That the crown sheet showed no

(a) leaks,
(b) cracks or blisters,
(c) bulging or bagginess;

some or all of which would have been present or visible had there been a prior burning of the crown sheet, and low water in the boiler.

All of the above matters, which defendant claims are demonstrated, are either denied or contradicted by its own witnesses, or by what actually happened at the time of the explosion, and are all in dispute.

1. There was no proof that the crown sheet was in perfect condition when the engine was put into service on October 19, 1910, because

(a) the inspection made by Collins, ending on October 18, 1910, did not reveal the inside shell of the crown sheet, because he did not strip the boiler naked;

(b) defendant failed to produce the witnesses who had charge of the engine between the annual inspection of the morning of October 19, 1910, when it was put into service, and when the fires were built, and while on its test run, and on the night of October 18, 1910.

2. Morgan, as well as Evans and Rose, says that he did not burn the crown sheet.

(a) There is no testimony in the case that Morgan, on October 21, 1910, let the water in the boiler get below the level of the crown sheet.

(b) Morgan denies that he burned the crown sheet or had low water in the boiler on the day of the explosion, and says that he observed all the necessary precautions to have water in the boiler.

(c) There was water in the tank when Morgan tested it after the explosion.

(d) There is no proof that the defendant kept water in the boiler over the crown sheet during the night of October 19, 1910, or the night of October 20, 1910, while the engine was laid up at the end of the runs, in Port Jervis and Jersey City, respectively, at either of which times the crown sheet might have been burned.

3. That leaks, cracks or blisters, bulging or bagginess would have been present or visible had there been a prior burning is denied and contradicted.

(a) The leaks, if present, would not have been visible because the dry steam comes out and burns them off.

The testimony is that they might be present, and not they must be present, had there been a prior overheating.

(b) Cracks or blisters. The testimony is, that they might be present, but not that they must be present.

Evans testified that the crown sheet even if white hot, and if water were poured thereon, would not crack, and finally, when the accident happened, there was no crack in the crown sheet, but the water went through the bolt holes.

(c) Bulging or bagginess. The testimony is, that bulging or bagginess might have been present,

but not that it must be present, had there been a prior burning or overheating of the crown sheet.

The above conclusions all appear from the testimony quoted under the third and fourth grounds of appeal, above.

On this appeal this court cannot say as a matter of law on the above testimony that the explosion was due to Morgan's or Ruane's contributory negligence, or that they caused the low water in the boiler.

This is especially so when the above testimony is taken in connection with that examined in the first section of this brief.

There the plaintiff showed:—

1. Engine 957 was put into service on October 19, 1910, with a dangerous and defective water supply; with the obstruction in the tank, testified to by Evans, the normal and natural result of which would be low water in the boiler below the level of the crown sheet, the identical cause of the explosion testified to by all of defendant's experts.

2. Defendant's failure to inspect the tank or water supply at the annual inspection ending on October 18, 1910.

3. Actual notice given to defendant by Evans' report on the work book that there was an obstruction in the tank which prevented the proper flow of water from the tank to the boiler, the identical cause of the explosion testified to by defendant's experts, and Evans' demand that defendant clean up the tank around the tank valves, put a strainer in the tank, and clean out the hose strainers.

4. Defendant's neglect at Port Jervis, on Octo-

ber 19th and 20th, 1910, to clean out the tank around the tank valves, to put a strainer in the tank, and to clean out the hose strainers.

5. Falling of part of the crown sheet, resulting in Ruane's death.

6. The cause of the falling of the crown sheet fixed by defendant's experts as low water in the boiler below the level of the crown sheet, and the consequent burning and blowing out of the crown sheet from the very condition which would normally and naturally result from the obstruction in the tank testified to by Evans, and which the defendant neglected to inspect for or remove, or repair, after actual notice.

On the authority of the following cases, the trial judge was right in refusing to direct a verdict for the defendant on the ground that the evidence did not show that the explosion was caused by the negligence of Morgan and Ruane because:

1. The case presents a fairly debatable question whether the plaintiff's decedent's neglect or Morgan's neglect caused the low water in the boiler, or whether it was caused by the defendant's neglect.

2. Because the facts are controverted and not manifest, and remain in substantial dispute.

3. Because the contributory negligence of plaintiff's decedent, or Morgan, does not appear clearly as a conclusion of fact or by necessary exclusive inference.

4. Because the evidence is plainly in such shape that different minds might honestly draw from the testimony different conclusions as to who caused the explosion.

All of which made proper the submission of the question of contributory negligence to the jury for decision.

THE LAW ON DIRECTION OF VERDICT FOR CONTRIBUTORY NEGLIGENCE.

"It is settled that if the case presents a fairly debatable question whether the plaintiff's negligent conduct contributed to the injury, the solution of that question is for the jury." P. R. R. Co. v. Righter, 42 N. J. L. 180, citing Moore v. Central R. R. Co., 24 N. J. L. 824; Aycrigg v. N. Y. & E. R. R. Co., 30 N. J. L. 460; D., L. & W. R. R. Co. v. Shelton, 55 N. J. L. 343.

"If the facts be controverted or not manifest, it is the duty of the judge to submit them to the jury under proper instructions, thus leaving to that branch of the court the exercise of its peculiar function and affording to the parties the right of trial by jury, which the Constitution has declared shall remain inviolate." Central R. R. Co. v. Moore, 24 N. J. L. 824; Aycrigg v. N. Y. & E. R. R. Co., 30 N. J. L. 460.

"If the real facts have not been established by the evidence but remain in substantial dispute, the trial judge must submit them and the inference to be drawn from those which the jury find established, to the determination of the jury." Moebus v. Becker, 17 Vr. 41; Newark Passenger Railway Co. v. Block, 55 N. J. L. 605; Traction Co. v. Scott, 58 N. J. L. 682.

"On a motion to non suit in order to withdraw the case from the jury the contributory negligence must appear clearly as a conclusion

of fact or by necessary conclusive inference, and from the evidence adduced by the plaintiff." P. R. R. Co. v. Middleton, 57 N. J. L. at 158.

"If different minds might honestly draw from the testimony different conclusions as to the cause of the accident, the settled legal rule is that such material question remaining in substantial dispute belongs to the province of the jury." Ferguson v. Central R. R. Co., 71 N. J. L. 647 at 651, Court of Errors and Appeals.

III.

FIFTH GROUND OF APPEAL CONSIDERED.

THE DEFECT IN THE CROWN SHEET, IF THERE WAS ANY BY REASON OF A PRIOR BURNING, WAS NOT A LATENT DEFECT THAT COULD NOT BE ASCERTAINED BY THE INSPECTION THE DEFENDANT WAS LEGALLY OBLIGED TO MAKE.

The fifth ground of appeal urged by the defendant why the trial judge erred in refusing to direct a verdict in favor of the defendant, and in submitting to the jury the question of defendant's liability is:

> "Because the defect in the boiler, if there was any, was latent and of such a character that it could not be ascertained by such inspection as the defendant was legally bound to make." (State of Case, pages 1, 2, 254, 308.)

The inspection which the defendant was legally bound to make is laid down in Ruane v. Erie Railroad Co., 83 N. J. L. 423, affirmed 90 Atl. 1135, in the following language:

> "The duty of the employer is to exercise reasonable care and skill in making inspections and tests at proper intervals. This duty is satisfied if the master uses such reasonable precautions as a man of ordinary prudence would use for the safety of himself and his workmen under the curcumstances. We think this duty is satisfied if the master exercises the same care that is ordinarily exercised, and that one engaged in practical operations is not bound to make either the inspections or the

tests which may be possible in a laboratory or upon a small scale and outside the practical conduct of affairs."

The defendant's theory (as stated on page 15 of its brief in the Supreme Court) is, that had there been any defect in the boiler, arising from a burned or overheated crown sheet, the defect would be latent because the blue mark on the crown sheet which would indicate such overheating would be on the upper side thereof.

The testimony upon which defendant will probably say that the defect, if any, existed, was a latent one is that of Evans. "The blue marks are what is left when an engine has been left bare of water; that would not show on the outside. You probably were speaking about the inside, between the inner and outer shell, the line mark of the water where they found it on examining the engine" (page 156, lines 31-38). "We never see the crown sheet. That is impossible to see it; only the inside shell. You see the outside shell next to the fire. The inside shell next to the water you never see. Those are things that come in shop inspections. We never see them" (page 158, lines 12-18).

THE LAW ON LATENT DEFECTS.

"When a servant receives an injury by reason of a latent defect in the appliances with which he is employed, to establish the liability of the master the evidence must justify the inference that the master either knew, or by the exercise of the care and diligence required of him might have known of the defect." Electric Co. v. Kelly, 57 N. J. L. 100.

The duty required of defendant under Ruane v. Erie R. R. Co., cited above, was to exercise reason-

able care and skill in making inspections and tests at proper intervals of the tank and boiler of Engine 957, and in exercising that duty to use such reasonable precautions as a man of ordinary precedence would use for the safety of himself and his workmen under the circumstances of this case.

THE DEFENDANT BY THE EXERCISE OF THE CARE AND SKILL REQUIRED OF IT WOULD HAVE KNOWN OF THE DEFECT IN THE BOILER IF THERE WAS ANY.

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(1) THE DEFECT IN THE CROWN SHEET, IF THERE WAS ANY, WAS NOT A LATENT ONE BECAUSE DEFENDANT AT THE ANNUAL INSPECTION ENDING ON OCTOBER 18, 1910, DID NOT INSPECT THE INNER SURFACE OF THE CROWN SHEET WHICH INSPECTION WOULD HAVE MADE KNOWN TO DEFENDANT THE DEFECT.

THE BLUE WATER LINE WHICH SHOWS A BURNED CROWN SHEET APPEARS ON THE INNER SURFACE OF THE CROWN SHEET.

The water line shows where the water was at the time the accident happened, that is the height of the water, the color of the iron changes when the water gets below the level of the crown sheet and uncovers the iron so that the iron is exposed to the heat with no water to protect it (Lester, page 100). At the line of demarcation where the water leaves off and the steam begins it has this fatal blue color (page 101, lines 1-5).

The blue marks do not show on the outside. The line mark of the water shows on the inner surface

of the crown sheet (Evans, page 156, lines 31-38; page 158, lines 12-18 quoted above). The inner surface is seen only in shop inspections (page 158, lines 12-18).

NO INSPECTION OF THE INNER SURFACE OF THE CROWN SHEET WAS MADE AT THE ANNUAL INSPECTION.

There is no testimony anywhere in the case that the inner or upper side of the crown sheet was examined at the annual inspection ending on October 18, 1910.

The testimony of Smith, Buckley, Olean, Haley and Collins, the witnesses who testified concerning the annual inspection, was analyzed under title "Annual Inspection" in the first part of this brief. It was there shown that Smith, Buckley, Olean and Haley testified to nothing about the crown sheet.

Collins was the witness who actually made what inspection was made. He testified that he did not strip the boiler naked. That he only stripped the fire box naked (page 243, lines 7-14). In the light of Evans' testimony that the "blue line" appears on the inner surface of the crown sheet it is seen that he did not inspect or examine its inner surface. That in order for him to see the inner surface of the crown sheet it would be necessary to tear the boiler apart and strip it naked entirely. This he did not do (page 243, lines 5 and 6).

Collins does not testify anywhere in the case that he examined the inner or upper surface of the crown sheet.

THE INSPECTION OF THE INNER SURFACE OF THE CROWN SHEET WAS A REASONABLE PRECAUTION IN THE PRACTICAL OPERATION OF A RAILROAD.

There is no testimony in the case that an inspection of the inner surface of the crown sheet would be impracticable in the practical operation of a railroad. Or that it would be possible only in a laboratory or on a small scale, or outside the practical conduct of affairs.

That it is an inspection possible in the practical operation of a railroad is shown by Evans' testimony that the examination of the inner surface of the crown sheet comes in shop inspections (page 158, lines 16 and 17).

THE INSPECTION OF THE INNER SURFACE OF THE CROWN SHEET AT THE ANNUAL INSPECTION WOULD HAVE BEEN AT A PROPER INTERVAL.

Engine 957 was in the shops for its annual overhauling, inspection and repair (Collins, page 238; Smith, page 129, lines 37-40; page 130, lines 1-3; Haley, page 226, lines 19-29).

The defendant did not attempt to prove any inspection prior to the annual inspection.

An inspection once a year is manifestly a reasonable precaution.

LOW WATER FIXED BY DEFENDANT'S EXPERTS AS THE CAUSE OF THE BLOWING DOWN OF THE CROWN SHEET BASED ON THE BLUE WATER LINE.

The defendant's experts fix low water in the boiler below the level of the crown sheet as the cause of the blowing down of the crown sheet (see Title, Cause of Accident) and base their opinions on the "blue line."

THE DEFECT IN THE CROWN SHEET WAS NOT A LATENT ONE BECAUSE IF DEFEND-

ANT HAD EXERCISED THE CARE AND DILIGENCE REQUIRED OF IT, DEFENDANT WOULD HAVE KNOWN OF THE DEFECT.

Defendant by the exercise of the care and diligence required of it might have known of the defect (Electric Co. v. Kelly, 57 N. J. L. 100).

The defect in the boiler, if any there was, was not a latent one, because by inspecting the inner surface of the crown sheet at the annual inspection defendant would have known of the defect. This inspection was possible in the practical operation of a railroad and a proper interval for it. In the light of the testimony of defendant's experts who base their opinions on the "blue water line," the presence of this line would denote a burned crown sheet.

If the defendant had exercised the care and diligence required of it under Ruane v. Erie R. R. Co., 83 N. J. L. 423, it would have known of the defect had there been any.

(2) THE DEFECT IN THE CROWN SHEET, IF ANY EXISTED, WAS NOT A LATENT ONE, BECAUSE THE DEFENDANT, AT THE ANNUAL INSPECTION ENDING ON OCTOBER 18, 1910, DID NOT INSPECT THE TANK, WHICH INSPECTION WOULD HAVE MADE KNOWN TO DEFENDANT THE OBSTRUCTION IN THE TANK AND THE NECESSITY FOR INSPECTING THE INNER SIDE OF THE CROWN SHEET.

NO INSPECTION OF THE TANK ON ENGINE 957 WAS MADE AT THE ANNUAL INSPECTION OF OCTOBER 18, 1910.

This was shown by the analysis of the testimony

of Smith, Buckley, Olean, Haley and Collins in the first part of this brief under title "Annual Inspection." It was there shown that Collins was the only witness who testified to anything of value about the annual inspection and that he made what inspection was made. Collins made no inspection of the tank, the hose strainers or the water supply. An examination of Collins' testimony will not reveal an inspection of the tank or water supply of engine 957. There is no testimony of any inspection of the tank anywhere in the case.

THERE WAS AN OBSTRUCTION IN THE TANK WHICH PREVENTED THE FLOW OF WATER TO THE BOILER.

On October 19, 1910, when engine 957 was on its first trip after its annual overhauling and repair, and in charge of Engineer Evans, the injectors refused to work properly (page 79). That the trouble was in the tank, some obstruction of the flow of water from the tank to the feed pipe (bottom of page 79). The suction that is constantly in operation when the injector is at work drove those particles that got in the tank down in the strainer (page 161, lines 36-40). The water failed to go to the boiler because of some obstruction in the tank (page 82, lines 37-40; page 83, lines 1 and 2).

THE INSPECTION OF THE TANK AT THE ANNUAL INSPECTION ENDING ON OCTOBER 18, 1910, WAS A REASONABLE PRECAUTION IN THE PRACTICAL OPERATION OF A RAILROAD.

There is no testimony in the case that an inspection of the tank would be possible only in a laboratory or upon a small scale, and outside the practical conduct of affairs.

That it was an inspection possible in the practical

operation of defendant's railroad is shown by Evans' demand in the work book (page 154) that the tank be cleaned out and a strainer put in the tank.

THE INSPECTION OF THE TANK AT THE ANNUAL INSPECTION WOULD HAVE BEEN AT A PROPER INTERVAL.

Engine 957 was in the shops for its annual inspection, overhauling and repair (Collins, page 238; Smith, page 129, lines 37-40; page 130, lines 1-3; Haley, page 226, lines 19-29).

The defendant did not attempt to prove any inspection prior to the annual inspection.

LOW WATER FIXED BY DEFENDANT'S EXPERTS AS THE CAUSE OF THE BLOWING DOWN OF THE CROWN SHEET, BASED ON THE BLUE LINE ON THE CROWN SHEET.

The defendant's experts fix low water in the boiler below the level of the crown sheet as the cause of the blowing down of the crown sheet. (See first part of this brief, title "The Cause of the Accident.")

INSPECTION OF THE TANK WOULD HAVE REVEALED THE OBSTRUCTION IN THE TANK TESTIFIED TO BY EVANS, THE NORMAL AND NATURAL RESULT OF WHICH WOULD BE LOW WATER IN THE BOILER, THE CAUSE OF THE ACCIDENT AND WOULD HAVE MADE KNOWN TO DEFENDANT THE NECESSITY FOR INSPECTING THE INNER SURFACE OF THE CROWN SHEET.

For an indefinite time prior to the discovery of the obstruction in the tank by Evans, the obstruction was in the tank.

Evans' experience with this obstruction was that it prevented the flow of water from the tank to the boiler. (See Evans' testimony quoted above.)

This lack of water in the boiler is the very condition which defendant's experts say caused the blowing down of the crown sheet.

If the defendant had inspected the tank of engine 957 at the annual inspection ending October 18, 1910, defendant would have discovered the obstruction in the tank.

To men reasonably skilled in the operation and inspection of steam locomotive engines knowing the effect of low water in the boiler on the crown sheet to be an overheating and possible blowing down of the crown sheet, and in the light of the testimony of defendant's experts that low, or lack of, water in the boiler caused the falling of the crown sheet in engine 957, it is manifest that the presence in the tank of an obstruction that did on October 19, 1910, prevent the flow of water to the boiler and the normal and natural result of which would be the low water in the boiler that defendant's experts say caused the "blue water line" would make known to the defendant the necessity for inspecting the inner surface of the crown sheet where the blue line would appear (Evans, page 156, lines 31-38; page 158, lines 12-18).

THAT THE DEFECT IN THE CROWN SHEET AS SHOWN BY THE BLUE LINE WAS NOT A LATENT ONE IS INDISPUTABLE.

Defendant by the exercise of the care and diligence required of it might have known of the defect. (Electric Co. v. Kelly, 57 N. J. L. 100.)

The defect in the boiler, if any existed, was not a latent one because by inspecting the tank at the

annual inspection which was a proper interval for inspection and which was an inspection possible in the practical operation of a railroad, the defendant would have known of the obstruction in the tank, which in the light of the testimony of defendant's experts as to the cause of the falling of the crown sheet, would have made known to defendant the necessity of inspecting the inner surface of the crown sheet for the "blue line" which would normally and naturally result from an obstruction of the flow of water from the tank to the boiler.

If the defendant had exercised the care and diligence required of it under Ruane v. Erie R. R. Co., 83 N. J. L. 423, it would have known of the defect.

(3) THE DEFECT, IF ANY EXISTED IN THE CROWN SHEET, WAS NOT A LATENT ONE BECAUSE DEFENDANT FAILED TO INSPECT THE TANK AT PORT JERVIS ON OCTOBER 19 AND 20, 1910, AFTER RECEIVING ACTUAL NOTICE OF THE OBSTRUCTION BETWEEN THE TANK AND THE BOILER, WHICH INSPECTION WOULD HAVE REVEALED THE OBSTRUCTION IN THE TANK AND MADE KNOWN TO DEFENDANT THE NECESSITY FOR INSPECTING THE CROWN SHEET.

THE DEFENDANT RECEIVED ACTUAL NOTICE OF THE OBSTRUCTION WHICH PREVENTED THE PROPER FLOW OF THE WATER FROM THE TANK TO THE BOILER.

After Evans had the trouble with his injectors on his trip to Port Jervis on October 19, 1910, which he testified came from some obstruction in the tank (pages 79, 161, lines 36-40; page 82, lines 37-40; page 83, lines 1 and 2), he made the

following report in the work book on his arrival in Port Jervis:

> "Engine 957, Glass put in; left front window, Right foot front engine truck cellars gone and wheel very hot. Couplers O. K. *TANK CLEANED OUT AROUND TANK VALVE AND STRAINER PUT IN TANK; CLEAN OUT HOSE STRAINERS.* Pack blower valve; also left steam ram of injector." (Page 154, lines 17 to 36.) (Signed) EVANS.

> "I am positive that I indicated on the book that there was some obstruction between the tank and the engine." (Evans, page 154, lines 5 to 8.)

THE DEFENDANT FAILED TO INSPECT THE TANK AFTER RECEIVING THE ABOVE NOTICE.

The testimony of the witnesses who testified to the inspection at Port Jervis was analyzed in the first section of this brief under title "Port Jervis Inspection." It was there shown that the only witnesses who testified to any inspection of the water supply were Schumacher, Holt and Hadrick.

An examination of the testimony of Schumacher, Holt and Hadrick will not reveal any inspecting of the tank at Port Jervis. The only testimony in the case is that of Hadrick (page 197, line 37; page 198, lines 3 to 16).

> "A. I had a man working on the injector, examining it; also had a man clean the tank.

> "Q. Do you recollect who it was that had something to do with the boiler; do you recollect the name I mean?

"A. You mean the tank?

"Q. I should have said the tank.

"A. Why, Jost.

"Q. Did you see any of the men working on the engine?

"A. Seen Mr. Holt.

"Q. Do you recollect seeing Mr. Jost?

"A. Why I seen him coming from the engine but I didn't see him do the work.

"Q. You don't know what work he actually did then?

"A. I know he was to clean the tank.

"Q. I mean you didn't see him do it?

"A. I did not."

There is no other testimony anywhere in the case of any examination, inspection or cleaning of the tank either at Port Jervis or at Jersey City after Evans made his report.

THE INSPECTION OF THE TANK WAS A REASONABLE PRECAUTION POSSIBLE IN THE PRACTICAL OPERATION OF A RAILROAD.

This is shown by Evans' report in the work book demanding the inspection and cleaning out of the tank.

There is no testimony in the case that the inspection was impracticable, or outside the practical operation of affairs, or unreasonable.

THE INSPECTION OF THE TANK AFTER EVANS' REPORT WAS A PROPER INTERVAL FOR INSPECTION.

No inspection is attempted to be proved by defendant prior to the Port Jervis inspection other than the annual inspection ending on October 18, 1910, at which as shown above no inspection of the tank was made. (See (2) above.)

INSPECTION OF THE TANK WOULD HAVE REVEALED THE OBSTRUCTION TESTIFIED TO BY EVANS, THE NORMAL AND NATURAL RESULT OF WHICH WOULD PRODUCE THE LOW WATER WHICH CAUSED THE EXPLOSION.

For an indefinite time therefore prior to Evans' discovery and report of the obstruction in the tank an obstruction was in the tank which would prevent the flow of water to the boiler, the very cause which all of defendant's experts say caused the explosion.

To men reasonably skilled in the operation and inspection of steam engines, knowing the effect on the crown sheet of low water in the boiler to be that testified by defendant's experts, and in the light of the testimony of defendant's experts that low water caused the explosion, *IT IS MANIFEST* that the presence of an obstruction in the tank the normal and natural result of which would be to obstruct the flow of water to the boiler, would make necessary an inspection of the inner side of the crown sheet.

INDISPUTABLE CONCLUSION THAT THE DEFECT, IF ANY EXISTED, WAS NOT A LATENT ONE, IF DEFENDANT HAD EXER-

CISED THE CARE AND DILIGENCE REQUIRED OF IT DEFENDANT WOULD HAVE KNOWN OF THE DEFECT.

The conclusion is indisputable that the defect in the crown sheet, if any existed, was not a latent one because by inspecting the tank at Port Jervis on October 19 or 20, after Evans made his report, or at Jersey City, before sending the engine out on October 21, 1910, which were proper times for such an inspection because inspection was not proved at Jersey City at the annual inspection ending on October 18, 1910, and which inspection was a reasonable precaution possible in the practical operation of a railroad, the defendant would have known of the obstruction in the tank and of the necessity for cleaning it out, which would, in the light of the testimony of defendant's experts that low water in the boiler caused the explosion, have made known to defendant the possible existence of defects in the crown sheet which would normally and naturally result from an obstruction in the tank to the flow of water to the boiler.

If the defendant had exercised the care and diligence required of it under Ruane v. Erie R. R. Co., 83 N. J. L. 423, it would have known of any defect in the crown sheet.

(4) THE DEFECT IN THE CROWN SHEET WAS NOT LATENT, IF ANY THERE WAS, BECAUSE IT WOULD HAVE BEEN KNOWN TO DEFENDANT IF IT HAD INSPECTED THE INNER SURFACE OF THE CROWN SHEET AFTER IT HAD RECEIVED NOTICE OF THE OBSTRUCTION IN THE TANK.

The defendant had received actual notice of the obstruction in the tank which obstructed the flow of water from the tank to the boiler. (See testi-

mony of Evans, quoted under (3) above, page 79; page 161, lines 36-40; page 82, lines 37-40; page 83, lines 1 and 2; page 154, lines 17-36.)

The defendant's experts testified that the cause of the falling of the crown sheet was low water below the level of the crown sheet. (See "Cause of Accident.")

To men reasonably skilled in the operation and inspection of steam locomotive engines low water in the boiler means a burned crown sheet with the "blue water line" on the inner surface thereof. This is shown by the testimony of defendant's experts who base their opinion of the cause of the blue line as low water below the level of the crown sheet. (See "Cause of Accident.")

Defendant made no examination or inspection of the inner surface of the crown sheet after receiving notice from Evans of the obstruction in the tank.

It was a proper interval or time for inspection because no inspection of the inner surface of the crown sheet was proved at the "Annual Inspection."

It was an inspection that was possible in the practical operation of a railroad. This is shown by Evans' testimony, "The inside of the crown sheet we never see. Those are things that come in shop inspections" (page 158, lines 12 to 18).

The conclusion is indisputable that the defect in the crown sheet, if any there was, was not a latent one because the defendant had received actual notice by Evans' report that an obstruction existed in the tank which obstructed the flow of water to the boiler. To men reasonably skilled in the operation and inspection of steam engines low water means a burned crown sheet with the blue line thereon. The inspection of the crown sheet was a

reasonable precaution possible in the practical operation of a railroad. If defendant had inspected the inner or upper surface of the crown sheet it would have known of the defect, if any there was.

If the defendant had exercised the care and diligence required of it, under Ruane v. Erie R. R. Co., 83 N. J. L. 423, it would have known of any defect in the crown sheet.

(5) THE DEFENDANT WAS UNDER A GREATER DUTY THAN TO EXERCISE REASONABLE CARE AND SKILL IN INSPECTING THE CROWN SHEET.

The defect in the crown sheet, if there was any, was not a latent defect because the defendant was given actual notice of the possible existence of defects in the crown sheet and was obliged to inspect for possible defects therein.

By Evans' report in the work book (page 154) defendant was put on notice as to the existence of an obstruction in the tank which prevented the flow of water to the boiler.

Low water in the boiler below the level of the crown sheet is the cause of the "blue water line" which marks a defective or burned crown sheet. (See "Cause of Accident.")

This "blue line" cannot be seen by an inspection of the firebox because it is on the inner or upper surface of the crown sheet. (Evans, page 156, lines 31-38; page 158, lines 12-18.)

The defendant was put upon notice of an obstruction in the tank which would produce the blue line, and was thereby put upon notice as to possible defects in the crown sheet.

It was defendant's duty to inspect the inner surface of the crown sheet for indications of defects which would come from low water in the boiler.

The master is required when put upon notice as to the possible existence of defects to employ unusual and extraordinary tests.

> Stassett v. Taylor Co., 82 N. J. L., top of page 633. (Court of Errors and Appeals.)

The defendant made no inspection of the inner surface of the crown sheet after being put on notice as to the existence of possible defects therein. (See "Port Jervis Inspection," in the first part of this brief.)

The defect in the crown sheet, if there was any, was not a latent one, because if defendant had exercised the care and diligence in inspecting the inner surface of the crown sheet required of it under Stassett v. Taylor, defendant would have known of the defect.

IV.

THE TRIAL JUDGE WAS RIGHT IN SUBMITTING THE CASE TO THE JURY.

GEORGE L. RECORD,
J. FISHER ANDERSON,
Respondent's Attorneys.

New Jersey Court of Errors and Appeals

MARTIN RUANE, Administrator of Patrick Ruane, *Respondent,* *vs.* ERIE RAILROAD COMPANY, *Appellant.*	On Appeal from Supreme Court.

BRIEF OF COLLINS & CORBIN IN FAVOR OF APPELLANT.

(1)

Statement of the case.

The appeal herein was taken to review a judgment of the Supreme Court affirming a judgment of the Hudson County Circuit Court in favor of the respondent (hereinafter called plaintiff) and against the appellant (hereinafter called defendant). The case has been tried twice. At the first trial the jury returned a verdict in favor of the plaintiff and assessed the damages at $5,000. The trial court reduced the verdict to $2,200 and judgment was entered accordingly. From that judgment defendant took writ of error to the Supreme Court, and the judgment was reversed on the ground of error in the charge. See 83 N. J. L., 423; 85 Atl. 178. Then the plaintiff took an appeal to this court—which affirmed the judgment of the Supreme Court on the opinion below. See 90 Atl. 1135.

At the second trial verdict was again rendered

for the plaintiff, and the jury assessed the damages at the sum of $4,000. The trial court reduced this to the sum of $2,500, and judgment was duly entered (pp. 9-11). From that judgment the defendant took an appeal to the Supreme Court—the exceptions having been reserved in accordance with the practice approved in *Christy v. New York Central R.R.*, 92 Atl., 395.

The Supreme Court in an opinion filed November 29, 1915, and not yet reported affirmed the judgment of the Hudson Circuit Court (pp. 301-5). Thereupon the defendant took the present appeal to this court.

(2)

Specifications of the Grounds of Appeal.

1. The Trial Court erred in refusing to direct a verdict in favor of the defendant when thereunto moved, and in submitting to the jury the question of the defendant's liability to the plaintiff, whereas the trial court should have directed a verdict in favor of the defendant and should have refused to submit to the jury the question of the defendant's liability to the plaintiff; the trial court should have directed such verdict for one or more of the following reasons urged in behalf thereof at the trial, to wit:

(a) Because no negligence was shown on the part of the defendant;

(b) Because the negligence alleged in the complaint or declaration was not proven;

(c) Because the cause of the accident was negligence on the part of a fellow-servant of the plaintiff's intestate;

(d) Because the negligence that caused the accident was that of the plaintiff's intestate;

(e) Because the defect in the boiler, if there

was any, was latent and of such a character that it could not be ascertained by such inspection as the defendant was legally bound to make.

2 The Supreme Court affirmed the judgment entered in the Hudson County Circuit Court in favor of the plaintiff and against the defendant, whereas the Supreme Court should have reversed said judgment for one or more of the reasons stated in the Supreme Court (p. 307, l. 30 to p. 308, l. 30).

The question before this court on the present appeal is whether the Supreme Court should have reversed the judgment of the Circuit Court for one or more of the foregoing reasons.

(3)

Brief of the Argument.

I.

The plaintiff failed to show that the cause of the accident was the negligence alleged in the complaint.

The accident occurred October 21, 1910, on defendant's Main Line near a station known as Ramsey. The decedent was working as a fireman with one Morgan as engineer on engine 957 drawing a passenger train from Jersey City to Port Jervis. About half a mile west of Ramsey, and while the train was in motion, there was a loud explosion, which broke the door of the fire box and blew out fire and steam upon the decedent, and as a result of the injuries sustained thereby he died shortly after.

The charge in the declaration was that the defendant negligently constructed the locomotive and negligently inspected the same, so that it was not in a safe condition for use (p. 4). There was no attempt made to show negligence in the con-

struction of the locomotive; and the only point for consideration is whether the locomotive had been properly inspected and was in proper condition.

The only witness called on behalf of the plaintiff for the purpose of showing what caused the accident was the engineer Morgan. He said that his train started from Jersey City on the morning of the accident at 7.30 o'clock with a passenger train (p. 13, l. 30). He went to the yard for his engine about five minutes of six (p. 28, l. 40). There was a fire in the boiler at that time (p. 30, l. 5). After leaving Ramsey station there was a loud report in the fire box; "everything blew all over" (p. 16, ll. 20-30). The water was in working order, and there was no interruption to its flow. "The injectors were working freely at all times" (p. 19).

After the accident the witness noticed that one corner of the "roof" of the fire box had dropped down and pulled away from the bolts (pp. 21, 22). Counsel for plaintiff then asked for his "judgment" as to the cause of the accident, and he replied that he could not explain it (p. 23, l. 20; p. 24, l. 25). His attention was called to testimony which it was alleged he had given on another trial of the case (pp. 24, 25) and he was asked whether "that" was the probable cause, to which he replied, "I could not say that; there are so many other things" (p. 25, ll. 30-40). And finally, he was again asked: "In your judgment was that the probable cause of this accident?" to which he replied, "No, I don't think so" (p. 26, l. 35). The question to which counsel was directing the attention of the witness was whether or not the engine had been damaged before the witness took it out of Jersey City (p. 24, l. 40); and the final result of counsel's effort to prove his case was that his expert testified that in his judgment such was *not* the cause of the accident. The

witness suggested that the accident may have been due to powder or something of that kind, and he told of another occasion when he had found some powder in the coal in the tender (pp. 26, 27). He finally said, when the question was repeated as to what was his opinion as to the probable cause of this accident, "I don't understand it, and I can't give no explanation" (p. 34, ll. 30-40).

On cross examination the witness said that the engine left the yard for the train shed about a quarter of seven. He spent the interval from the time he arrived at the yard up to the time the engine started from the yard, in looking around to see if he had the necessary tools, oiling the engine, etc. Among other things, he opened the door of the fire box and looked in, just as he usually did (p. 29). It was part of his work to inspect the engine carefully before starting it. Such inspection included an examination of the fire box. He saw nothing out of order; the fire was low, as "they naturally leave them," to keep from blowing off and save pumping.

> "Q. You found the fire box in the condition that it is usually left in, did you? A. Yes, and they are left out that way when they are standing over night.
>
> "Q. And so far as the fire was concerned there was nothing out of the ordinary? A. Nothing out of the way that I could see.
>
> "Q. On that night it was in the usual way? A. The usual way, yes, sir.
>
> "Q. And so far as the fire box itself was concerned, did you find anything apparently wrong with that when you looked at it? A. Not that I could see, if I remember rightly" (p. 30).

The attention of the witness was then directed specifically to the question as to whether he observed any irregularity or a "wavy" condition in the crown sheet and he says that he did not think

he saw anything out of the way with the crown sheet (p. 30, ll. 30-40).

He tested the injectors before leaving and found they were all right (p. 31, l. 15). "The injector was working all right, satisfactory in every way" (p. 32, l. 20).

He further said that when he looked into the fire box on the morning of the accident he saw the heads of the bolts on the crown sheet and he saw nothing wrong (p. 34, ll. 10-20).

If the water was allowed to get too low so that the crown sheet becomes hot, the engine would start to leak when the water was sent back onto the crown sheet. "These crown bolts and flues would start up leaking" (p. 37). The cold water upon the hot metal would leave a "blister" and a "crack" (p. 38, ll. 1-10). When he inspected the engine on the morning of the accident he said he did not think there was any leak as near as he could remember; if there had been a leak he would not have taken the engine out. He inspected it sufficiently to satisfy himself that there was no such condition on the engine that morning. He further said:

> "Q. When you examined the crown sheet that morning, was there any indication of any blister or any crack? A. None at all, nothing; everything was in perfect condition" (p. 38).

After calling one other witness (on the question of the measure of damages), the plaintiff rested; motion for non-suit was made and after a long discussion plaintiff's counsel asked for and obtained permission to re-open the case and to put in further testimony; thereupon a locomotive engineer by the name of Evans was called. He ran the engine in question (957) on October 19, 1910, two days before the accident, from Jersey City to Port Jervis. When he took charge of the

engine for his trip that day he found what he termed "personal inconveniences," such as absence of headlight, and some other things that are usually on engines (p. 78, l. 30). Between Jersey City and Rutherford the injector "broke up" and his fireman immediately applied the injector on his side. He "imagined" that the trouble was some obstruction of the flow of water from the tank to the feed pipe (p. 79, l. 30). On arrival at Port Jervis he left the engine in the shop for a pair of wheels, and reported that the tank hose should be cleaned out (p. 80, l. 15).

On cross examination he said that the indications were that the engine had just come out of the shop. He inferred this from the general appearance of the engine, the good condition of the rods, cylinders, valves and running gear. The engine worked all right that day with the exception of the injector (pp. 81, 82). He explained that by "breaking up" of the injector he meant that the water failed to go to the boiler (p. 82, l. 30). He first noticed this when he was about eight miles from Jersey City, and then, he and his fireman for the rest of the trip alternated with the injectors on their respective sides of the cab (p. 83, l. 15). He said he had not the slightest trouble in making his time to Port Jervis, a distance of eighty miles, and the fact was that he could have gone there on the one injector alone (pp. 83, 84). Did not have low water in the boiler at any time nor did he allow the water to get below the level of the top of the crown sheet (p. 84, l. 15). The gauge cocks and the water glass were working all right on that trip (p. 86, ll. 1-15).

He further said that before he left Jersey City on the morning of October 19th the first thing he did was to test the gauge cocks, and then the water glass; then he tried his air, looked over the rods, filled his lubricators, looked at the eccentrics; he looked into the fire box. "As far as

could be seen everything was absolutely perfect." He especially observed the crown bolts as it is the crown sheet that a man is most particular about.

> "Q. Did you find anything out of order in any way at all in the crown bolts, crown sheet or any other part of the fire box? A. I did not see a leak in that box either outside or inside" (pp. 87, 88).

The plaintiff put in no further evidence. Hence, on this showing all that we have is that an accident happened on October 21. On October 19 the same engine made another trip, on both occasions the engine was carefully inspected by engineers of long experience, both of whom said that they took particular notice of the appearance of the crown sheet and crown bolts. Neither of them observed anything out of order; on the contrary they both swore that everything was in perfect condition.

The plaintiff's counsel, however, urged that the crown sheet must have been weakened on this trip of October 19 by reason of the failure of one of the injectors to work properly at all times. His own witness, however, says that he could have gone to Port Jervis all right even with the one injector, and in any event the injector on the fireman's side was all right; and he and the fireman alternated in the use of injectors, and at no time on that trip was there any low water nor was the crown sheet burned. Defendant might well have rested on the plaintiff's own case; but in order to meet any possible claim that might be advanced to the effect that it did not fairly disclose all of its information on the subject, the defendant at some length offered all admissible testimony available to it for the purpose of showing the inspection made of engine 957 when it was left at the Port Jervis shops on October 19 and the condition of that engine when it was operated from Port

Jervis to Jersey City on October 20, the day before the accident.

We will therefore now ask the court's attention to the evidence showing what was done with the engine on its arrival at Port Jervis on October 19.

On that day engine 957 left Jersey City at 7.30 A. M. and arrived at Port Jervis about 11.10 A. M. (p. 86, l. 35; p. 142, l. 35). On its arrival Engineer Evans made a report in a book called the "work book" calling attention to certain repairs or inspections that he considered necessary. This was in accordance with the custom at that time (p. 154, l. 40). The purpose of leaving the engine at Port Jervis instead of using it back for the trip to Jersey City on that day was because one of the wheels was hot (p. 154, l. 12). It was not left there for the purpose of removing the alleged obstruction between the tank and the engine—in fact it is quite apparent from Evan's testimony that he had no personal knowledge as to whether or not there was any such obstruction, but he inferred that there was some such difficulty by reason of the fact that his injector "broke up." As it was necessary to leave the engine at Port Jervis for the purpose of attending to the hot wheel, the engineer in accordance with the usual practice in such cases put down everything that he thought might need attention, even including a broken glass in the front window. His report as written in the work book calls for a variety of small repairs (p. 154).

The work that was done at the Port Jervis shops was then shown in considerable detail by reference to the work slips. Holt, one of the workmen in the roundhouse at that point had charge of the injectors, safety valves, etc. (p. 163). Referring to two of these slips, which were signed by him, he testified that he had done the work described on such slips, namely, that he packed the

blower valve and the left steam ram on the injector; also that he examined the injectors. This examination consisted of taking them apart and looking at the tubes and testing them. "They worked all right" (p. 165). In addition to his record on the work slips he recalled engine 957 because on the next day after the accident his attention was called to the fact that an accident had happened (p. 164).

The foreman of the roundhouse at Port Jervis, one Hadrick, also had his attention called the fact of the accident a day or two thereafter (p. 197). He said that because of this he recalled that he had a man working on the injector, examining it and cleaning the tank. The man that worked on the injector was the witness Holt (p. 197, l. 40). He was present when Holt tested the injectors and the witness tested them himself afterwards. He did this by pumping. They worked "good"; there was nothing the matter with them. This test was before the accident (p. 201).

Other employes at Port Jervis testified to various work that they did on engine 957. Thus, Barbour put in the glass in the window (p. 167); Riggs was the box packer and his name appears opposite the line in the work book calling for that kind of work (p. 168); Mitchell, by reference to his work slip, testified that he cleaned the brake valve (pp. 179-182); Willman, also by reference to a work slip, testified that he repaired a cylinder cock. This had nothing to do with the injectors (p. 183); Kirchner, also by reference to a slip, testified that he cleaned out the sand pipes. This also had nothing to do with the injectors (p. 184).

All of the work mentioned in Evans' report was done by these several witnesses, to wit—Barbour, Riggs, Kirchner, Holt, Mitchell and Willman, although the work slips for Riggs and Barbour could not be located.

So far as the present case is concerned the testimony of none of these witnesses, aside from that of Holt (and of the roundhouse foreman Hadrick), is of much importance, as their work had nothing whatever to do with the injectors or with the tank; this testimony, however, does show the careful attention paid by the roundhouse employes to *all* matters referred to in the engineer's report; and the testimony of Holt and Hadrick shows conclusively that the injectors were carefully examined, and after such examination they were tested and found to work satisfactorily.

Work slips were also required to be kept for the work done in the boiler ship. But after diligent search by the foreman and some of his clerks these slips could not be located—no doubt due to the lapse of time since the accident and perhaps to the fact that some change has been made in the method of storing these slips. The foreman, however, did recall that one of his men, by the name of Josd, had received orders to clean the tank (p. 198). The record of this work was kept in a small book called the "boiler work" (pp. 191-2). The slips were copied into this book. It shows certain work done on October 19 to engine 957 (p. 197). This record was offered, but after being received in evidence subject to objection, was finally ruled out (pp. 193, 252). Hence, there is no direct proof as to what was done in the way of cleaning the tank, except the testimony of Hadrick, who says that he knew Josd was to do it, and saw him coming from the engine but did not actually see what he did (p. 198).

After engine 957 had been overhauled at Port Jervis on October 19, as shown by the testimony of the foregoing witnesses, it was again put in operation on the following day, October 20, and ran from Port Jervis to Jersey City in charge of Engineer Evans and Fireman Rose, arriving at

Jersey City at 6:45 P. M. But before it started on this trip on October 20 it was inspected at the Port Jervis shops by one Schumacher. By reference to his signature in a book called "inspection book," he testified that on that day he looked the engine over to see if there was anything loose or broken or if there was any leak, and he then made out his report to the roundhouse foreman. His inspection included an examination for leaks. He started at the pilot and went all around the engine (pp. 172-7).

Before Engineer Evans started on the trip with this engine from Port Jervis to Jersey City on October 20, (the day before the accident) he also examined it at the shops. He opened the fire box door and looked at the crown sheet and bolts. "I did not see a thing wrong with it." He also tested the injectors and they worked all right.

> "Q. Did you have any trouble with your injectors on the way down from Port Jervis to Jersey City on October 20th? A. Not a particle; I had a very pleasant trip down" (pp. 92-94). On that trip the water at no time was below the level of the crown sheet and the crown sheet was not burned; there was no leak anywhere (p. 93, l. 40). With reference to the injectors he said:
>
> "Q. Did your injectors or either of them break up, as you call it, at any time on that trip? A. There was not a break from Port Jervis to Jersey City" (p. 94, l. 15).

Fireman Rose ran the engine with Evans both on October 19 and October 20. On the first day he used the injector on his side part of the trip and it worked "first class" (p. 142). On the next day he left Port Jervis about 3 P. M. Before leaving he looked at the crown sheet and the fire box, and "it was O. K." There was no leak, no crack, no blister, no sign of burning (p. 143). There was no "bulging" or "bagginess" of the crown sheet. "It was in first class condition" (p. 144,

l. 20). On the trip east from Port Jervis had no trouble with the injector (p. 143, l. 35).

On the arrival of engine 957 at Jersey City on the evening of October 20 (the day before the accident) it was left in the roundhouse for the night. Shortly after 6 A. M. the next morning the employe in the roundhouse, assigned to that duty, examined the engine. He tested the gauge cocks, put on the blowers, looked at the flues and examined the fire box. There was no leak at that time. He recalled the fact that he had looked over this engine that morning because he heard it "blowed up" (pp. 151-2).

The foregoing summary traces the operations and examinations of engine 957 from October 19, 1910 to the time of the accident. There was also testimony showing the inspection of the engine made *prior* to October 19—the date when it was put into service after it had received an overhauling at the Jersey City shops. On October *eighteen* the engine was at the Jersey City roundhouse for inspection. Hugh Smith, the foreman of boiler makers, said "It was put to the hardest sort of test" (p. 128, l. 25). The practice was to inspect boilers once a year; this took about two days (pp. 129, 130).

One Patrick A. Collins (who had died since the first trial and whose testimony was read; p. 229) was employed as the boiler inspector at Jersey City on October 18, 1910 (p. 230). He heard of the accident five or six hours after it occurred, and this impressed upon his mind the fact of his inspection previous to the accident (p. 233). He described what he did as follows:

> "I examined that boiler, stripped her all off naked, a manner of speaking, got her stripped off naked, that is the fire box and the boiler, examined it thoroughly inside and outside for defects as far as can be determined by any man" (p. 234, ll. 1-10).

He said he spent nearly a week making this inspection, and whatever defects he found he had them repaired and had the boiler "put in thorough working condition" (p. 234-5). He removed a few stay bolts and put in new ones and after that was done he again inspected the boiler; "found that everything was complied in a satisfactory manner so as the engine was in perfect condition to run as a first class engine" (p. 234). The crown sheet was in "perfect condition" (p. 234, l. 10). When he got through inspecting it there was nothing the matter with it anywhere. He examined the engine before it left the shop and it was in "first class working condition" (p. 235, l. 40).

On cross examination he said that he began his examination about October 12; that on the first inspection he found stay bolts that were defective and he reported that to the foreman of boiler makers. Then he made another examination to see if the work had been done. He had a number of stay bolts removed, not only those that showed signs of defects, but also those in the next row so as to make absolutely sure that they were all right. The boiler was cleaned thoroughly so as to leave no scale and was examined for fractures. The tubes were inspected and cleaned (p. 246).

One Haley worked with Collins as boiler inspector (p. 220). He was present when the boiler was tested two or three days before the accident. His duty was to watch the gauge to see if it had the right pressure. "The gauge was perfect" (p. 221). The purpose of the test was to see if there was any defects in the boiler. Everything was all right; there were no leaks. The pressure was put on by means of a pump. This was the usual way of testing boilers (p. 222).

One Olean examined and tested the gauge cocks, safety valves, etc. of the engine before the accident in pursuance of orders from his foreman, Mr. Buckley (p. 235-6).

Buckley testified that he supervised the work on the boiler fixtures, including the injector. A report of the work done by Olean was made on October 18, 1910. The work that Olean did was checked up by Buckley to see that it was done and he then marked the report "Correct." This examination included the check valve, which is part of the injector (pp. 132-3).

From this evidence the following facts appear *without dispute*:

1. Engine 957, including the stay bolts and all parts of the boiler, was overhauled and repaired and the boiler and the various parts connected therewith—including injectors—were thoroughly tested *in the usual manner* on October 18th, three days before the accident.

2. After said repairs and inspections the engine was put into service for the first time on October 19th and ran from Jersey City to Port Jervis, a distance of eighty-eight miles. During that trip the only trouble was with one of the injectors but this was not sufficient to cause low water at any time.

3. On arrival at Port Jervis October 19th the engine was turned over to certain employes in the roundhouse and the matters, to which the report of Engineer Evans called attention, were all attended to—including an examination and testing of the injectors.

4. Some time on October 20th before the engine started on its return trip from Port Jervis to Jersey City it was again examined and inspected by an engine inspector, and also by both the engineer and the fireman, who had operated it the previous day.

5. On said return trip on October 20th no defects were discovered; the injectors worked all right.

6. On arrival at Jersey City the engine was

placed in the roundhouse; remained there over night, and when examined by one of the roundhouse employes on the morning of October 21st it was found that the fire was burning and there were no leaks of any kind.

7. Before starting on the trip of October 21st, the engine was examined and inspected by Engineer Morgan. This included an inspection of the fire box and crown sheet; there were no signs of any leak or of any previous overheating or burning of the crown sheet.

8. On the trip on which the accident occurred, nothing was found wrong with the engine up to the very moment when the accident happened.

Under the decision of the Supreme Court and of the Court of Errors and Appeals on the former judgment the defendant was not an insurer against negligence but was only bound to exercise reasonable care and to make such tests as are customary under like conditions. 83 N. J. L. 423.

We submit that this evidence clearly shows that all tests, both of the boiler and of the injectors and of the crown (as well as the other parts of the engine) that were required to be made under this principle, were in fact made.

There is nothing to suggest that the boiler had ever been burned or overheated prior to the accident, but even if it had been, any defect arising therefrom would be latent, as the blue mark on the crown sheet which would indicate such overheating would be on the upper side thereof (p. 158, l. 15). For such latent defect the master would not be liable.

A master is not liable for injuries to his servant from latent defects of which the master is ignorant, and which could not be discovered by reasonable care and diligence. The master is not required to employ unreasonable or extraordinary tests to discover such latent defects. *Essex County*

Electric Co. vs. Kelly, 57 N. J. L., 100; *Barrett vs. Young,* 78 N. J. L., 733; *Stassett vs. Taylor Iron & Steel Co.,* 82 N. J. L., 631.

The claim of plaintiff's counsel that the jury were entitled to find that there was some overheating on some unknown prior occasion is mere conjecture and without any support in the evidence. In a case of this kind the plaintiff is not entitled to recover when there is merely a *possibility* of negligence. The jury cannot guess at the cause of the accident.

> "In the absence of direct evidence the law requires that she must show the existence of such circumstances as would justify the inference that his death resulted from a neglect of duty by his employer and exclude the idea that it was due to a cause for which the company was not responsible" (*Kennedy v. Netherlands Company,* 76 N. J. L., 618, at page 622).

The plaintiff cannot recover unless the evidence reasonably excludes the cause for which the company is not responsible; if the evidence is evenly balanced, plaintiff is not entitled to recover. *Humer v. Lehigh Valley R.R. Co.,* 65 N. J. L., 703; *Stumpf v. D. L. & W. R.R.,* 76 N. J. L., 153.

A recent case in which a number of decisions on this point is collated is *Dingman v. Merrill,* 93 Atl., 664 (N. H.), from which we quote as follows:

> "If the case had been submitted to the jury, any finding by them relative to the real cause of the accident would have been a mere guess or conjecture.
>
> "'In this state the jury are not permitted to find material facts without evidence, or from mere conjecture as to the truth of one of two or more equally probable or possible theories having different legal results.'" *Reynolds vs. Fibre Co.,* 73 N. H., 126, 59 Atl. 615; *Deschenes vs. Railroad,* 69 N. H., 285, 46 Atl. 467; *Carr vs. Electric Co.,* 70 N. H.,

308, 48 Atl. 286 *Gahagan vs. Railroad,* 70 N. H., 441, 50 Atl. 146, 55 L. R. A. 426; *Horan vs. Byrnes,* 70 N. H., 531, 49 Atl. 569; *Dame vs. Car Works,* 71 N. H., 407, 52 Atl. 864; *Boucher vs. Railroad* 76 N. H., 91, 79 Atl. 993, 34 L. R. A. (N. S.) 728, Ann. Cas. 1912 B, 847.

"The following language of the court in *Deschenes vs. Railroad, supra,* is particularly pertinent to this case:

" 'The facts proved are equally consistent with a theory of the accident which would discharge the defendants as with one that would charge them; and, in the absence of some evidence as to the fact, a judicial trial does not substitute an unfounded guess or conjecture for the legal proof which the law requires.'

" 'The law damands proof and not mere surmises.' *Bonds vs. Smith,* 113 N. Y., 378, 21 N. E., 128.

"In *Patton vs. Railway,* 179 U. S., 658, 21 Sup. Ct., 275, 45 L. Ed. 361, the court said:

" 'Where the testimony leaves the matter uncertain and shows that any one of the half a dozen things may have brought about the injury, for some of which the employer is responsible and for some of which he is not, it is not for the jury to guess between these half a dozen causes and find that the negligence of the employer was the real cause, when there is no satisfactory foundation in the testimony for that conclusion.' "

An illustration of this principle as applied to a case of a boiler explosion, is *Louisville Gas Co. vs. Kaufman,* 48 S. W., 434 (Ky.). In that case one of the boilers of an electric light company exploded and caused the destruction by fire of a large dry goods store. Judgment was obtained for over two hundred thousand dollars. This was reversed on the ground that the evidence of the plaintiff's made it just as probable that the cause of the explosion was one for which the company was not responsible as that the cause was one for which the company was responsible—the court saying:

"The question is whether the law will authorize a verdict on the problematical data and the uncertain and shifting foundations thus laid by the plaintiffs. When the question is one of negligence or no negligence, it is well-settled law that where the evidence is equally consistent with either view—the existence or non-existence of negligence—the court should not submit the case to the jury, for the party affirming the negligence has failed to prove it."

Another case in which the same rule was applied to a boiler explosion is *Brunner vs. Blaisdell,* 32 Atl., 607, where the Supreme Court of Pennsylvania held that:

"Recovery for death of an employe caused by explosion of a boiler in his employer's factory cannot be had, though an inexperienced man had been placed in charge of the boilers, it being shown that the explosion was not due to his negligence, and the cause of it being left to mere conjecture."

The court said:

"The fact of the accident raised no presumption of negligence, charging the defendants, and its cause was entirely unexplained. * * * It was said in *Ford vs. Anderson,* 139 Pa. St., 261, 21 Atl. 18, by Mitchell, J.: 'It is not always possible for a plaintiff to show the utmost exactness just how the injury occurred, but he must always show, at least by a fair preponderance of evidence, that it was caused by the negligence complained of. * * * A witness who had not seen the plant or machinery testified as an expert to the precautions which should be taken under given conditions before shutting off the steam from a boiler. This did not help the plaintiff's case, as it did not appear either that the conditions existed or that the precautions were not taken, and the standard of perfect management was not one which the defendants were required to meet.'"

Another case in Pennsylvania to the same effect is *Hitchman v. Kerbaugh,* 89 Atl., 669.

In *Texas and Pacific R. Co. vs. Barrett,* 166 U. S., 617, 41 L. Ed., 1136, the railroad company was held liable for injuries caused by the explosion of a locomotive boiler for the reason that it appeared that for some time before the explosion the boiler had been in a weak and unsafe state because of the condition of the stay bolts, many of which had been broken before the explosion. The U. S. Supreme Court, in this case, laid down the following principles as applicable to a boiler explosion, head notes one, two and four of the opinion reading as follows:

> "1. A railroad company is not liable for injury to an employee by the explosion of a locomotive boiler, unless it resulted from the want of ordinary care, either in selecting the engine or in keping it in reasonably safe repair.
>
> "2. A railroad company is not required to adopt extraordinary tests for discovering defects in a locomotive boiler or any of its machinery, which are not approved, practicable, and customary; but it fulfills its duty in this regard if it adopts such tests as are ordinarily in use by prudently conducted roads engaged in like business and surrounded by like circumstances. * * *
>
> "4. The burden of proof is on the employee suing for alleged negligence of his employer to show that the injury received was caused by the master's negligence, to which plaintiff's negligence did not contribute."

Other boiler explosion cases to the same effect are *Branham v. Buckley,* 166 S. W., 618 (Ky.); *Mason & Hurst Co. v. Feltner,* 179 S. W., 222.

In the case of *Levendusky vs. Empire Rubber Co.,* 87 Atl. Rep., 338, 84 N. J. L., 698, this held that the explosion of a vulcanizer was not *per se* evidence of negligence. Judgment of non-suit was affirmed. The court in its opinion, speaking

through Parker, J., discussed a number of boiler explosion cases as follows:

"There was no error in this ruling. We assume the condition most favorable to plaintiff, that at the moment of the explosion the relation of master and servant did not exist as between the plaintiff and defendant, and that defendant's duty to him was the same as to any passerby on the highway. Whether in such a case proof of the occurrence of this explosion, without more, would establish a *prima facie* case of negligence is not satisfactorily settled. Some of the cases discriminate between the duty of exercising ordinary care and that of exercising a high degree of care, recognizing a presumption of negligence in the latter case but not in the former. 36 Cyc. 1265. Others recognize it in the case of injury to a stranger but not if the injured party be a servant. 12 Encyl. L. (2d ed.), 503. It is laid down that the explosion of a steam boiler is not, *per se, prima facie* evidence of negligence. Id., 502. Such is the rule in New York, *Losee vs. Buchanan,* 51 N. Y., 476; *Consulich vs. Standard Oil Co.,* 122 Id., 119; *Reiss vs. N. Y. Steam Co.,* 128 Id., 103. In Pennsylvania: *Spencer vs. Campbell,* 9 Watts & S., 32; *Brunner vs. Blaisdell,* 170 Pa. St., 25; *Earle vs. Arbogast,* 180 Id., 409. (In *Baron vs. Reading Iron Co.,* 202 Id., 274, the question was not presented.) In West Virginia: *Vieth vs. Hope Salt, etc., Co.,* 51 W. Va., 96; 57 L. R. A., 410. In Illinois: *John Morris Co. vs. Southworth,* 154 Ill., 126. To the contrary are the case of *Lykiardopoulo vs. New Orleans, etc., Railroad Co.,* 127 La., 309; 22 Am. & Eng. Ann. Cas., 979, and cases cited in the note.

"In our own state it was held in the Supreme Court that the owner of a steam boiler is not liable for its explosion in the absence of negligence, and the New York case of *Losee vs. Buchanan, supra,* was cited and relied on. In the later case of *Van Winkle vs. American Steam Boiler Co.,* 23 Vroom, 240, the owner was held to a high degree of

care, but the case was decided on demurrer and called for no ruling on the *quantum* of evidence. In *Bauman vs. Cowdin,* 46 Id., 193; 47 Id., 575, plaintiff undertook to prove negligence in inspection or management.

"We need not undertake to reconcile the conflicting authorities, or to judge between them, for the case falls plainly within the rule laid down in *Bahr vs. Lombard, Ayres & Co.,* 24 Vroom, 233. The plaintiff, though at the time of the accident perhaps legally a stranger, was actually and for some months had been an employee of the company. It was evident, from this fact and from the colloquy between court and counsel, that plaintiff, or his counsel, which was the same thing, was in possession of material but undisclosed evidence as to the circumstances of the accident. He made no pretence of having submitted all the evidence that he had been able to obtain on this point, or that he had been unable to obtain any, but rested on the proposition that no matter what he knew or could show, the defendant on proof of the occurrence of the accident was bound to explain it away. The Bahr case is directly to the contrary, and under the ruling in that case, the present judgment must be affirmed."

Under these authorities and on the facts herein summarized (which, as we have pointed out, were practically undisputed), we submit that verdict should have been directed for the defendant on the ground that no negligence on its part was proved. The present case is far stronger for the defendant than the cases above cited for the reason that the defendant undertook to show, and did in fact show, that not only had the customary inspection been made but very unusual care had been exercised in the repairs to, and inspection of, the boiler and the other parts of the locomotive. The present case is also much stronger for the reason that we are not left in the dark as to the real cause of the accident; on the contrary the evi-

dence shows clearly what the real cause was. (See Point II.)

The Supreme Court in its opinion said:

> "The testimony discloses, that the case was tried out by the litigants herein on the issue that the appellant had carelessly put in use a locomotive engine which was defective, out of repair and unfit and unsafe for use, and which condition the appellant might have discovered by a reasonably careful inspection. Morgan was the engineer who operated the locomotive at the time the boiler exploded. This was on the 21st day of October, 1910. Two days prior thereto one Evans ran the locomotive engine from Jersey City to Port Jervis, a distance of eighty-eight miles, and on the trip one of the injectors broke down. Evans says that it appeared to him that the locomotive engine had just come out of the repair shop and had been overhauled. Evans was recalled by the defense and on his direct examination testified that he reported to the appellant, among other things, that there was some obstruction between the tank and engine, and that the tank needed to be cleaned out and a new strainer to be put in. This report was made on the evening of the 19th of October and the boiler exploded on the morning of the 21st of the same month. What was done to the locomotive during the previous time that it was in the repair shop does not appear."

We respectfully submit that in making the foregoing statement the Supreme Court apparently overlooked two lines of evidence neither of which was in dispute; in the first place there was evidence to show that *before Evans* undertook to run the locomotive on October 19 the engine had been thoroughly overhauled and repaired and the injectors had been tested. The tests were made on October 18 and the repairs and inspection of the boiler and other parts of the engine were made prior to that date. Nearly a week was

occupied in these repairs and tests. See testimony of Collins, Haley, Olean and Buckley hereinbefore cited.

This testimony shows in great detail what was done to the engine while it was in the repair shop prior to the date (October 19) when Evans ran the engine from Jersey City to Port Jervis.

In the next place, the evidence shows with equal detail what was done in the repair shop at Port Jervis on the arrival of the engine at that point on October 19. The Supreme Court is mistaken in saying that it does not appear what was done to the engine during the previous time it was in the repair shop. It does appear what was done in the shops *both before and after the trip made by Evans.*

The Supreme Court also says that it nowhere appears "that the tank was cleaned out and a new strainer put in. Nor does it appear that the obstruction between the tank and engine of which Evans complained was removed" (p. 304, ll. 15-25). It is quite true that it does not appear that the tank was cleaned out and a new strainer put in. But that, we submit, has nothing to do with the question of whether there was negligence on the part of the defendant. There is nothing to show that a new strainer was required unless that may be inferred from the testimony of Evans, that he had some trouble with one of the injectors on his trip from Jersey City to Port Jervis. His testimony by no means shows that a new strainer was necessary. The best possible proof that the "obstruction" had been removed prior to the trip back from Port Jervis to Jersey City is found in the fact that *after* the engine was overhauled at Port Jervis it was again examined and inspected before it started on the return trip and nothing wrong was found with the injectors; and when the return trip was made (on

October 20) *the injectors worked all right.* The best possible proof that there was no defect on October 20 is found in the fact that there was no trouble with the injectors on the trip made that day—a distance of 88 miles. It is evident that something must have been done at Port Jervis to remove the difficulty with the injectors of which mention had been made by Evans when he ran the engine the day before.

The best test of the condition of the injectors is the actual use of the same; such use showed there was nothing wrong with them.

Besides the evidence of Evans as to the proper working of the injectors on October 20 there is the evidence of plaintiff's own witness Morgan that on the trip when the accident happened he had no trouble with the injectors up to the moment of the accident. This same witness, before he started on this trip, examined the fire box and found nothing wrong with it. There was no irregularity in the crown sheet; he tested the injectors before he started and found they were satisfactory (p. 32, l. 20).

The Supreme Court said:

> "There was evidence, therefore, from which a jury might have reasonably inferred that no new strainer was supplied, and that the tank was not properly cleaned out and that such condition might have interfered with the injector and caused insufficient water in the boiler."

We think that in coming to this conclusion the Supreme Court must have overlooked the *undisputed* evidence of Morgan and Evans as well as of other witnesses which showed that on the trip from Port Jervis to Jersey City on October 20, and on the next day from Jersey City up to the point of the accident, there was nothing whatever to interfere with the proper operation of the

injectors. How can it be said, in the face of such evidence, that there is any ground to permit a jury to find that there was trouble with the injector which might have caused low water in the boiler? If there had been any such trouble surely Evans would have noticed it on the trip from Port Jervis to Jersey City on October 20; the employees in the roundhouse at Jersey City where the engine was placed on the night of October 20 would have observed the condition in the crown sheet or in the bolts; Morgan would have observed it when he examined the engine before he started his trip on October 21. There is not a witness who found anything whatever to suggest that the crown sheet had been weakened on any trip prior to that of Morgan on October 21; on the contrary they are all unanimous in stating that there was no such weakening—or at least that none was apparent. Unless the defendant is an insurer against accidents, what more could possibly be required of it?

II.

The evidence shows that the accident was due to negligence on the part of either plaintiff's intestate or a fellow servant of the plaintiff's intestate.

The present action is brought under the common law, where is no principle more firmly established than that the master is not responsible for an accident due to negligence of a fellow servant. We submit that in the present case the evidence demonstrates that the accident was due to the negligence of Engineer Morgan—who was of course the fellow servant of the fireman. The evidence does not reasonably indicate any other cause for this accident—unless indeed it was due to a powder explosion as suggested by Morgan. In this respect the record is somewhat different

from that at the first trial. It appears that on that occasion Morgan, as an expert witness for the plaintiff, gave as his opinion that the engine had been "damaged" before he took it out of Jersey City by somebody else, on account of being short of water (p. 24). But at the present trial Morgan was asked the direct question whether or not that was the "probable cause" and he replied, "No, I do not think so" (p. 26, l. 35). He further said that he could give no explanation of the accident (p. 34, l. 35). The case is therefore barren even of opinion testimony that the accident may have been due to some damage done to the engine before the day when Morgan ran it. Moreover, the evidence cited under the preceding point (I) demonstrates that there had not been any such prior damage.

The evidence to which we now call attention shows that the real cause of the accident was negligence on the part of Engineer Morgan, or on the part of plaintiff's intestate.

This is shown by the appearance of the crown sheet when examined shortly after this accident; this appearance proved that the water had been below the level of the top of the crown sheet. Inspector Collins examined the engine five or six hours after the accident and found a number of bolts pulled out of the crown sheet and the left front corner of the sheet was "bulged down," about six inches below the natural formation. He found on the crown sheet a demarkation line known among the boiler makers as the "fatal blue," showing where the water had been. His opinion as to the cause of accident was that there was no water on the crown sheet. He had seen this before in other similar cases. This result was caused by feeding water into the boiler when the metal was at a white heat. This leaves an "indelible" color which cannot be mistaken (pp. 236-8).

Hugh Smith, foreman of boiler makers at Jersey City, saw the engine at Suffern shortly after the accident. It was brought to Jersey City and there examined by several expert mechanics in company with this witness (p. 126). This examination was made a day or two after the accident. He noticed the water line around the edge where the bolts had started to give way. The water line was four to six inches below the level of the top of the crown sheet. The cause of the accident was low water (pp. 127-8).

Mr. Lester, general foreman of boiler makers, examined the engine a day or two after the accident. He found a number of bolts pulled out (p. 98). He observed the water line. The overheating causes the iron to turn a "bluish" color. When the water gets below the level of the crown sheet the iron is uncovered so that it is exposed to the heat with no water to protect it and this discolors the sheet. At the line where the water leaves off and the steam begins it is the fatal blue color. He had seen numbers of very such cases; in his opinion the cause of the drop of the crown sheet in question was "a clear case of low water" (pp. 100, 101).

A slight overheating would loosen the thread of the bolts so that it would "almost invariably" leak (p. 104, l. 30). Overheating will also cause the sheet to "bag" (p. 107). This could be seen even if very "slight" (p.). A person looking into the fire box could see this condition. Ordinary observation by an experienced engineer would disclose it (p. 111; p. 113, l. 1).

On the part of the crown sheet which had not dropped down and from which the bolts had not pulled out, there were no indications of leaking or bagginess (p. 115, l. 35, to p. 116, l. 5).

Mansfield, chief boiler inspector of Central R. R. of New Jersey, examined the crown sheet in com-

pany with Mr. Lester and some others (p. 116). He found the blue line. This indicates scarcity of water. The cause of the accident was allowing the sheet to become overheated, which loosened the fastenings and the pressure pushed the sheet down (p. 117). If the metal had been weakened that would result in leakage (p. 118, l. 5).

O'Malley, foreman of boiler makers of D. L. & W. Railroad Co., also examined the engine. He noticed the blue line. Cause of the accident was "positively" low water (p. 119). There was a difference in the color of the crown sheet on one side and the other side of this line "where it was protected by the water it is still scaly, but on the other side of this line it was perfectly clean, which showed that it had been overheated and was burned off and made clean" (p. 124).

There was no attempt made by the plaintiff to meet the evidence of these several expert witnesses. Their testimony showed conclusively that the cause of the accident was overheating. Plaintiff's counsel claims that this overheating must have been on some occasion prior to the accident; but this argument fails for the following reasons:

1. The engine had been completely overhauled and the boiler thoroughly inspected only three days before the accident; and there is no proof whatever that when it was put into service on October 19th there was any defect in the crown sheet—on the contrary the evidence is undisputed that everything was in first class condition.

2. The evidence of the engineer and fireman who used the engine on October 19th and October 20th is that on neither date was the crown sheet overheated.

3. The evidence of numerous inspectors at Port Jervis and Jersey City, as well as of Engineer Morgan himself, shows that there were no indications whatever of a prior overheating; that is,

there was no leak, no crack, no blister, no bulging or no bagginess—some one or all of which conditions must have been present and must have been visible if there had been any such prior burning of the sheet.

This proof amounts practically to a demonstration that the cause of the accident was overheating on the trip of October 21st. Such overheating must have been due to carelessness on the part of the engineer, Morgan (or perhaps on the part of Ruane himself) in failing to keep sufficient water in the boiler.

The case is strikingly similar to that of *Hudson vs. Rome, etc., R.R. Co.,* 145 N. Y., 408. In that case the plaintiff's intestate was a fireman in the employ of the railroad company, and while the engine was stopping to take water, the crown sheet collapsed and allowed the steam to escape into the fire box, and blew out through the door upon the fireman. An examination after the accident showed that the crown sheet had been scorched; it was white and of a bluish cast and clean. The staybolts by which the crown sheet was supported had been drawn out, leaving holes through which the steam escaped. The plaintiff contended that the scorching of the crown sheet had taken place on some prior occasion, and that the defendant was negligent in sending it out upon the road while in that condition. In that case, as in this, the engineer said that he kept the crown sheet covered with water, but opposed to this were the facts shown by the examination of the engine and the testimony of experts, indicating that the crown sheet must have been red hot at the time it collapsed. The Court of Appeals of New York reversed a judgment for the plaintiff, saying:

> "The judgment of the experts is based upon well known and recognized and scientific facts, which to our mind is controlling. The

crown sheet was found to have been scorched. It was white with a bluish cast and perfectly clean, tending to show that the scorching was recent; had it been worked after the scorching evidence of soot and discoloration would be expected. The staybolts had drawn out, the arch inverted, the sheath extended, and the holes elongated, without sign of a crack or other flaw. Could this have occurred with this steel sheet cool and under water; could it be stretched ten to fourteen inches and inverted in that condition? The experts say no. And their judgment accords with our learning and experience. There is no evidence that the scorching was done on any other occasion. Aside from the inference that might be drawn from the testimony of the engineer already alluded to. He could determine the amount of water over the crown sheet by trying the guage cocks. But in trying this he may have mistaken steam for water. However that may be, in the absence of further evidence showing that the sheet may have been scorched on some prior occasion, we cannot regard it as affording more than a scintilla of evidence, which will not justify a verdict against the physical and scientific facts that leave no room to doubt that the crown sheet had become dry and partially melted at the time of the collapse. * * * If the crown sheet was scorched at the time of the accident, it was the fault of the engineer, the co-servant, of the deceased, and not that of the defendant."

In this aspect the present case also resembles *Temple vs. Gilbert,* 85 Atl., 380, where a locomotive engineer was held personally liable for damages by reason of an accident to a fellow employe (who was riding in the cab) caused by an explosion of the engine boiler which experts proved was due to overheating, resulting from the failure on the part of the engineer to keep a sufficient supply of water in the boiler.

The case is also like *LaCasse v. N. O. T. & M. R. Co.,* 64 So., 1012, where it was held that the facts

showed that the blowing off of the crown sheet of the boiler of a locomotive was caused not by defects in the boiler but because of low water.

In the course of the opinion, the court said:

> "Defendant has shown that a piece of steel, such as this crown plate, if superheated without water upon it, acquires a blue color, but does not otherwise acquire this color; and that this crown sheet had this color. Plaintiff's own expert, Marcotte, testifies to the same thing, but says that the plate did not have this blue color, but was gray as if it had had water upon it.
>
> "As to this plate having exhibited this distinctive blue color after the accident, there can be no serious question, as Marcotte stands alone against a large number of witnesses. As to this color being a sure and unmistakable sign, there can be no serious question in the light of the testimony. Some ten witnesses, whose life work has qualified them to speak knowingly on this point, have testified in the most positive and unqualified manner that they know and are positive and cannot be mistaken that only by having been superheated without water upon it this crown sheet could have had this blue color imparted to it. It is impossible to read the record without becoming convinced of the perfect sincerity and entire reliability of this testimony; and it is destructive of plaintiff's theory of this crown plate having collapsed from the defective condition of the bolts and not as the result of not having had water upon it."

The Supreme Court seems to have been satisfied that the cause of the explosion was low water in the boiler. It says:

> "In the present case an examination of the locomotive engine after the explosion showed that the crown sheet had been thus exposed and collapsed" (p. 304, ll. 15-18).

We agree with this conclusion, but we say that the cause of the collapse was the negligence of the fellow-servant of the plaintiff's intestate.

III.

Judgment should be reversed on the ground that there was no proof of negligence on the part of defendant and that the accident was due to negligence of a fellow servant of plaintiff's intestate.

COLLINS & CORBIN,
Attorneys of Erie Railroad Company,
Defendant.

GEO. S. HOBART,
Of Counsel.

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Notice and Grounds of Appeal.

(Filed April 10, 1915.)

To George L. Record, Esq.,
Attorney of Respondent.

TAKE NOTICE that the defendant, Erie Railroad Company, appeals from the whole of the judgment entered in this cause to the Supreme Court of the State of New Jersey, on the following ground, to wit:

The trial court erred in refusing to direct a verdict in favor of the defendant when thereunto moved, and in submitting to the jury the question of the defendant's liability to the plaintiff, whereas the trial court should have directed a verdict in favor of the defendant and should have refused to submit to the jury the question of the defendant's liability to the plaintiff; the trial court should have directed such verdict for one or more of the following reasons urged in behalf thereof at the trial, to wit:

1. Because no negligence was shown on the part of the defendant.

2. Because the negligence alleged in the complaint or declaration was not proven.

3. Because the cause of the accident was negligence on the part of a fellow-servant of the plaintiff's intestate.

4. Because the negligence that caused the accident was that of the plaintiff's intestate.

5. Because the defect in the boiler, if there was any, was latent and of such a character that it

could not be ascertained by such inspection as the defendant was legally bound to make.

Yours respectfully,

COLLINS & CORBIN,
Attorneys of Appellant.

Return.

The answer of Luther A. Campbell, Esquire, Judge of the Circuit Court holden in and for the County of Hudson and within named, the record and proceedings of the plaint whereof mentioned is within made with all things touching the same I send to the Justices of our Supreme Court of Judicature at Trenton, N. J., at the day and year within contained, in a certain appeal to this writ annexed as within I am commanded.

LUTHER A. CAMPBELL,
Judge.

Declaration.

(Filed Sept. 7, 1911.)

The defendant was summoned to answer unto said plaintiff therein in an action at law upon the following complaint:

The Erie Railroad Company, a corporation of the State of New York, was summoned to answer unto Martin Ruane, administrator of the goods and chattels, rights and credits, moneys and effects of Patrick Ruane, deceased, plaintiff in an action in tort, and thereupon the said plaintiff, by George L. Record, his attorney, comes and complains, for that the said defendant, the Erie Railroad Company, did at the time hereinafter mentioned and for a long time prior thereto, and still does operate and maintain a certain line of railway from Jersey City, in the State of New Jersey, to the New York State line in the State of New Jersey, over which said railway the said defendant company aforesaid operates railway cars for the carriage of passengers and freight for hire and reward.

And the plaintiff avers that on or about the twenty-first day of October, nineteen hundred and ten, the said Patrick Ruane was in the employ of the said defendant company as a locomotive fireman, and that on said day in the regular course of said employment the said Patrick Ruane was acting as fireman on a locomotive operated by the defendant company on its line of railway in the State of New Jersey a short distance this side of the town of Suffern, and that it then and there became and was the duty of the said defendant to the said Patrick Ruane to see that the said locomotive operated by the said defendant was in good condition and repair and in a safe condition to be used for its appropriate purpose, so that no in-

jury should happen to the said Patrick Ruane in his capacity as a fireman as aforesaid, and so that he could safely discharge his duty as such fireman.

And the plaintiff avers that the said defendant company neglected its duty in this behalf, and that the said locomotive was so carelessly and negligently constructed, and so carelessly and negligently inspected and kept in repair, and that the defendant company employed such negligent and careless persons in the performance of the duty of keeping the said locomotive in repair and in safe condition, that as a consequence of such neglect of duty on the part of the said defendant company the boiler on the said locomotive, at the time and place aforesaid, exploded and inflicted such injuries upon the said Patrick Ruane that he died shortly thereafter from the effects of the same.

And the plaintiff avers that said boiler blew up and the said Patrick Ruane was so injured that he died because of the negligence of the said defendant company in employing the said locomotive without properly inspecting the same and ascertaining that the same was not in a safe condition for use.

And the plaintiff avers that by reason of the bruises, hurts and wounds caused to the said Patrick Ruane by the said accident aforesaid, because of the negligence of the said defendant company, and without any default or negligence on the part of the said Patrick Ruane, he was so injured that he died on the day and year aforesaid, at Suffern, in the State of New York, that is to say, in Jersey City in the County of Hudson aforesaid.

And the plaintiff avers that as the administrator of the goods and chattels, rights and credits, moneys and effects of the said Patrick Ruane,

he was forced to lay out and expend a large sum of money, to wit, the sum of five hundred dollars, in and about a proper and decent burial of the said Patrick Ruane, and that the said Patrick Ruane left him surviving next of kin depending upon him and who suffered pecuniary loss by reason of his death, as follows: Patrick Ruane, his father, Martin Ruane, Thomas Ruane, Garret Ruane, and Edward Ruane, brothers; and Mary Nolan, Kate Farmer, Bridget McCann, Ann Riley and Ellen Meelie, sisters.

And the plaintiff avers that he has suffered loss as administrator representing the said next of kin as aforesaid, to the sum of twenty-five thousand dollars.

Wherefore and by force of the statute in such case made and provided an action hath accrued to the said plaintiff as administrator of the goods and chattels, rights and credits, moneys and effects of the said Patrick Ruane, deceased, for the exclusive benefit of the said next of kin of the said Patrick Ruane to demand and receive from the said defendant company the said several sums of money above demanded, in manner and form as is above demanded and therefore he brings his suit.

And the said plaintiff brings here into court letters of administration granted to the said plaintiff of the goods and chattels, rights and credits, moneys and effects of the said Patrick Ruane, deceased, granted by John P. Egan, Surrogate of the County of Hudson, New Jersey, which gives sufficient evidence to the said Court hereof the right of the said plaintiff as administrator aforesaid, the date whereof is a certain date and year therein named, the twenty-second day of July, Nineteen hundred and eleven.

GEORGE L. RECORD,
Attorney for Plaintiff.

Plea.

(Filed Aug. 16, 1911.)

The Defendant answers as follows:

And the said defendant Erie Railroad Company, by Collins & Corbin, its attorneys, comes and defends the wrong and injury, when, &c., and says that it is not guilty of the said supposed trespasses above laid to its charge, or any or either of them, or any part thereof, in manner and form as the said plaintiff hath above thereof complained against it. And of this the said defendant puts itself upon the country, &c.

COLLINS & CORBIN,
Attorneys of Defendant.

(Affidavit attached.)

Rule to Show Cause.

(Filed Jan. 15, 1915.)

On due application made on behalf of the defendant in the above entitled case

ORDERED that the plaintiff show cause before this Court on Friday, the Fifth day of February, Nineteen hundred and fifteen, at ten A. M. at the Court House in Jersey City, why the verdict rendered in his favor on the thirteenth day of January, Nineteen hundred and fifteen, should not be set aside and a new trial granted.

And it is further ORDERED that the following point be and the same is expressly reserved, to wit:

Defendant's exception and objection to the ruling of the trial court in refusing to direct a verdict in its favor when thereunto moved, and in submitting to the jury the question of the defendant's liability to the plaintiff.

LUTHER A. CAMPBELL,
Judge.

Rule entered this 15th day of January, A. D. 1915, on motion of

COLLINS & CORBIN,
Attorneys of Defendant.

Reasons.

(Filed Jan. 22, 1915.)

The defendant assigns the following reasons in support of its rule to show cause herein:

1. The verdict rendered in favor of the plaintiff on January 13th, 1915, is against the evidence.

2. Said verdict is against the clear weight of the evidence.

3. Said verdict is contrary to the charge of the court.

4. Said verdict is excessive.

COLLINS & CORBIN,
Attorneys of Defendant.

Opinion of Circuit Judge.

(Filed March 27, 1915.)

CAMPBELL, J.

The reasons urged under the rule are that the verdict is against the evidence, the weight thereof, the charge of the court, and that the verdict of four thousand dollars is excessive.

I do not find that which convinces me that the jury did not properly find, as to the facts, nor that they improperly weighed the evidence.

The rule will not be made absolute for those reasons.

The verdict under the testimony is clearly excessive.

Giving the plaintiff the benefit of every reasonable presumption and probability the recovery should not exceed twenty-five hundred dollars.

If the plaintiff shall, within ten days, enter in the minutes of the court a waiver to the excess over twenty-five hundred dollars, the verdict may stand for that amount, otherwise the verdict will be set aside as to the amount of damages only, and a venire de novo awarded to ascertain the amount of damages.

Dated, March 27, 1915.

LUTHER A. CAMPBELL,
Judge.

Order for Judgment.

(Filed March 29, 1915.)

Luther A. Campbell, Judge of the above Court, having on March 27, 1915, on the rule to show cause granted in the above matter, decided that the jury properly found as to the facts and properly weighed the evidence, and deciding that the verdict in the above case is excessive, and ordering that the verdict stand in the sum of twenty-five hundred dollars, provided the plaintiff within ten days enter in the minutes of the above court a waiver of the excess over twenty-five hundred dollars, and deciding that the verdict stand for the sum of twenty-five hundred dollars if such rule be entered.

The plaintiff therefore hereby remits all of the verdict rendered in his favor in the above cause in excess of the sum of twenty-five hundred dollars; and it is therefore

ORDERED that judgment final be entered in favor of the plaintiff and against the defendant in the sum of two thousand five hundred dollars, besides costs of suit to be taxed.

Rule entered this 29th day of March, 1915, at 1.30 P. M. on motion of Attorney of Plaintiff,

GEORGE L. RECORD.

Judgment.

This action was tried before Judge Luther A. Campbell with a jury at the Hudson Circuit Court January 15th, 1915.

The cause having been heard and submitted to the jury, they return their verdict as follows:

They say they find for the plaintiff, and against the defendant, and they assess the damages of the plaintiff on the occasion of the premises at the sum of Four Thousand Dollars ($4,000.00) over and above his costs and charges by the said plaintiff about his suit in this behalf expended.

And the matter coming on to be heard on a rule to show cause why the verdict so as aforesaid found should not be set aside and a new trial granted.

The Court orders that unless the plaintiff shall remit all of said verdict in excess of the sum of Two Thousand Five Hundred Dollars ($2,500.00) as and for his damages on occasion of the premises that the verdict so as aforesaid found shall be set aside, and a venire de novo shall issue whereupon the plaintiff here remits the excess aforesaid.

Whereupon it is adjudged that the plaintiff recover of the defendant the sum of Twenty-five Hundred Dollars ($2,500.00) damages and his costs which are taxed at Fifty-four Dollars and Ninety-seven Cents ($54.97), making in the whole the sum of Two Thousand Five Hundred and Fifty-four Dollars and Ninety-seven cents ($2,554.97).

Judgment entered this Twenty-ninth day of March, A. D. 1915.

LUTHER A. CAMPBELL,
Judge.

Attest:

JOHN J. McGOVERN,
Clerk.

(Hudson Co. Seal.)

Testimony.

HUDSON COUNTY CIRCUIT COURT.

MARTIN RUANE, Administrator,

vs.

ERIE RAILROAD COMPANY.

APPEARANCES:

GEORGE L. RECORD, Esq., for the Plaintiff.

COLLINS & CORBIN, Esqs. (Mr. Hobart), for the Defendant.

Before JUDGE CAMPBELL, and a jury, January 11, 1915.

MR. RECORD: Your Honor might look over the decision of the court when it comes up, so that your Honor may be guided as to the legal points involved. The case was tried here and then went up to the Supreme Court and the Court of Errors.

THE COURT: The opinion is of the Supreme Court and the Court of Errors affirmed it?

MR. RECORD: Yes.

Counsel for the plaintiff opened the case to the jury.

Counsel for the defendant opened the case to the jury.

MR. RECORD: Mr. Hobart, I suppose you will admit the fact that the administrator has been appointed?

MR. HOBART: Oh, yes; there is no question about that.

George W. Morgan—Direct.

GEORGE W. MORGAN, sworn.

DIRECT EXAMINATION BY MR. RECORD:

Q. Where do you reside? A. Goshen, Orange County, New York.

Q. What is your business? A. At the present, do you mean?

Q. Yes. A. Looking after the air compressor in the Erie shops.

Q. In the Erie shops in Jersey City? A. Yes, sir.

Q. Employed by whom? A. The Erie Company.

Q. The Erie Railroad Company? A. Yes, sir.

Q. What was your business before that? A. Engineer.

Q. Engineer? How long were you an engineer? A. Thirty years.

Q. You mean a locomotive engineer? A. Yes, sir.

Q. Did you serve an apprenticeship as a fireman before you became an engineer? A. Yes, sir.

Q. Upon what road were you employed as an engineer for thirty years? A. The Erie Railroad.

Q. Upon what road were you employed as a fireman? A. The Erie railroad.

Q. Were you employed by the Erie Railroad as an engineer on the 21st day of October, 1910? A. Yes, sir.

Q. What time did you start out at that morning? A. 7.30.

Q. From where and to what place were you bound? A. Jersey City to Port Jervis.

Q. You took an engine out of the Erie Railroad yard bound for Port Jervis? A. Yes, sir.

Q. What kind of train was it, freight or passenger? A. Local passenger.

Q. It was a local passenger train; what time did you go to the engine before you took it out on that morning? A. I should judge about five minutes of six.

Q. Where did you find the engine? A. Standing outside of the engine house, the fore pit; what they call the fore pit.

Q. Had you driven that engine the day before? A. No, sir.

Q. How long before that time had you driven that particular engine? A. Sixteen months lacking four days.

Q. What was the condition of the engine when you took it with reference to its being fixed up ready to go out on the road that morning? A. Well, there was a whole lot of necessary tools to be put on, to have the engine equipped for the road.

Q. What did you do to fix the engine, in preparation for the trip? A. Well, had to look after lamps, headlights, fire tools, engine tools, flags, fill lubricators, road cup, oil the engine around.

Q. When you started out had you done everything that you knew to do to make the engine in proper condition for running? A. No, sir.

Q. What remained to be done? A. Sir?

Q. (Repeated by the stenographer.) When you started out had you done everything that you knew to do to make the engine in proper condition for running? A. That was my intention.

Q. So far as you knew you did everything you knew? A. Yes, sir.

Q. Was there sufficient water in the boiler when you started? A. Yes, sir.

Q. How do you know that? A. Well—

Q. (Interrupting.) Can you tell? A. We have water glasses and gauge cocks in all engines.

Q. You tested it by those? A. Yes, sir.

Q. How far in your judgment did you have water sufficient to last before you needed to have another supply when you started out? A. Well, this morning there was a special order that there was no water at Harriman.

Q. There was no what? A. No water at Harriman station, where we usually take water on that train, and I took great caution that I would have water. I expected to make a long run to Greycourt this morning, on account of no water at Harriman.

Q. And Greycourt is above Harriman? A. Greycourt was the second station west of Harriman—the third station west of Harriman.

Q. Was there a fire in the boiler when you got on the engine in the morning? A. Yes, sir.

Q. Or did you have to build it; that is, when you got there at six o'clock was there a fire in the boiler? A. Yes, sir.

Q. How far above Suffern is Greycourt? A. I could not exactly—

Q. (Interrupting.) Well, it is above it; it is beyond Tuxedo; it is beyond Harriman? A. Beyond Harriman; it is five to eight miles, let us say.

Q. Yes. Who was the fireman with you on that trip? Who was the fireman? A. Pat Ruane, I think.

Q. Mr. Ruane? A. Ruane.

Q. Was he accustomed to go with you as fireman? Had you been with him before? A. No, sir; this was his first trip with me.

Q. This was his first trip with you? A. Yes.

Q. Do you know where he was the day before? A. No, sir.

Q. You met him at the engine before you started out when you went there in the morning? A. Yes.

Q. Will you tell the jury what happened with reference to this accident, the time of day and the place, and as you remember it, in your own way? A. What do you mean, what happened?

Q. Well, just tell the jury? This jury knows nothing about it, just tell them what happened when this accident took place? A. Well, afterwards—or shortly after leaving Ramsay station, maybe half a mile or three-quarters—

Q. (Interrupting.) Where is Ramsay? A. West of Ramsay station.

Q. Where is Ramsay? A. Ramsay is first—second station east of Suffern.

Q. Second station east of Suffern? A. Yes, sir.

Q. Go ahead. After leaving Ramsay, what? A. After leaving Ramsay station, half a mile or three-quarters, I heard a loud report of the firebox, which I thought was no more than a tube bursting.

Q. What happenel? What happened after the report? A. Well, the fire, water and everything else; I don't know what happened, I was so excited.

Q. Well, tell what you remember? What took place so far as you remember? A. Nothing else took place, only fire, water and everything blew all over.

Q. Blew out of the door? A. Firebox door.

Q. And what happened to Ruane? A. That I could not say; didn't see him.

Q. Was—did the flame of the fire come out of the firebox into the cab? A. Yes, sir; had to, I suppose.

Q. How long did that last before you found out what happened? A. It was all over in a short time, maybe a minute.

Q. All over in a moment? A. Minute.

Q. What did you do, stop the engine, or did it stop itself? A. No, we stopped the engine.

Q. You stopped the engine, and when it was over in this minute, where was Mr. Ruane? A. That I don't know where he was.

Q. That is, he was not there? A. That was my first idea, to look to see where he was.

Q. And he was not there? A. He was not there.

Q. He disappeared? A. He disappeared.

Q. Was he there at the time of the explosion? A. Yes, sir.

Q. He was right there with you, and he disappeared when this explosion took place?

THE COURT: The witness is not answering. If he was there, was the question. He said nothing to you. I don't know whether you noticed it or not. He did not say yes or no; he shook his head.

Q. (Repeated by the stenographer.) He was right there with you, and he disappeared when this explosion took place? A. Yes, sir.

Q. He was in front of the firebox? A. That I could not say.

Q. But he was in the cab with you? A. He was in the cab.

Q. And he had been shovelling coal, and tending to the fire and the duties of a fireman all the way up prior to this time? A. Yes, sir.

Q. When did you next see him? A. In the hospital at Suffern.

Q. As soon as you stopped the train what did you do; did you get out, or what did you do yourself? A. Tried to get out.

Q. What? A. I tried to get out; finally got out all right.

Q. Did you then try to find Mr. Ruane? A. Yes, sir.

Q. What did you find out? A. Didn't find out anything for two hours——three hours afterwards.

Q. Then what did you find out? A. Found out he was in the hospital.

Q. And did you see him there? A. Yes, sir.

Q. Was he alive? A. Yes, sir.

Q. What was his condition? A. Nothing.

Q. I mean what was his condition, was he conscious? A. Yes, sir.

Q. Or was he— A. (Interrupting.) He was conscious when I went in and spoke to him.

Q. But he had been injured? A. Yes.

Q. Well, what became of him? A. I don't know.

Q. You did not stay until he died? A. No, sir.

Q. And you do not know anything about that? A. No, sir.

MR. HOBART: We admit that he died.

MR. RECORD: Yes, it is admitted that he died as a consequence of these injuries?

THE COURT: As a result of these injuries.

MR. HOBART: Yes.

THE COURT: All right.

Q. Did you on the way up to Suffern test the condition of the water in the boiler from time to time? A. Yes, sir; that is our business to look.

Q. That is your business. Now, tell the jury how you test, make sure that you have water in the boiler? A. Well, gentlemen, we have three gauge cocks on here in front of us, on the boiler here; over on the left-hand side is a water glass. Now, it is not necessary at all times to use these gauge cocks. We have this water glass here at the left of us where we can see, daylight or dark, there is ample space in front of that where we can see

whether there is water in the boiler or not. Well, if this water does not work up and down in this glass that way, free, it indicates that the glass is not in working order; consequently, we turn on, open these spigots to know whether we have water.

Q. Did you——or did the gauge show that the water was in working order? A. Yes, sir.

Q. Did you have an instrument called an injector? A. Yes, sir.

Q. What is the purpose of that? A. To supply water to the boiler.

Q. To supply water to the boiler? A. Yes, sir.

Q. And how do you work that; does it work itself? How do you work it? A. No, sir, we work it by a lever; that is the—spindle handle that forces the water to the boiler.

Q. How often do you do that? How often do you do that? A. A good many times on a local train; I could not tell you how many times.

Q. That is part of your duty, and you have been accustomed always to do that? A. Yes, sir.

Q. That is a part of the standing duty of an engineer? A. Yes, sir.

Q. And you attended to all of that on this trip? A. Yes, sir.

Q. So far as you know was there any interruption to the flow of the water on this trip prior to the accident? I mean on that day; was there any interruption to the flow of the water? A. None that I know of.

Q. The water was flowing freely at all times up to the time of the accident? A. The injectors were working freely at all times.

Q. Yes. Do you remember the last place at which you tested it? Have you any personal recollection of that? A. A good deal from memory; I can't—

Q. (Interrupting.) I mean where; at what place on the line prior to the time of the accident do you remember having looked at your water gauge or your injector; do you remember that? A. Yes, sir.

Q. What place do you remember? A. Allendale; I tried my gauge cock.

THE COURT: Where is that with respect to Ramsay station?

A. Sir?

THE COURT: Where is Allendale with respect to Ramsay station?

Q. Where is Allendale with respect to Ramsay? A. About three miles.

Q. Three miles this way? A. East of Ramsay.

THE COURT: You reach Allendale before you reach Ramsay on your trip?

A. Yes, sir.

Q. That is to say, four or five miles away from the scene of the accident you had tested up your water gauges to see that the flow of the water was all right? A. Yes, sir.

Q. And how many minutes would that occupy in your judgment, prior to the accident; how long a time before, five minutes, ten or fifteen, or how long; how long before the accident was it? You say it was five or six miles; now, what time was it? A. Maybe nine minutes.

Q. Hal you seen Mr. Ruane firing up the engine on the way up and attending to his duties? A. Yes, sir.

Q. So far as you know he tended his duties as fireman properly on that trip? A. Yes, sir.

Q. How many cars were there on the train? A. Seven cars leaving Jersey City.

Q. How were you supplied with coal? A. Plenty of coal, full tank of coal.

Q. Was the supply of coal all right, as far as you know? A. Yes, sir.

Q. Was this the usual number of cars on the train which you had that morning, or an unusual number? A. Usual number of cars.

Q. Usual number? A. Usual number as far as Walden; there they cut off three cars, left only four cars from Walden to where the accident happened.

Q. Did you inspect the engine after the accident in any way? A. Yes, sir.

Q. What did you see? What was the condition that you found after the accident? A. Left-hand front corner of the crown sheet dropped down.

Q. Will you explain to the jury what the crown sheet is? A. The crown sheet is over the firebox, the heaviest part of the boiler; the water rests on top of the crown sheet.

Q. The crown sheet separates the fire from the water, is that it? A. Yes, sir.

Q. What is its shape, circular shape or square? A. Square.

Q. It is square surface at the top? A. Well, some are square, some are oval, round.

Q. What was this one, circular or round? A. Little bit rounded.

Q. Little bit rounded; and that was the roof, so to speak, of the firebox? A. That was the roof of the firebox.

Q. And one corner of that had come down? A. Yes, sir.

Q. That was blown out, or were the bolts loose, or what was the condition of it? What did it look like? Was the corner there bent down, or had it been blown away? A. It dropped down.

Q. It just dropped down? A. It just dropped down.

Q. Pulled the bolts out; is that right? A. Just dropped down.

Q. Now, is the crown sheet held up by bolts? A. Yes, sir.

Q. What had happened to those bolts? A. Well, broke, I suppose.

Q. That is, it was pulled away from the bolts? A. Pulled away.

Q. And fell down. How big a space was there after it had fallen down? A. Well, I could not exactly say what the space was.

Q. Well, how much, was it a yard or a foot square, or what? A. I do not think it was a yard; maybe a foot.

Q. Maybe a foot. When you go in at night or at the end of a run what do you do as a matter of practice with the engine? What do you engineers do? A. After our train is taken away?

Q. Yes. A. We back up to the turntable, turn the engine, leave it over the ash-pit for the fire to be cleaned and looked after.

Q. Then you disappear? A. Then we get off.

Q. And the fireman gets off with you? A. Yes, sir.

Q. And then some local employees take charge of the engine? A. Yes, sir.

Q. What is your custom when you go to the engine; what do you do? A. Inspect the engine thoroughly before we go out, always.

Q. But you find the engine prepared for you when you go after it in the morning? A. Not always.

Q. Not always? A. No.

Q. But if it is not prepared then you prepare it; is that right? A. Yes.

Q. What is the general custom when you go to the engine in the morning for a run; do you find water and steam and coal and everything all pre-

pared? Or do you have to fix all of that? A. Usually it is all prepared, the water—there is coal, and the oil the firemen have to look after, all the supplies; but we always have to see that we have a tank of water before leaving.

Q. So far as you know all of those things had been attended to that morning? A. Yes, sir.

Q Now, after you inspected the crown sheet did you do any other thing about the engine after the accident happened? A No, sir.

Q. Did you test up the water in any way? A. Only in my tank; that is all.

Q. To see if you had water in the tank? A. Water in my tank.

Q. What in your judgment was the cause of that accident? A. Well, I could not really explain that.

Q. Well, what might have caused it?

MR. HOBART: Objected to as immaterial —"what might have caused it."

MR. RECORD: Well, I am not so sure but what it is. My only point is this. Here is an expert upon this subject, if there is any. He was there, and he has had about thirty years' experience with all this sort of work. Now, I suppose he could say as an expert, handlng this combination of water and steam and fire, the different ways that it might have happened. It might have happened by an explosion in the coal, or it might have happened by the fireman throwing something in, and it might have happened by the water getting low, and the water being suddenly let in upon a hot surface, and so on. I am not particularly anxious to press the question.

THE COURT: Wouldn't the usual question of an expert be, Mr. Record, what, *in*

his judgment, and what he found upon examination to have been the probable cause? When you use the word "might" it takes in every possibility, even the remotest.

MR. RECORD: I think your Honor is right about that.

THE COURT: I know exactly what the point is counsel is referring to, but it seems to me as you put the question that that is the objectionable part of the question. Might is a word of that consequence that it might go to the remotest possibility. I think that is beyond what an expert would be permitted to testify.

MR. HOBART: State what the probable cause was.

THE COURT: He may state what upon examination he found was the probable cause. I do not think that would be a bad question.

MR. HOBART: If he is able to say, oh, yes.

Q. What in your judgment was the probable cause of that? A. I could not explain.

Q. On the former trial did you express an opinion as to that?

MR. HOBART: I object to that, unless his attention is called specifically.

THE COURT: Yes; he is entitled, I suppose, to have all questions put before him.

Q. I read from the record of the former trial this question, page 20: "Q. What, in your opinion, caused that accident? A. My opinion is this, that engine was damaged before I took it out of Jersey City, or had been damaged by somebody else unbeknownst to me and the company. Q. In what way? A. Short of water or something of the

kind." Now, did you so testify on the former trial?

MR. HOBART: I object to that because counsel is attempting to impeach his own witness.

MR. RECORD: I am trying to refresh his recollection.

MR. HOBART: This witness has not shown any attitude of deceiving; he has told us frankly everything he knows.

THE COURT: Well, suppose that you were wrong in your thought as to counsel's purpose, that it is not to impeach his witness, but to refresh his recollection; then, what have you to say?

MR. HOBART: And that I do not understand him to say.

MR. RECORD: That is what I am doing it for.

THE COURT: I think, Mr. Record, if it is for the purpose of impeaching your witness, it is improper. The purpose of assisting him in his recollection I think is proper; I do not think Mr. Hobart does object if you say that is the purpose.

MR. HOBART: I do not think I can object to it if that is the purpose.

Q. For the purpose of refreshing your recollection I ask you if you testified that way on the former trial, as an expression of an opinion? A. I may have, but, of course, you have the book; can't remember those things.

Q. Is that a probable cause? Would that account for it, for the accident?

MR. HOBART: I object to that as immaterial.

A. I could not say that; there are so many other things.

Q. Can you say whether in your opinion that is a probable cause or not?

MR. HOBART: I object to that on the ground that it is immaterial, as to whether it is a probable cause. What is the probable cause?—that is another question. A mere guess is clearly immaterial.

THE COURT: Well, the only question is, Mr. Record, whether or not that is getting to that same question. The real question is as to the probable cause. That is what you are naturally reaching for.

MR. RECORD: Well, I am going further than that. I do not wish to press any question that counsel objects to, but I do not want to get any more objections to these efforts.

THE COURT: The only question in my mind—what is that last answer?

(Answer repeated by the stenographer.) "I could not say that; there are so many other things."

THE COURT: It seems to me that that answer would make it almost impossible for the witness to answer your question.

MR. RECORD: Unless this refreshes his recollection so that he changes it.

Q. In your judgment was that the probable cause of this accident—in your judgment? A. No; I do not think so.

Q. What do you think was the probable cause? A. It may have been powder or something of that kind caused that boiler to give way as it did.

Q. Do you think it was powder? A. Well, that is my opinion.

Q. You think now that it was powder? What makes you think that? A. I think it was powder because I found powder in the tank before.

Q. You had found powder in the tank before? A. Yes, sir, in the coal.

Q. When was that? A. That was when I was on a milk train, found twenty-five pounds of powder, blasting powder; I should judge about twenty-five pounds in the can.

Q. You found that where? A. In the coal.

Q. In the coal in the tender? A. Yes, sir.

Q. Was that the only time you ever found pow der in the coal? A. Not as I can remember.

Q. That is the only time you can remember? How long before this was that occasion? A. Some time before.

Q. About a year or five years, or what? A. Yes, sir—more than five years.

Q. More than five years? How many years? A. Maybe seven years.

Q. Maybe seven years, and that was the only time in your history that you ever found powder in the coal? A. Yes.

Q. And that did not get into the firebox? A. That did not get into the firebox; that can was so large that it would be noticeable in shovelling in the firebox; it rolled down so it would be noticeable—a large can like that, a twenty-five pound can; but if it could be packed into a small package and pounded down so that it would make quite a—

Q. (Interrupting.) I do not think that is in response to my question, if your Honor please. He is just going into the might and so on. I wish to hold the witness as far as I can, because he is not —in a sense he is not our witness.

MR. HOBART: You subpoenaed him.

MR. RECORD: What is that?

MR. HOBART: You subpoenaed him.

MR. RECORD: Yes, but what I mean is he is in the employ of the railroad company.

MR. HOBART: That is no reason why he should not tell the truth, if he is.

MR. RECORD: He is not going to testify any more than he can help. I press that, but I do not think that ought to go on the record.

Q. (Repeated by the stenographer.) Maybe seven years. And that was the only time in your history that you ever found powder in the coal? A. Yes, sir.

Q. (Repeated by the stenographer.) And that did not get into the firebor. A. That did not get into the firebox; that can was so large that it would be noticeable in shovelling in the firebox—

THE COURT: Do you wish to have the rest of that stricken out?

MR. RECORD: Yes, sir.

The part of the question beginning "that can was so large," &c., stricken out.

CROSS EXAMINATION BY MR. HOBART:

Q. I understood you to say that you got to the engine yard where this engine was at about five minutes of six on the morning when the accident happened? A. Yes, sir.

Q. Do you remember the number of the engine? A. 957.

Q. Now, do you recall what was the time that you got on board of that engine to start it out in order to go down to the passenger shed and to pick up your train? In other words, what time did you begin to put the engine in operation? A. About five minutes to six; that is when I first got around there.

Q. You got there five minutes of six? A. Yes.

Q. But when did you actually start the engine again; when did you leave the yard or start for the shed? A. About a quarter of seven; may have been a little bit later than that because after leaving the fore pit I had to have the fuel-tank of water to get.

Q. What was the time your train left that morning? A. Seven thirty.

Q. So that you were in and around the engine for about an hour and twenty minutes or so before you started to put it in motion; is that correct? A. Yes, sir.

Q. And during that time you looked around to see if you had the necessary tools, looked after your headlight, oiling, and so on? A. Yes.

Q. I suppose the fireman assisted you in that? A. Yes, sir.

Q. That was part of his duty, to assist you, wasn't it? A. It was part of his duty, yes, sir.

Q. And did you, among other things, look into the firebox? A. Yes, sir.

Q. The firebox has a door, has it not? A. Yes, sir.

Q. And in order to look into the firebox do you open the door? A. Yes, sir.

Q. You know what a firebox looks like, of course; you have seen them many a time; you did just what you usually— A. (Interrupting.) A good while.

Q. You did that morning just what you usually did in the way of inspecting and examining the engine? A. Yes, sir.

Q. It was part of your work, as I understand it, to inspect the engine carefully, and see that it worked before you started it? A. Always.

Q. And would part of that inspection include the examination of the firebox? A. Yes, sir.

Q. And did you do that that morning? A. Yes, sir.

Q. When you looked in the firebox did you find anything out of order or apparently wrong? A. Saw nothing out of order, if I remember right; the fire was low and, of course, they naturally leave them lay partially that way—low pressure that way, to keep them from glowing off nad save pumping them.

Q. You found the firebox in the condition that it usually is left in, did you? A. Yes, and they are left out that way when they are standing.

Q. When they are standing over night? A. Yes, standing over night.

Q. And so far as the fire was concerned there was nothing out of the ordinary? A. Nothing out of the way that I could see.

Q. On that night it was in the usual way? A. The usual way, yes, sir.

Q. And so far as the firebox itself was concerned, did you find anything apparently wrong with that when you looked at it? A. Not that I could see, if I remember rightly.

Q. Can you see the entire firebox when you open the door and looked in, as you did? A. Sometimes; you can if the fire is bright, or partly bright, you can see every part in it.

Q. Well, did you see every part of the firebox that morning? A. I did.

Q. You did? A. Yes, sir.

Q. Let me ask you in particular whether you observed if there was anything wrong in the way of irregularity or wavy condition, or anything like that in the crown sheet when you looked into the firebox? A. I do not think I saw anything out of the way with the crown sheet.

Q. The crown sheet is the upper part of the firebox? A. The upper part of the firebox.

Q. So that when you look in the firebox you see the crown sheet? A. Yes, sir.

Q. And did you see it that morning? A. Yes, sir.

Q. And as I understand, you observed no irregularity, nothing irregular or wavy or out of order, or anything else out of the way with the firebox? A. Nothing out of the way.

Q. Did you test that firebox before you started out? A. Yes, sir.

Q. And found that was all right, did you? A. Found it was all right.

Q. Did you test your injectors before you started out? A. Yes, sir.

Q. And you found that was all right? A. Had both injectors on before leaving Jersey City to see that they were in good condition.

Q. Let me ask you another question: You say those injectors are operated by a lever? A. Yes, sir.

Q. Lever in the cab? A. Lever in the cab. The injector is in the cab.

Q. Now, where does the injector pump the water from, and to where does it go when it is pumped? A. It is drawn from the tank and pressed in the boiler.

Q. The injector is simply the engineering name of the pump? A. Yes, takes the place of the pump.

Q. The water, as I understand it, is placed in the tank to start with? A. The water is placed in the tank.

THE COURT: It is very commonly called a tender, isn't it?

A. Tender, yes.

Q. And in order to carry that in the boiler do you have some hose pipe, or some other kind of pipe running from the tender to the boiler? A. Yes; there is a hose underneath; a hose con-

nected to the tank, and then the feed pipe comes up this way, and couples on to the injector.

Q. And when the injector is operated that begins to pump the water from the tank to the boiler; is that correct? A. Pump the water from the tank to the boiler, yes.

Q. You do not actually see the water moving from the tank into the boiler, do you? A. No, sir.

Q. Of course, it is covered by the hose and the other machinery, whatever that may be? A. Yes.

Q. Well, how are you able to tell whether the injectors are working all right? Can you hear the water, or can you tell by the pressure of the injector, or how do you tell? A. Tell by the sound of the injector. If you have any idea it is not working, and you place your hand down this way against the water pipe and the injectors were not working, they would be hot.

Q. And do you recollect whether you did that that morning? A. The injector was working all right, satisfactory in every way.

Q. You spoke of two injectors. Is there one on each side of the cab? A. One on each side of the—

Q. (Interrupting.) On each side of the cab, or how? A. Some engines have two on each side, and others have one on each side.

THE COURT: How about this engine?

Q. This engine has an injector on which side of the engine? A. Right side.

THE COURT: On the engineer's side as well as on the fireman's side?

A. Yes.

Q. And does the fireman sometimes himself operate the injector? A. Yes, sir.

Q. The purpose of having two, I suppose, is in case one of them gets out of order to operate the other? Do you know whether that is the case?

A. Yes, sir; oftentimes ask the fireman to put on the other, the left injector, in case the right one gets out of order.

Q. Sometimes they get out of order? A. Yes, sir.

Q. Even while you are out on a run? A. Yes, sir.

Q. And even though they may be all right when you start? A. Yes, sir.

Q. That sometimes happens, does it not? A. Yes, sir.

Q. Coming back to this crown sheet for a moment; you have told us that you suppose some of the bolts had come out or had given way; did you observe particularly after the accident whether or not any of the bolts had come down, or is that simply your argument, or your own explanation of what might have been the immediate cause of the accident? A. That is my own explanation. Of course, it was not my business.

Q. You did not then, I understand, take any particular notice of these bolts after the accident? A. No, sir.

Q. You, of course, were very much excited and disturbed, naturally, because of what had happened? That is correct, is it not? A. Yes, sir.

Q. Are those bolts on that engine so arranged that you can see some part of them on the under side of the crown sheet as you look into the firebox? A. You can see the heads of the bolts, yes, sir.

Q. And they are on the under side of the crown sheet? A. They are on the under side of the crown sheet.

Q. And do you recollect about how many there are? A. Well, there is a good many; I could not tell you how many.

Q. You do not know how many? A. Do not know how many.

Q. But you can see those heads as you look into the firebox? A. Yes.

Q. And do you recollect as you looked into the firebox, as you have already told us, on this morning of the accident, and looked at the crown sheet—did you also look at the bolts; in other words, could you look at the crown sheet without also seeing the bolts? A. Look at the crown sheet, you see the bolts.

Q. You have to see the bolts to see the crown sheet, do you not? A. Have to see the bolts.

Q. Was there anything, so far as you could see, out of order in connection with those bolts by which the crown sheet was held? A. As I remember I do know whether there was anything out of the way.

Q. You saw nothing wrong? A. Saw nothing wrong.

Q. Do you know what the name of these bolts is? A. Crown bolts, I think.

Q. Are they sometimes called radial stays; or is that another kind of bolt? A. I don't exactly know the name of those.

Q. You know them as crown bolts? A. Crown bolts.

Q. I suppose that is because they are fastened to the crown sheet? A. Yes, sir.

Q. I suppose this is the only time you have had an explosion or accident of this kind, Mr. Morgan, was it? A. Yes, sir.

Q. And as I understand you, in answer to Mr. Record's question, you are not in position to say what in your opinion is the probable cause of this happening? A. I can't; I don't understand it, and I can't give no explanation.

RE-DIRECT EXAMINATION BY MR. RECORD:

Q. I want to ask him this, in respect to what he has been asked before: Was there a fire in the engine when you arrived there that morning? A. Yes, sir.

Q. How long had that fire been burning? A. I don't know; I didn't bring the engine in off the road; I don't know anything about that.

Q. What part of the crown sheet had fallen down after the accident; was it the part in the rear of the crown sheet or up over the door of the crown sheet? A. Part next to the flue, the flue sheet, over the top of the flue sheet.

Q. That does not mean anything to me or the jury; I don't know. The crown sheet starts from a point over the door, doesn't it? A. Yes, sir.

Q. And then goes back, goes right ahead or goes back—goes right ahead, I call it, several feet? How long is it; how many feet long is it? A. I should judge five foot.

Q. Five foot? A. Five and a half, maybe eight foot, the different—different class of engines.

THE COURT: On this particular engine, as nearly as you can tell us, how long was it—engine No. 557—your best recollection?

A. I should judge seven foot and a half or eight feet.

Q. The part of the crown sheet that had fallen, was it in the back part or the front part; towards you or away from you? A. Away from me.

Q. On the further end? A. On the further end.

Q. The back end of the cab? A. I call that the front end.

THE COURT: Because of the fact that it is toward the front of your engine?

A. The front of the engine; I call it the front end away from the door.

Q. Well, the front end away from the door? A. The front end away from the door; I call it the front end away from the door.

Q. When you looked in what kind of fire was there in that? A. The fire was low.

Q. The fire was low? A. Generally let the fire die down that way to keep the engine cool while standing around.

Q. Then you opened the door; you didn't put your head in the door at all, did you? A. No; it is not necessary.

Q. Well, you couldn't, could you, on account of the fire? A. No, sir.

Q. You could not have put your head in; all you could do was look in over the fire and see what you could see; is that right? A. Just merely open the door; just the same as you would open a stove door.

Q. And look in? A. And look in.

Q. And you saw nothing wrong? A. Saw nothing wrong.

Q. And that was your habit all the time? A. Yes.

Q. Were you employed by the Erie Railroad when you testified before? A. Yes, sir—no.

Q. You were not? A. I was not.

Q. After this accident were you discharged? A. Yes, sir.

Q. And then you have been re-employed since the last trial? A. Yes, sir.

Q. What is the object of watching out for the water so carefully; what is your idea in watching your injector and keeping the water freely flowing? A. Well, if we did not do that why, it would create damage.

Q. What damage? A. The water would get low in, and probably the engine would give out.

THE COURT: Get low where,—

A. Low in water.

THE COURT: Where do you mean the water would get low and create damage?

A. If we did not keep this injector on and watch our water glass.

Q. The water would get low and it would stop the engine, is that right? (No answer.)

Q. (Repeated by the stenographer.) The water would get low and it would stop the engine; is that right? A. No; it would not go.

Q. Well, what would happen? A. I don't know what would happen? A. Well, why do you do it then; why do you keep the water on there; what is the reason of it; what is the engineering reason? A. Engine would get down in steam and it would not go; you would have to stop.

Q. You would have to stop? A. Yes, sir.

Q. Is there anything other thing that would happen? A. If your injector—

Q. (Interrupting.) For instance, if you let the water down wouldn't that tend to heat the crown sheet unduly; wouldn't the crown sheet get hot if you withdrew the water from it? A. If you allow the water to get down it will, yes.

Q. Then, what would happen if you let the water back after it had been withdrawn? A. Start the engine leaking.

Q. Start the engine leaking? A. Yes, sir.

Q. What would be the effect of the cold water coming back on the crown sheet? A. Well, it would affect the engine so you could not get along with it any further.

Q. In what way? A. These crown bolts and flues would start up leaking.

Q. Would start to leak? A. Yes, sir.

Q. What would happen to the water? A. Well, you couldn't go any further; you would have to leave that train; that is the only thing I know would happen.

Q. Well, what would be the effect of the cold water upon the hot metal if the water was drawn off and then left back again? A. It would naturally leave a blister.

Q. Would leave a blister? A. And crack.

Q. And crack? A. Yes.

RE-CROSS EXAMINATION BY MR. HOBART:

Q. When you inspected that engine on this morning of the accident before you started out on your trip, was there any leak so far as you saw? A. I don't think there was, near as I can remember; I don't think there was any leak to the engine.

Q. If there had been any leak you would not have taken the engine out, would you? A. No; if there had been any leak about the flue or crown sheet we would call the dispatcher's attention to it and refuse to take the engine out.

Q. It is against the rules to take a leaky engine out? A. Yes.

Q. And you inspected it sufficiently to satisfy yourself that there was not any such condition on that engine that morning, did you not? A. Yes, sir.

Q. And as I understand it, when you made your inspection you did it in the usual way, in the way you had been doing it for many years past? A. For many years.

Q. One other question: When you examined the crown sheet that morning, was there any indication of any blister or any crack? A. None at all; nothing; everything was in perfect condition.

Q. Now, reference has been made to your having entered the employ of the company again. How did you come to enter the employ of the company—I mean after this first trial; did you

apply for employment? A. Well, I think the city was making a good many complaints in regard to black smoke, and the general manager thought it necessary to appoint two men, experienced men, to instruct firemen to eliminate this black smoke, and I was appointed as black smoke inspector.

Q. And you held that position for some time? A. Held that position for a year and a half.

Q. And then after you were assigned to duty in the inspection of air compression; is that right? A. Yes, sir.

Q. Did you apply for re-employment in the same capacity? A. No, sir.

Q. The general manager, as far as you know, was looking around for experienced men for that position? A. He wanted two experienced men for this position.

Q. Of course, your name was on the company's rolls as having had a good many years—as a man of experience? A. Yes.

Q. You have not run on a locomotive since? A. No, sir; I have not run on an engine since.

(Witness excused.)

CATHERINE FARMER, sworn.

DIRECT EXAMINATION BY MR. RECORD:

Q. Mrs. Farmer, where do you reside? A. Jersey City.

Q. What relation were you to Patrick Ruane? A. Sister.

Q. How old was Patrick Ruane when he died? A. Thirty years old.

THE COURT: Talk a little louder, Mrs. Farmer.

Q. Speak to the jury so they will understand? A. Thirty years.

Q. Where was he born? A. Ireland.

Q. How long had he been in this country? A. Eleven years.

Q. During that time with whom had he been employed? A. The Erie Railroad.

Q. The Erie Railroad? A. Yes, sir.

Q. All the time? A. Not all of the time.

Q. How many years of that time? A. Oh, between seven and eight.

Q. Between seven and eight years? A. Yes, sir.

Q. In what capacity was he employed by them? A. As fireman and engineer.

Q. Had he been regularly employed as an engineer? A. No, sir.

Q. Only at different times? A. The last two years.

Q. The last two years he had been employed as an engineer? A. Yes, sir.

Q. What wages had he received during those two years, if you know? A. Well, if he worked he would get a hundred and twenty-five—thirty—

MR. HOBART: I ask if this witness knows.

THE COURT: Of course, that is a point of necessity.

MR. RECORD: Suppose, let me lay the foundation.

MR. HOBART: I am perfectly willing to stick to it. I have the whole thing here, Mr. Record; you may look at it.

Q. Where did he board? A. With me.

Q. With you? A. Yes, sir.

Q. You knew his general earnings so far as he told you? A. Yes, sir.

Q. And your foundation of your knowledge is what he told you? A. Yes, sir.

MR. HOBART: Then I submit she is incompetent to testify.

THE COURT: It depends entirely upon what he may have told her, Mr. Record. I do not see how it lays a foundation for her testimony,—as to what it is she may know from some other source. However, it may be perfectly proper. May I ask a question of her?

BY THE COURT:

Q. How do you know, Mrs. Farmer, what he earned? Do not tell us what he earned, but tell us how you know what it was? A. Well, just as he told me, and how he gave me the money to send to my parents; as far as I know that is what he told me.

THE COURT: Of course, it may be competent as to one feature.

MR. RECORD: Of course, I do not care how much—as to whether the payment—

MR. HOBART: I assure you that is from the record handed to me by the superintendent in response to my request (exhibiting paper.)

MR. RECORD: I stipulate that these were the amounts of money that from time to

time had been paid to him, and we will put that in the record.

THE COURT: Well, should not that be read right now?

MR. RECORD: These are different months and different amounts; they run from thirty-five dollars and the highest is ninety-eight dollars. Part of the time he was employed in each month; he was employed by the defendant practically, evidently; some months he was steadily employed and some months he was not. This seems to be the best thing; why not put that right in.

The paper was received and marked Exhibit 1, plaintiff.

Q. Did he live with you at the time he was killed? A. Yes, sir.

Q. How long had he been living with you prior to the time of his death? A. Well, I think it was May.

Q. In May? A. May or June, yes.

Q. What was the condition of his health? A. Perfect health.

Q. Did he have any family? A. No, sir.

Q. He was an unmarried man? A. Yes, sir.

Q. Are you the daughter of Patrick Ruane, the administrator in this case? A. Yes, sir.

Q. You are the daughter of Patrick Ruane? A. Yes, sir.

Q. Is he alive? A. Yes, sir.

Q. Where does he live? A. Ireland.

Q. How old is he—or how old was he at the time of the accident? A. Between seventy-one and seventy-two.

Q. What is his condition of health?

MR. HOBART: If she knows; one moment, if she knows.

Q. If you know? A. Well, about a month ago he was in good health; we had a letter from him a month ago, in good health.

Q. So far as you know? A. Yes, sir.

Q. Do you know how much money on an average your brother had contributed to your father for his support? A. Well, I should judge around three hundred dollars a year.

Q. How do you know about it? A. I sent it.

Q. You sent it? A. Yes, sir.

Q. Where did you get it? A. Sometimes I got it in real estate—

Q. (Interrupting.) No; I mean did you get it from your brother Patrick Ruane? A. Yes, sir.

Q. Then how did you send it over? A. Sometimes I sent it in real estate orders; sometimes I would send the money just as it was, and sometimes I would get it in a post office order, just as I—

Q. (Interrupting.) Where did you get your real estate—to what real estate did you go to get your money order? A. By the junction.

Q. By the Junction, at the junction? A. Sometimes I would get it there, the nearest place to me.

Q. Did he send the money over in this way through you regularly or—

Q. (Interrupting.) A. Yes, sir.

Q. Or at stated times? A. Regularly.

Q. What is your father's business, how does he get a living over there; what is his occupation? A. Nothing, only a little farm.

Q. Farmer? A. He has a farm, yes.

Q. For how long a time had he been sending this money? A. Ever since he came to the country.

Q. He had been sending money over there ever since he came to the country? A. Yes, sir.

Q. You testified he had been here how long? A. Eleven years.

CROSS EXAMINATION BY MR. HOBART:

Q. Is your mother living also? A. Yes, sir.

Q. What is her name? A. What is that?

Q. What is her name? A. Well, Ellen Ruane.

Q. And this money that your brother,—the one that was killed—the money that he sent over you sometimes have sent it by post office, sometimes by what you call a real estate order? A. Yes.

Q. What is the name of the real estate agent through whom you would send these real estate orders? A. Mr. Reynolds.

Q. Mr. Reynolds? A. Yes, sir; he is in business at the Junction.

Q. At the Junction; you mean at the Five Corners? A. No, sir; the Junction of Grand Street.

Q. Junction of Grand Street? A. Yes, sir.

Q. What other street? A. Grand Street and Communipaw Avenue.

Q. Grand Street and Communipaw Avenue, Mr. Reynolds? Did you usually send these orders through Mr. Reynolds? A. No, sir.

Q. But only sometimes? A. Sometimes, yes, sir.

Q. And I presume he has a record of what were sent; did he keep a record? A. I don't know; I can't say that.

Q. Did you keep a record? A. No; I did not. I began just the summer before he got killed.

Q. How long had you been sending those over for Patrick? A. All the time.

Q. You mean during the entire time he had been in this country? A. Yes.

Q. Well, he had only been staying with you since May? A. No, sir.

Q. Well, how long had he been boarding with you? A. Well, he had been boarding with me—

he went to Port Jefferson and when he came back again—

Q. (Interrupting.) The last time he had been boarding with you before the accident was from the previous month of May; is that correct? A. Yes.

Q. How did he board; what did he pay? A. He paid between seven and eight.

Q. You mean seven and eight dollars a week? A. Yes, sir.

Q. For his board? A. Yes, sir; sometimes he would leave it back, according to what he would have.

Q. Well, his understanding with you was that he would pay seven or eight? A. Seven dollars a week; that was the understanding.

Q. Seven dollars a week, according to what he might be able to earn, is that right? A. Yes, sir.

Q. Sometimes it might be seven, sometimes eight? A. Yes.

Q. I suppose when he worked over time and earned a little more he would pay you eight? A. Yes, sir.

Q. Of course he bought his own clothing and looked after his own personal expenses? A. Yes, sir.

Q. Now, when you sent this money over for your brother—you said about three hundred dollars a year—please tell us whether you sent it for both your father and mother? A. Well, it always went to my father; the money orders were always taken for my father.

Q. Made out in his name? A. Yes, sir.

Q. But it was sent to take care of both your father and mother? A. Well, I suppose it was sent to take care of both, but we always sent the money to my father.

Q. They were living together, weren't they? A. Yes, sir.

Q. Your father and your mother? A. Yes, sir.

Q. And your mother needed to be helped just as much as your father, did she not; is that right? A. She had no other income.

Q. Beg pardon? A. She had no other income.

Q. Now, you have some other brothers and sisters, have you not? A. Yes, sir.

Q. And do they send money also to your father? A. I could not say they sent any.

Q. You could not, or they did not? Well, let us begin with Garrett. Garrett lives with your father and mother, doesn't he? A. Yes, sir.

Q. Does he help take care of them? A. Well, he has to help to take care of them.

Q. He works on the farm with them, doesn't he? A. Yes, sir.

Q. Do they own the farm, or do they rent it? A. They own it.

Q. And your brother Garrett helps them run the farm? A. Yes, sir.

Q. Now, you have a brother Martin, haven't you? A. Yes, sir.

Q. Didn't Martin send money from time to time out of what he earned? A. No; he was learning his trade; he could not send any; when he earned it he sent a little, just according as he—

Q. (Interrupting.) How long has Martin been here? A. Fourteen years past now.

Q. Has it taken him fourteen years to learn a trade? A. Not fourteen years; he was not fourteen years here then.

Q. Well, he was ten years here; does it take him ten years to learn a trade? A. I don't know.

Q. How much did Martin earn at the time your brother was killed? A. I cannot tell.

Q. Is Martin here? A. Yes—no, sir.

Q. Where does he work? A. Pennsylvania.

Q. For the Pennsylvania Railroad? A. Yes, sir.

Q. At the Pennsylvania shops? A. Yes, sir.

Q. And he earns good wages? A. Good wages, yes.

Q. Does he send money to your father and mother from time to time? A. From time to time, yes.

Q. How much does he send? A. Well, sometimes he would send twenty-five dollars and ten dollars, just according as to how he could afford to send it.

Q. Was he married at that time; was Martin married? A. No, not at that time.

Q. He was earning about as much as Patrick, wasn't he? A. No; not as much as Patrick.

Q. Not quite so much? A. No, sir.

Q. Well, how much would he send over in the course of a year to your father and mother? A. He would send a hundred dollars or so.

Q. Hundred dollars or so each year? A. Yes, sir.

Q. How much has he been sending since Patrick was killed? A. Well, that I don't know now; he send it himself; he is a married man now.

Q. Now you have another brother Thomas, haven't you? A. Yes, sir.

Q. Where does he work? A. He is a bartender.

Q. Where—what does he earn? A. Ten or twelve dollars a week.

Q. Does he send money to your father and mother from time to time? A. Yes, sir.

Q. Do you know about how much he sends? A. No, sir; I don't know.

Q. He does not board with you? A. No.

MR. RECORD: Are these questions directed as to what happened after the accident in any way?

MR HOBART: I should have limited it, of course, to the time—I am referring to the

time before the accident; you are right, Mr. Record.

MR. RECORD: Before the accident.

MR. HOBART: I am referring to the time before the accident.

A. Oh, he was not here only about a year; he was not working at all then.

Q. But Martin had been sending before the accident about a hundred dollars a month? A. Not a month.

Q. I mean a year; I beg pardon. I mean a year? A. Yes, sir.

Q. And you have still another brother whose name is Edward, haven't you? A. Yes, sir.

Q. And is he earning anything now? A. He is earning now, yes.

Q. He is earning now? A. Yes, sir.

Q. But he was not earning at the time of this accident? A. No; he was not.

Q. Are you quite sure that all that Martin sent in the course of a year before the accident was about a hundred dollars? A. I am quite sure.

Q. Didn't you say on another occasion in answer to the question "Can you give any idea how much it would amount to in a year"—referring to what Martin sent—"I can't say"—wait a minute—didn't you say, "About two hundred dollars, or something like that"? A. I may have said that, but what I sent—

Q. (Interrupting.) A. Martin sent some in addition to what you sent? A. Yes.

Q. Well, Martin is here, isn't he? A. Yes, sir.

Q. Well, he can tell us for himself. Now, your father, you say, at the time of this accident, was about seventy-one or seventy-two years of age? A Yes, sir.

Q. How old is your mother? A. My mother is around sixty-nine or so.

Q. Well, when you said your father was seventy-one or seventy-two, can you tell us which it was; was it seventy-one or seventy-one and a few months, or was it seventy-two? A. I think it was around seventy-two.

Q. Around seventy-two? A. Yes, sir.

Q. At the time of the accident to Patrick? A. Well, I cannot say, I can't really say whether it was seventy-one or seventy-two; it was next birthday at the time of the accident.

Q. Do you happen to remember when his birthday was? A. I do not.

Q. Don't remember that? Well, your recollection of it is that he was about seventy-two at the time? A. Yes, that is my recollection.

(Witness excused.)

MR. RECORD: We rest now.

MR. HOBART: If your Honor please, I would at this time make a motion for a non-suit, on the ground that there is no evidence to go to the jury on the question as to whether or not this defendant was negligent, and on the further ground that the negligence that caused this accident was the negligence of a fellow servant. I call your Honor's attention very briefly to the fact that the claim, and the only claim of negligence in this case is that the defendant neglected its duty in that the locomotive was negligently constructed, negligently inspected and kept in repair, and that the defendant employed careless and neglectful persons, and as a consequence of such neglect the boiler exploded, and so on; that the boiler blew up because of the negligence of the company in employing

said locomotive without properly inspecting same, as a consequence the same was not in a safe condition. That is the entire ground of the action. It is based on the common law theory of the master's duty to exercise reasonable care in the way of inspecting and examining machinery that is furnished to its employees.

Now, it is the law of this State, as settled by the Supreme Court, and confirmed by the Court of Errors and Appeals, that the duty of the master was to exercise what was called reasonable care as distinguished from a high degree of care; and, in fact, the reversal on another occasion was had upon the very ground that his Honor, the trial judge at that time, imposed upon the defendant in his charge a certain degree of care which the court thought was more than the master was legally obliged to exercise. So we start with the proposition that the master is under the duty to exercise reasonable care.

Now, where is the proof in this case that such care was not exercised. The proof, it seems to me, is directly to the contrary, on the part of the engineer, on the part of the fireman himself, if you please, his duty it was to assist the engineer in observing the conditions, to examine the—they both say they examined the boiler, inspected it, spent an hour and twenty minutes in going over it, and among other things they looked at the firebox and found everything in good condition. There is no evidence to suggest that the probable cause of this accident was negligence in the way of inspecting or properly equipping this engine. On the

contrary, the evidence is just the other way. Now, I want to go a step further. It will, of course, be urged there, at least I understand it will be—that in the case of this man the fact of the accident may be considered as at least presumptive evidence of some negligence. I don't think that is the law, and certainly that is not the rule as laid down in a very recent case in 87 Atlantic. There are a number of cases on that very subject, and the one in New Jersey was the explosion of a vulcanizer, where the matter was discussed with a good deal of detail, and a number of cases cited; and I have gathered in this memorandum a large number of cases both from New Jersey and other states. Of course, your Honor knows the old standby of Marshall vs. Wellwood, a boiler explosion, and there are numerous cases in other states; but so far as relates to the duty of the master to his servant, the mere fact of an explosion, whether it be a boiler explosion, a vulcanizer, as in the New Jersey case, 87 Atlantic, or whether it would be, as in one case, a bottle of mineral water,—in all those cases it is held that there must be some proof of negligence, and that the mere fact of the accident proves nothing, and especially when there is nothing before the court to show but what one of several causes may have been responsible for the accident.

MR. RECORD: I do not think this thing needs particular discussion. Here is a case, while we present all of the evidence that is available to us—in this first case referred to, Mr. Justice Parker makes the point at once; the plaintiff made no pretense to have

filed all of the evidence in the case. Now, here is an accident which from its very nature, the only evidence available to us, is that of the engineer. He was there, and the other man was killed. Now, we cannot be put upon a negative—we cannot be made to prove the negative; there would be no way on earth that we could go, any possible evidence that we could get that they were negligent affirmatively. How could we start out to prove that? This case is different from any found in the books, I think your Honor will find, in this way: That here we produce a man who went to this engine at six o'clock in the morning, and had not used the engine before. He had not used it for sixteen months according to his evidence. Therefore he can't explain what had been doing with it for sixteen months, and he says he did everything that was required of him to be done. He saw that the water was there, the coal was there, and the supplies. He went up the road; he worked the injector, watched his guages, and in a few minutes everything had been done all right so far as he was concerned. Therefore, he was not to blame. They can't get out on the ground that he was to blame, because they had not properly inspected in any way.

Now, this is not the case of a pipe running through a building and exploding in some mysterious fashion. This is a case where we have the facts. Now, the fact is that this crown sheet caved in, not out, but down; that that must have been caused by something. Now, we have got that far. That is a fact to go to the jury. How was

that caused? Is that a thing that happens? Is that a mysterious thing against which there could be no precaution? It seems to me that this happened either because this engineer was negligent, or else it happened because they had not properly inspectd the boiler, because it does not cave in that way unless there had been at that moment a withdrawal of the water, and letting of it back upon the hot metal, which would have an effect, as he says, of affecting the metal.

Now, when we get into the defense of this case—that is the defense. They produced here before, and they will produce again a long number of witnesses to show that what happened here was that this man failed to keep the water supplied, and that the water went off and was withdrawn from over this crown sheet, and that the crown sheet got red hot, and that then by working his injector back came the cold water and snapped upon the hot metal and snapped it through. Now, that might have happened. I think that is exactly what did happen, except that it transpired from their testimony in the other case that they had trouble with this engine some time before, and the thing could have been weakened just as Mr. Morgan testified it could have been weakened, if at some time previous some other engineer had let the water low and somebody in the yard had kept the fire up when it ought not to have been kept up. There are half a dozen ways in which their negligence might have accounted for this. We cannot be asked to prove a negative. We cannot be asked to be put upon the

proposition of showing that they were negligent unless you can show that we have some evidence. They have practically all the evidence. We came here with an engine; we show what happened, and that cannot happen except this engineer fails to do his duty or unless they fail to inspect, or unless there was a secret defect which they could not be held to discover by inspection. Your Honor can turn it around and see that that is so.

THE COURT: Mr. Record, is not the real question that is before us now simply this: As to whether or not under the rules in this state what you have shown is all that you need to show, or must show in order to present a prima facie case and to put the defendant upon his defense? Isn't that really what we are having the tug-of-war over?

MR. RECORD: Yes.

THE COURT: If you have gotten to that point, and that is the stopping point in a case of this character, of course, that settles it, because if you have reached that point, and if you have gone as far as you are obliged to go, then I cannot grant a non-suit.

MR. RECORD: Of course. That is what I am directing your mind to. I have produced all of the facts that I can produce. That is plain. Now, I have produced all of the fact necessary to raise this presumption; that is to say, I have produced physical facts from which I can argue before the jury that this accident was due to the fact of a prior misuser of this engine. They

are the judges of that, and that should have been cured by inspection. They are the judges of that. The question is, are the facts susceptible of that argument? If so, they are the judges of that.

THE COURT: May I interrupt you from time to time? Our ideas will come nearer together. Where have you shown, in what part of the testimony have you shown—wherein and from what testimony may the jury have such a fact before them as you speak of,—that because of a previous misuser of this very instrument it had been put in a weakened or improper condition which probably a reasonable inspection would have shown? Wherein in the testimony have you shown that? Because I cannot see—I think you will agree with me—the jury cannot speculate upon mere theory, they must have something which has an element of fact about it.

MR. RECORD: You have these facts: Now, let me see if I cannot make that clear to you. We have the alleged facts about the injector and water, and it is necessary to keep that water up over the crown sheet to keep the crown sheet cool; otherwise, if you draw off the water and the crown sheet simply becomes red hot—if there is any interruption to the water—you have got that ordinary knowledge, your ordinary physical knowledge—that if you let iron get red hot by withdrawing the water from it and interrupting the water, and let it come back, that physical results will come from that situation.

THE COURT: So far as the engineer says, yes; that it would crack or weaken, or how-

ever you may put it; that it would weaken the crown sheet.

MR. RECORD: Yes. Outside of what the engineer says we can say what we know. This is common knowledge, this every day knowledge. You don't need an expert to show that if you get a sheet of iron red hot with fire on one side of it, then let a lot of water come upon it, that there is a physical result from that.

THE COURT: No question about that. But, have we arrived within proof that that had previously been done, some proof that that had previously been done? Have we a right to assume that that may have been the cause?

MR. RECORD: Yes, we have.

THE COURT: For instance, if you show, or did show on your side that that had taken place a day or two ago, or two days or a week before, I am perfectly willing to say now, yes; the presumption would be with you, that that did weaken this particular part of the boiler, and the probable cause was that— the probable cause of this accident. Have you done anything like that, or are you on your argument leaving it to the jury to say whether or not? If this is a speculative thing, it seems to me the jury cannot work upon it. They must have facts to work upon just the same as the workman must heve tools.

MR. RECORD: I was proceeding upon the legal theory.

THE COURT: You do not mind my interrupting you?

MR. RECORD: No; it is the best way to get at it, too. I was proceeding upon legal

theory, and all I have to do is to show the facts from which they can decide upon a probable cause. I think I musst be right upon that. The facts are, if this witness testified correctly, if the jury believes this witness, he did everything he could that day; therefore, he is not to blame. Now, then, we are tied down to two things, if the jury accepts that: Either that there was a defect there which could have been seen, which could have been seen by inspection, or, that there was such a kind of a defect in it that no inspection could have located it, and then you have your whole case. There is no other presumption that I can think of. Now, I cannot, if I had fifty witnesses—I cannot prove that there was a concealed defect there, can I? How can I? That is a negative. Therefore, the only practical thing for us to consider is—here is the probable cause: The probable cause is that it was not a probable concealed defect, but the very presence of this injector, the whole appliance shows that there is danger of that water being withdrawn; there is danger of this going back, and that throws upon the defendant the burden of showing that they did everything that they could, humanly speaking, not the impossible, in order to get out from under the presumption. We cannot be held to the presumption of a concealed defect. All we have to do is to raise the presumption of a situation whereby they are compelled to go on and say that they performed their duty, and it seems to me that that is what we have done here—all you can do in any accident where a thing blows up on the

road; nobody ever knows; nobody ever can know.

THE COURT: Your argument, as I understand it, Mr. Record, goes to this point: From what you have shown by the engineer witness, this accident may either have happened from any one of three causes; An improper or abusive use, we will say, at some time preceding the happening of the accident, which a general inspection, reasonable, as the Court of Errors has said it must be, should have shown to the defendant company, or there was a concealed defect which no reasonable inspection would have shown; or, third, that the casualty was the result of negligence on the part of the engineer witness. If the first is the actual situation then your contention is that the burden of showing a reasonable inspection, under the Supreme Court and Court of Errors opinion, is upon the defendant. If they show that to the satisfaction of the jury, then, of course, they are relieved; if it was a concealed defect and they satisfy the jury as to that, then, of course, they are relieved from the obligation. As I understand, it is part of counsel's reason urged for a non-suit as to the third—I don't know whether I am correct about this; I want to be corrected if I am not—if it was due to the neglect of the engineer witness, and, as he was a fellow servant of the deceased, he cannot recover.

MR. HOBART: That is correct.

MR. RECORD: Yes.

THE COURT: I imagine by the way you speak that you will agree with me there.

MR. RECORD: That is so.

THE COURT: So that all we are left with is the fact that an abusive use had been made of the instrument at some prior to the happening, and within such a time as could be—

MR. RECORD: (Interrupting) Or that it had worn out. We don't know how long this engine has been in existence. It might have been worn out and leaking. I mean you have your physical facts from which the jury can get at a probable cause of it—a reasonable thing, not irrational, but a reasonable thing. It may have been worn out, may not have been inspected for years, may gradually have gotten to the point where it breaks, may have been injured by something. Our theory is that that is what happened three or four days before—the interruption.

THE COURT: It is not in this case now.

MR. RECORD: No. They must have shown that it was either a concealed defect or the fault of this man himself.

THE COURT: What have you to say as to the testimony of your own witness as to the probable cause, Mr. Record?

MR. RECORD: Well, I should say as to that—

THE COURT: (Interrupting). He was produced as your witness, or as an expert, qualified as such. He says he cannot assign any probable cause. Isn't that the summing up of his testimony?

MR. RECORD: He could not say that one probable cause was more than another. In his former testimony he admits that he said that his opinion was that some water happened to be left on her at the improper time,

and the thing had been weakened. This time he says judging by his finding a big can of powder in the coal, there might have been a little bit of powder that might have caused an explosion. I don't think we are bound by his speculation, unless the position can be taken that he is expert upon this probable cause, although he says that never happened to him.

THE COURT: The question, Mr. Record, is dids't you call him for that purpose. As he says, he does not assign a probable cause Might it not be said then, by at least one deduction that would go to show, in a way by which you would be bound—because he is your witness—that it was concealed?

MR. RECORD: Yes; but his testimony had to be taken as a whole. He testified first that he did not know what the cause was; he could not tell. Then I refreshed his recollection as to what he testified before, and he says he may have so testified; and he says now, "I think it may be this powder in the coal." Now, your Honor, it is all well enough to say he is our witness, and he is, but, of course, there is the rule of adverse witnesses. This man is in the employ of the other side, and if he states that a piece of powder exploded in the boiler, and the result was to pull down the boiler instead of blowing it up, that is absurd; I don't care whose witness he is, whether he is my witness or whose witness he is; that is absurd. Of course, if there had been an explosion in the boiler proper the result would have been that the thing would have been pushed out, but the testimony is that the crown sheet was down. That never happened with-

out something going up against it. Of course, it did not; and I am in a position where this witness is in the employ of the other people, and he testifies one way on the former trial and admits it, and he testifies in this that it might have been powder. Now, I am going beyond the time. I may say he has testified to some physical facts here. Now, I am entitled to go to the jury and say he had put up two presumptions of how this might happen. I can argue, just as well as he can argue, what might have happened. It could not have happened from the powder, because the effects are inward and therefore the other theory is the probable one, and I have my physical facts to argue from. They are the judges. Now, can they step over after we show some facts which would account for it, by lack of inspection, or old age, or what not? The ordinary consequences of that action are arguable from the facts that we have testified. Now, does that raise a presumption that they can come here if they kill a man under those circumstances, and we not know any thing about it, and put us up here to prove a negligence? Could you ever make headway in a case where somebody is killed, where it has got to come from the law probabilities as to what the fact was?

THE COURT: What does your engineer say, as to this point, Mr. Record; as to this crown sheet, that if the water in the boiler were allowed to get out or get cold and the crown sheet to become hot, hot in the sense that you have spoken of; that is, without getting water over it? I remember his saying that it would cause it to blister or crack, leak.

MR. RECORD: Cause it to crack or leak.

THE COURT: Did he say on the point as to whether it would blow down?

MR. RECORD: He is not competent to testify as to that, because he does not know; nobody knows; you can reason upon it that it would.

MR. HOBART: He says it would cause one of three things: leak, blister, or crack. He found none of that when he examined it that morning.

MR. RECORD: You can reason from that when he says this would have an effect. So it would have an effect before. It might have had an effect, and we can reason as well as he can—it might have the effect of weakening it, not to the extent of letting water through. The water drawn off and let back upon that top metal might have weakened it. Now, I want to protect myself in every way in this. I see by one of these cases quoted here, that Justice Parker says it seems to be incumbent upon us—upon the plaintiff—to give whatever evidence he can. Now, if your Honor thinks there is a serious doubt about this—

THE COURT: (Interrupting). Is that the *Levendusky vs. The Empire*—

MR. RECORD: (Continuing). If there is a serious doubt about this I want to get this in your Honor's mind: I have proved here what I have proved before, there is no particular difference that I can see, and if your Honor thinks that that is a doubtful point, I want to get to your Honor's mind that if we are non-suited we are through, as I see it.

MR. HOBART: You can appeal.

MR. RECORD: I mean by that we are out of time; it could not be gone over again. This is a pretty serious matter to these people. I want to protect them in every way I can. Your Honor has put this in my mind by your expression of opinion: Your Honor says that if there was anything in the case to show that there had been an interruption of this water on this particular engine within a short time, that it would make a difference in your Honor's mind.

THE COURT: I said short time. I should have said reasonable time, reasonable both ways, reasonable both as far as the proximity to the happening is concerned, reasonable also—

MR. RECORD: (Interrupting). You said within a day or two.

THE COURT: (Continuing) Reasonable also so that the defendant may have been said to have had a reasonable opportunity to detect it; reasonable in both senses, is what I should have said.

MR. RECORD: If that is so that puts a very great responsibility upon me, and I am inclined in that situation to ask your Honor to let me reopen the case and let me put on this engineer of theirs. They put him on before, and I didn't want to put him on unless I had to. He is not my witness in a proper sense, but in the case before they put this man on and we subpoenaed him here. We thought that would come in rebuttal. They undertook to show inspection before, and we had subpoenaed him to have him in rebuttal if they didn't call him.

THE COURT: Of course, I do not know the situation before; I haven't seen the

printed case. I don't know what turn this case took before. I don't even know if there was a motion for non-suit.

MR. RECORD: The record does not show it.

THE COURT: The thought I had—whether I am correct or incorrect at this moment is of no particular consequence. As I suggested before, however, your deductions may be perfectly correct. Ordinarily one would say that a jury ought to have something—something tangible before it, other than mere opinions of the individual juror. If a juror has something tangible then he has a right to form his opinion, and it is his duty to decide whether or not from that tangible thing the truth of the situation, whether or not under all the circumstances it is the proper thing for a reasonable juror to believe. Again where that thing is so tangible as to form in a reasonable man's mind—and I presume that is the state of a juror's mind—the presumption that it was the cause or proximate cause of the happening. A mere floating idea as a juror may pick up, as it were, out of the air, is not ordinarily enough for the case to go to the jury. That is the reason I asked you as to whether your witness had gone further than I thought he had; whether he had gone so far as to say if such a thing had taken place the reasonable probability might have brought about just such a result as was found after this thing had happened; that is, after this plate, whatever you call it, had come down in this position; that such a happening might in reasonable probability have brought about such a condition. I

would be more inclined to agree with you if you had that tangible thing that you ought to have in this case, because I am keeping in mind now that your witness says —whether it is the fact or not is for the jury to determine—as to the truth of it—he says he did everything in the care of that engine that he ought to have done as he went along the road. If the defendant has that as a defense it may show that he did and relieve themselves; but it seems to me as the testimony stands he has exculpated himself and has thrown off himself the responsibility for not having performed his duty properly. I don't think you have that in the case; you are quite right in guessing my thought. You have not that tangible thing in the case which would allow it to go to the jury.

MR. RECORD: The tangible thing is this: After you state the facts to the jury—the facts are here; the proof is undisputed that the engineer did his duty. There are only two hypotheses. One is that there was a concealed defect that no inspection could discover; the other is that there was a lack of inspection. Here is the killing; here is the one man who was there and has testified. Then you hold me up to the point—that of these two presumptions you hold up the presumption that there was a concealed defect. How can it be the law, irrespective of any jury, or of anything out of their minds; how can there be any law to the effect that when there are two presumptions, that the probable presumption, according to human experience, that these things happen because things are worn out, because something hap-

pens to them—how can the more probable presumption be carefully put one side and I held to the improbable presumption?

THE COURT: Understand me, I am not saying that you ought to be held to all of the improbabilities. I am not saying that. There is a rule, is there not, that is applicable to negligent cases? I don't know—I am going to ask now—whether the rule has been changed with regard to railroad locomotives. I don't know that the rule is any different. The mere happening of an accident does not amount to prima facie proof of negligence; we all know that. We all read it when we first went into law.

MR. RECORD: It depends upon what happens. You cannot state a thing in those general trems. What happened? I should say—here is one of the cases I glanced hastily at; here is a man going through a yard, and here is a pipe bursting. That is not our case. The probabilities depend on each case.

THE COURT: That is the difficulty of applying the rule.

MR. RECORD: The probability is what is. Here is a complicated piece of mechanism. Not a piece of pipe in the ground. Here is a complicated piece of mechanism which requires continual care; won't go at all unless it is seen to day by day, which is a dangerous thing, which would blow up many times if it is not handled right, with contrivances and contraptions on it. That man must work with his hands, and watch with his eyes, all sorts of things, going to show that it is a dangerous thing, a thing

that is liable to go wrong unless the extremest kind of high care is put to it.

THE COURT: We are immediately finding ourselves face to face with the Court of Errors opinion, which says it does not require extreme care.

MR. RECORD: No; I think it says that some cases require more care, and—the Supreme Court opinion does say this; If your Honor please, this is what happened in this case: Judge Vail charged the jury some language that would be construed to say that they were guarantors against concealed defects. That is what they decided this case on.

THE COURT: Here is what the court says:

"The learned trial court in its instruction to the jury used this language: 'The law charges upon every one owning machines of any kind, locomotives or anything else, to inspect them properly at reasonable times, and see that the inspection is so thorough as to disclose any defects in the machines or in the locomotives, as it was in this case.'

"Now, regarding the character of the inspection the trial judge says: * * * * 'to see that that machine is kept, so far as human ability can keep it, in perfect condition for the work which it is designed to do.' And the court says: 'These instructions, we conceive, imposed an obligation of legal duty upon the defendant greater than the rule of law required, and placed the defendant, as to the care and inspection of its locomotives, substantially in the status of an insurer against defects which human ability might be said to discover.'

That seems to be the sum and substance

of what the Supreme Court has to say upon the rule: 'The duty of the employer is to exercise reasonable care and skill in making inspections and tests at proper intervals. This duty is satisfied if the master uses such reasonable precautions as a man of ordinary prudence would use for the safety of himself and his workmen under circumstances. We think this duty is satisfied if the master exercise the same care that is ordinarily exercised, and that one engaged in practical operations is not bound to make the inspection or tests that may be possible in a laboratory or upon a small scale, and outside of the practical conduct of affairs.' "

MR. RECORD: If your Honor please, the point there simply is, and we argued it out in the court above, and I made no pretense that it was good law, as the Judge stated; I simply said in a subsequent portion of his charge he corrected that and said that they were not guarantors. Now, the court holds that he went too far in his charge. That is not my point. I did not ask that these people be held to any guarantee. I am only urging to your attention the point that I brought in this case—a complicated machine which blows up under conditions which allow only three hypotheses possibly: The carelessness of the engineer; a concealed defect, or a defect that might have been removed by inspection. I have produced the evidence to show that the carelessness of the engineer is eliminated. Now, I am out on that. No matter how you twist that around I am then out on this motion, on this point; and having shown a complicated

machine—not a piping—but a complicated machine which is liable to do these things, which requires continual inspection, which has continual inspection, turned over from one set of experts to another—one set drives it, another cares for it and gets it ready for the next day—that under those circumstances the improbable presumption, namely, that this blew up from a concealed defect—an old engine—must the almost impossible presumption prevail in this case as against the reasonable presumption that they properly failed to inspect it? Now, it cannot be good law that I beheld to that alternative; that a presumption that is irrational in this case should be my rule instead of the reasonable rule. The trouble with legal points, and which get me restless always in court—is that we go discussing these theories. What is the fact? What is the human fact? The human fact is that when we go in the trial of this case we don't talk about any probabilities. We get down to the hard fact of how it blew up. They put their witnesses on and show how it blew up,—because this fellow didn't put that water on, and, of course, that is so; if that man kept that water on there that morning—this engine was old and played out, and had been injured before; that is the fact; everybody knows that is the fact—that an old engine has not got a concealed defect that has laid concealed for years. The concealed defect theory is a concealed defect that comes reasonably quick. That is an improbable theory. Now, to the extent that you depart from a complicated piece of machinery to a simple piece of mechanism your con-

cealed defect becomes much more probable. If you have a camera and it explodes, a slight defect is almost irresistable; when a steel rail explodes the slight defect is almost irresistable; but when you have a complicated piece of mechanism that it is hard to make go any how with the most elaborate care, it seems to me the presumption is all the other way.

THE COURT: The cases you refer to, Mr. Record, as being in the opinion written by Justice Parker; is that in the Atlantic?

MR. RECORD: Yes sir.

THE COURT: Have you anything to say further, Mr. Hobart, in the matter?

MR. HOBART: I don't think so.

MR. RECORD: I think I will take the responsibility of making a motion, anyway. If your Honor decides for us I am still up against the proposition—but your Honor is a good lawyer, and if you find difficulty the upper court may find difficulty if they take it up. This case has been up once before. It is an extremely hard case, cruel in every way—without saying that they are cruel. Here is a young Irishman that is killed, thirty years of age; it is a tragedy and a calamity. Here are his poor relatives, and I don't want to have this case lost if I can help it, by any fault of mine, and I don't want to go up on any technicality that I can prevent. Now, I think as your Honor finds that difficulty, I will make the motion that your Honor allow me to open this case to put in the testimony of this other engineer of theirs who testified for them in the last case, showing that a couple of days before this accident there was

trouble with this particular engine. Then I think, if this impresses your Honor, I will be a bit stronger. I don't think that I ought to be—

THE COURT: (Interrupting.) Do you see any objection to that, Mr. Hobart, except the ordinary one that after a case is closed it ought not to be opened again?

MR. HOBART: That is the only objection I have.

THE COURT: The purpose is to decide the issue upon the merits, if we can, and I suppose if Mr. Record perceives that he can bring about that situation, he should have that opportunity.

MR. HOBART: Of course, it is his right but we are wasting time.

THE COURT: I will consider that, Mr. Record, in the matter, I am inclined to say now that my conclusion will be, if there is great doubt about it, to grant your motion.

RECESS to 2 P. M.

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2 P. M. Trial of the case resumed.

THE COURT: The jury may retire for a moment.

MR. RECORD: I feel, as I have studied this during lunch hour—

THE COURT: (Interrupting.) Wouldn't it be highly improper for the court to direct a verdict? During the recess period my mind was unsettled. It is more unsettled now. The rule seems to be—however the court may like or dislike to make use of that rule—the rule apparently seems to be that the mere showing of a casualty such

as you have is not sufficient to take you out of the line of non-suit. For instance, let me explain myself just this much further: Suppose, instead of showing what you have shown, that this plate dropped, that you had denoted an explosion of the boiler. I don't know much about boilers, but I know they have such things as tubes in boilers; suppose that your tube had burst, the rule seems to be in this jurisdiction, in this state, that you must go to that point of showing the negligence of the company or of the defendant. There seems to be a different rule as to that—a somewhat different rule as to that as between employee and employer and as between one and a stranger; that seems to be the difference that is drawn by the court. That seems to me to be the rule. Now, I wonder if you have anything to say about that?

MR. RECORD: I have this to say, whatever may be your conclusion: I have come to the conclusion—to a certain definite conclusion with reference to what I want to do. Now, I have examined carefully this opinion of the court by Judge Garrison, which I take it is a good statement. I have examined that with some care and I am entirely satisfied with my position in reference to that, except on one point, and that is whether I should put in some more evidence now, having knowledge of it. That, I think, applies whether you have master and servant in the case or not. If there is any obligation upon us to put all the facts in the case, of which we have knowledge, it must be done whether master and servant are in the case or not, but you see, the Garrison

case is all our way when you come to examine it.

THE COURT: Except one point, if I may interrupt, and that one point seems to be that there was some testimony that in the operation or in the use of these pipes—that there was known to be or testified to be a leakage from them which produced a gas which was exploded, and the presumption at once arose as to the negligence of the master in permitting such a condition.

MR. RECORD: I am not talking about those facts. I am talking about what he says here, which is that no set of facts establish the rule. He says very plainly there that you have to work that rule out according to the facts that you have got, and here is the point that he lays down, which your Honor has in mind. We can't just prove an accident. It does not mean such proof as we have put here; it means that we have produced the proof that this man was killed. Supposing he was the only man on there, and all we proved was that he was killed—that is all. But here we have gone further; we have put in a lot of evidence besides the evidence that he was killed, and all that the court lays down anywhere is the rule that the mere fact of the explosion is not denied, and then it goes on to say in fact and in words that one case is not the guide of another case. Now, listen to this language: "The principle is quite institutional, that whenever a right of action springs from the conduct of a defendant, the plaintiff must present proof of the facts necessary to recovery. It is, furthermore, the general rule of law, that the mere proof of the occurrence of an accident, raises no presumption of negligence. These doc-

trines, which, if strictly applied, would lead to a non-suit in every case in which the plaintiff's proof failed to demonstrate the specific act of negligence which he deemed the proximate cause of his injuries, have inpractice an application which, while not losing sight of their normal character, to an intelligent adaptation with the requirements of the modern law of negligence. It may safely be asserted that no other department of jurisprudence presents so marked an illustration of the growth of a simple rule of conduct into a principle so widespread in its application to relationships which have grown and must continue to become more and more complex. A single illustration will suffice. The employment of each new mechanical force in commerce or manufacture must tend, not only to increase the already existing complexity of these relationships, but also to give rise to new and peculiar duties, which, in turn, must be met by rules of law characterized, not by novelty in principle, but by flexibility in application. That the development of the law of negligence has been, in these respects, both harmonious and consistent, evinces the soundness of the foundation upon which it rests. With the dictates of the law, whose function it is thus to declare the nature of the duties arising from these new relationships, there has been a corresponding growth in the legal rules which guide the production of evidence and weigh the sufficiency of proof. It could not have been otherwise. The use of instrumentalities of enormous power, and of complicated structure and operation, not only raises the standard of duty proportionately with the increase of danger; it also

gives rise to obligations springing from the exclusive control of these complicated engines, and from the almost exclusive knowledge of their structure and mode of operation. The reason is obvious. When all labor was manual, each workman knew or could easily learn the various processes incident to his employment. To-day a single plant will comprise a multitude of diverse appliances, the operators being for the most part, totally ignorant of all the others; while not one citizen in thousands knows anything in regard to the operation or construction of any of the new mechanical processes with which he is met at every turn, still less of the dangers incident to their operation. Under these changed conditions, to compel plaintiffs in every case to ascribe some specific act of negligence, would be to make a recovery for injuries dependent upon the possession of a special technical knowledge, and to grant immunity to the users of dangerous agencies in proportion to the success with which the special element of danger was concealed from the public.

From these considerations it follows that the quantum of proof which a plaintiff must give in order to draw from a defendant explanatory evidence, must, within certain limits, be dependent upon the circumstances of each case."

Now, if that means anything it means that we cannot simply prove an accident. We have got to put some more testimony, and so we do. They say we just simply say something blew up and the fellow was killed. We don't do that. We show a complicated piece of machinery, trace it to the

morning it was exploded, show who had it, what they did, how they kept these appliances up. We don't start with the time when this blew up at Suffern there. We trace it for two hours, three hours, four hours before that, and we show just its character, its condition, how it was received and we carry it along, and we say when it was received it would work, and we kept it in good order, and finally under these circumstances we describe how it happened. We didn't make as indefinite assumption of how it happened. He says the door blew open and the whole business came out from the inside outside. We give the specific circumstances, the physical surroundings of it. That is not a case where we just simply say that a workman is walking along the street and something blows up and kills him, nobody knows how, or why, or where; that is an entirely different line of thought, asd as I have studied that case I am entirely satisfied upon that. But what gives me disturbance, and I have made up my mind to press my application whatever your Honor's ruling might be—if your Honor decides that you will deny the non-suit I still want to open the case, because in each of these cases they put in the proposition that we must put up whatever evidence we have. Now, in the other trial we knew nothing of these facts, to-day we know. We know the fact that two days before this one of the other witnesses testified at the former trial that he had some trouble with this particular engine, with the water supply, and such a trouble as caused him to put it into the repair shop for repairs. Either on your Honor's refusal to grant a non-suit, or on

your Honor's granting a non-suit, I am confronted with that.

I don't know of any answer I can give. That testimony was given in this other trial —that there was a condition in this engine a day or two before that compelled them to send it to the repair shop. It seems to me in this case, under these cases, that I must put that in, and I wish to put that in irrespective of your Honor's decision; and I therefore suggest that your Honor will let me put that in and then your Honor will decide, because you will have to decide over again if you let me put it in.

THE COURT: Of course, if I deicde now I decide not to let you put it in. I suppose the only thing for me to do, Mr. Record, is, as you are making application to re-open your case for the purpose of introducing further testimony—I will pass upon that at this time and allow you to put in other testimony, and reserve my decision on the motion for non-suit. For all I know, application for non-suit may not be repeated. I will let you reopen your case.

MR. HOBART: I suggest that Mr. Record make a statement as to just what proof he intends to put in.

MR. RECORD: All I intend to put in is that Mr. Evans, the engineer, had this engine two or three days previously, and that he had such trouble with it, or whatever it was, that he sent it to the repair shop. That is all.

THE COURT: All right. Let the jury be recalled.

(The jury returns.)

SAMUEL W. EVANS, sworn.

DIRECT EXAMINATION BY MR. RECORD:

Q. Now, Mr. Evans, you are a locomotive engineer on the Erie? A. I am.

Q. How long have you been such? A. Since September, 1882.

Q. Can you testify as to whether or not you ran engine 957, which I think is conceded to be this engine? A. Yes.

Q. 957, in October, 1910? A. I did, in October, 1910.

Q. And do you remember the day? A. 19th of October.

Q. The 19th of October you ran that engine from where to where? A. From Jersey City to Port Jervis.

Q. From Jersey City to Port Jervis? A. What is that?

Q. From Jersey City to Port Jervis? A. That is right.

Q. Did you have any trouble with the engine? A. I had a number of personal inconveniences; I object to the word trouble.

MR. RECORD: Now, if your Honor please, this is an adverse witness; I think he ought to be made to answer the question.

THE COURT: Well, what were those things that you referred to, however you may care to designate them; what were those things that you are referring to?

A. Why, in the morning I found the engine part —the engine proper, what we term the engine, all right. The conveniences of the cab, such as clothes box, gate light, headlight, and those had not been put on the engine; she had been turned out in a hurry and left that for the day gang,

I suppose, to put on, and they were not there when I came. That made it very inconvenient for me to run around and have those things put there; that is, to have the man bring those things there.

Q. What do you mean by saying that it had been turned out in a hurry? A. Why, when they are turned out of the shop it is left to what is called the roundhouse forces at times to supply these engines with the headlights, and so forth.

Q. How do you know that this was turned out in a hurry? A. Well, I suppose she had been out on a test case the day before, and being short of engines had turned her out on my run.

Q. In a hurry? A. That is what we term in a hurry.

Q. Had this been in the repair shop to your knowledge? A. How is that?

Q. Had it been in the repair shop to your knowledge; had it just been— A. (Interrupting) All that I know is from hearsay, that she had just come out of the shop; personally I didn't see her in the shop.

Q. Now, what other trouble did you have after that? A. After we left Jersey City, between Jersey City and Rutherford, my injector broke up. My fireman, knowing his business, immediately put on his—his injector—and we alternated that way from there to Port Jervis. My injector would work good for a ways, and then it would break up. I would pay no more attention to that. Firemen, he put on his injector, use it for a few minutes; then I would alternate with mine.

Q. Do you know what caused your injector to break up? A. I of course could imagine from the way it did break up, that the trouble was in the tank, some obstruction of the flow of water from the tank to the feed pipe.

Q. That is the result of your experience? A. What is that?

Q. That is your conclusion from your experience? A. That was my conclusion; it was afterwards proved—

Q. (Interrupting.) Never mind that. That is the result of your experience? Now, did that trouble cause you to send that engine to the repair shop?

A. No, no.

Q. Did you send it to the repair shop? A I left her in Port Jervis for a pair of wheels, but not for that special purpose.

Q. Did you report that trouble? A. I reported the tank hose cleaned out.

Q. No, no. I mean did you report when you turned it in that you had had that trouble? A. No, it was not necessary, only the fact of reporting it on the sheet, that is all.

Q. You didn't make any report that the engine needed any repairs when you turned it in? A. Why, certainly; I reported the tank hose cleaned out.

Q. Now, wait a minute; what do you mean by that? A. I mean the hose.

Q. No, no. What was the language that you gave when you got there; what did you say? A. Oh, really I couldn't tell you the exact words, verbatim, what I wrote at the time; but that was the substance of it.

Q. The substance of it was that you reported that the tank hose needed cleaning out? A. Yes.

Q. Yes, A. Yes.

CROSS EXAMINATION BY MR. HOBART:

Q. Was that the first time you ran that engine, on the 19th of October? (No answer.)

THE COURT: Was that the first time you had run engine 957?

Q. Yes, sir; it was the first time I had to run her.

THE COURT: October 19th, 1910?

Q. You, of course, don't know whether that engine had been in the repair shop or had just come out of the repair shop or not? A. I couldn't say, only from hearsay; I did not see her in the shop.

Q. You had no personal knowledge whether she was in the shop? A. All of the indications around the engine indicated to me that she had just come out of the shop.

Q. You judged that from your experience? A. Yes.

Q. That had nothing to do with the— A. (Interrupting.) The general appearance, good condition of the rods, cylinders, and valves, all indicated to my mind that she had been in the shop.

Q. Well, how do you mean; looking fresh and bright and clean, or what? A. How is that?

Q. You said the general condition. What was her condition. What was there about the general condition that indicated to you that it had just come out of the shop? A. Now, I didn't quite get that.

Q. You said that it was its general condition; that it had just come out of the shop? What was there about its general condition to indicate that to you? A. That indicated that she had just come out of the shop?

Q. Yes. A. Well, the condition of her cylinders, the way her valves worked after we got out on the road, the condition of her rods, the good condition—oh, in fact, the general running gear of the engine; everything that was important for the good work of an engine indicated to my mind that she had been through a course of repairs.

Q. Well, did it or not work all right? Did it or not work all right on the 19th of October? A. That was on the 19th of October.

Q. Did it work all right that day? A. She worked all right with the exception of what I stated.

Q. Now, you said as you got near Rutherford you first noticed your injector breaking up. Will you tell us what you mean by that? A. Do you wish a description of the way an injector works?

Q. No. Just tell us what is meant by an injector breaking up? A. There is a tube in the injector called the combining tube. In this tube the velocity of the steam is imparted to the water. That is where the steam and water combine. If there is any breakage, or if there is anything that interferes with a perfect combination of these two, the injector breaks up; that is, the water fails to go to the boiler, and it flows down over the overflow pipe with some injectors. With some it goes back in the tank. In every case you cannot miss it if it is called to your attention.

Q. You don't mean by breaking up that the injector itself was broken; that the hose was broken, or anything like that? A. Oh, no; but the failing to work, stopping work.

Q. That the water does not flow as it ought to flow; is that what it means? A. I mean by the term breaking up, that it is failing to supply the water to the boiler through some cause either

in the tank or in the injector itself. In this case it was in the tank.

Q. The first time you noticed that was when you were approaching Rutherford from Jersey City? A. Not getting a sufficiency of water.

Q. How far is Rutherford from Jersey City? A. About eight miles.

Q. Now, after you had done that, tell us how you arranged about getting a water supply on the rest of your trip to Port Jervis? A. Why, I would use my injector. We just put it on after leaving the station. I would put it on when necessary, and it might work, five, six seven, eight, ten miles; then sometimes at that distance it would break up again. If the fireman seen it was necessary to put on his he would put it on; if not I would put it on in leaving that station. If it broke up in between stations where we had to run three or four or five miles he would put it on immediately without my saying anything to him about it.

Q. How far is Port Jervis from Jersey City? A. Eighty-eight miles.

Q. And during the rest of that trip, which would be about eighty miles, you and the fireman were watching the injector? A. We alternated between the right and left injector.

Q. The right injector is on the left of your cab? A. The left one was on the fireman's side.

Q. The right one was on your side? A. The right one was on my side.

Q. Well, after you worked the injectors in the way you describe, did you have any trouble in making your time to Port Jervis? A. What is that?

Q. (Repeated by the stenographer.) Well, after you worked the injectors in the way you describe did you have any trouble in making your time to Port Jervis? A. I did not, not the slightest. The

fact of the matter was I could have gone to Port Jervis with the right injector, even as it was, because every time it would break up it would blow that steam and that obstruction in the tank back, and it would work for a while.

Q. So you might have gotten there without using the other injector? A. I could have, with the right injector.

Q. Did you have low water at any time on that trip to Port Jervis? A. Where do you mean? Do you mean in the boiler?

Q. In the boiler or anywhere? A. Do you mean low water in the boiler?

Q. Low water in the boiler, yes. A. No; I did not.

Q. Did you have low water in the crownsheet—perhaps that is part of the boiler? A. No; that is an important part of the boiler; I did not.

Q. Did you at any time on that trip allow the water to get below the level of the top of the crownsheet? A. No.

Q. How do you know that? A. By the guage cocks.

Q. You can tell by watching the guage cocks the height of the water, can you not; did you watch them on that trip to see if the water was right? A. Well, I watched them as close as I ever do watch them—it is not necessary to watch them.

Q. Now, when you got to Port Jervis you left the engine, I suppose, in the Port Jervis yard? A. How is that question?

Q. (Repeated by the stenographer.) Now, when you got to Port Jervis, you left the engine, I suppose, in the Port Jervis yard? A. Yes, on the ash-pit.

Q. Did you make any other trip with that engine—

MR. RECORD: I object to that. I am only obliged to go as far as I have gone, and I have not asked him anything further than what he did with that engine after he got there.

MR. HOBART: I thought Mr. Record wanted to know all the facts?

MR. RECORD: That is a matter of defense; they know what became of the engine after he left it there.

MR. HOBART: I am trying to find out from this witness.

THE COURT: I suppose you are, Mr. Hobart, limited to the extent to which counsel on direct examination went.

MR. HOBART: I think his direct examination was broad enough to allow me to show by this witness everything he knows about this engine. He is asking him about one day, about some alleged trouble, about turning it into the shop. I want to find out now if this witness knows what was done, if anything; whether he ran the engine again,—before accident, of course.

MR. RECORD: I have not been into that at all.

MR. HOBART: I know. You purposely refrained from doing it. You don't want to show the facts; I do.

THE COURT: I am inclined to sustain the objection, because it seems to me it is outside of the line reached on direct examination.

Q. Well, let me ask another question. You have referred to the water guages on this trip on the 19th of October. How many guages do you have on the engine? A. There was three.

Q. And were they in proper condition on that day? A. They worked right; also a water glass.

Q. Which of these determine, or enable you to determine whether the water in the boiler is low; does the guage show that, or does the glass show it? A. The glass; engine run by the glass after I see that my guage cocks are all right.

Q. That is the purpose of the glass, is it not, to show the height of the water? A. Oh, yes; you cannot fail on it if you watch it close.

Q. So that worked all right? A. It was working all right.

Q. Did you watch it? A. I watched it.

Q. And can you tell by watching that glass whether or not the water gets below the level of the top of the crown sheet? A. Oh, yes.

Q. What is that? A. You cannot fail on that.

Q. You cannot fail to tell? A. You cannot fail, if you watch it close.

Q. Did you watch it; that is what I want to find out? A. Yes.

Q. Then, did you at any time on that trip—I am referring now to the 19th of October, the one Mr. Record mentioned—did you at any time on that trip have the water below the level of the top of the crown sheet? A. I did not.

Q. Coming back now to the time when you got this engine on the 19th of October, can you tell us at what hour of the day you took possession of it to make that trip to Port Jervis; in other words, what time did you leave Jersey City? A. The time tables have changed. As near as I can recall our leaving time at that time was, I think, about seven thirty; but the time tables have all changed, the numbers of trains, and so forth.

Q. It was about seven thirty in the morning? A. What is that?

Q. In the morning? A. In the morning.

Q. What time did you go to the yard in order to take charge of the engine that morning? A. Well, we average back and down on the train, about fifteen minutes before leaving time.

Q. Fifteen minutes before you left Jersey City that morning? I mean now, the 19th of October. Did you make any observation or examination of the engine? A. Did I what?

Q. Did you look at your engine to make any examination of it before you left? A. Yes.

Q. Then us what you did?

THE COURT: You are asked what you did.

Q. What did you do in fact? A. Well, I will have to go back to explain that. Do you wish a synopsis of the general work that a man does prior to leaving?

THE COURT: No, but what you did that morning of the 19th. It is a wide question. You can tell the jury exactly what you did toward examining that train before you took her out that morning.

A. The first thing I got on the engine, I looked at the guage cocks; generally that is a man's duty to try these and see that they are working, and then to take the water glass and see the water responds to the level in the boiler; that is, working freely in the glass. Then I examined the engine. I just looked at guages, tried my air, and looked over my rods, filled the lubricators, seeing that my eccentrics and everything was in working order; that was prior to moving the engine.

Q. Let me direct your attention to one matter in particular, and you may tell us whether you did anything in regard to it. Did you make any observation of the firebox? A. Oh, yes; that person looked in the firebox.

Q. What did you do that morning in regard to the firebox? A. I remember distinctly looking into the firebox. I always do, on any other engine when I get it, or strange engine; my specialty; both see the condition of the side sheets, flue sheets, and crown sheets.

Q. Tell us what condition you found the condition of the flue sheet and crown sheet connected with the firebox on that engine when you examined it that morning? A. As far as could be seen everything was absolutely perfect.

Q. Did that observation of the firebox include an observation of the bolts, the crownbolts, by which the crown sheet is held in place? A. First, as a rule, a man generally casts his eyes up at a sheet—

Q. (Interrupting.) Did you do that that morning? A. I did, embraced the crown bolts; the side sheets and so on we are not so particular about; it is the crown sheet the man is most particular about.

Q. Did you find anything out of order in any way at all in the crown bolts crown sheet, or any other part of the firebox? A. I did not see a leak in that box either outside or inside.

(Witness excused.)

MR. RECORD: That discharges my obligation as far as I can discharge it. That is all I know that bears upon anything that anybody knows who had anything to do with this engine. It is the whole history as far as I know of it, and I have put before the court and jury all that I know in reference to this case as to the happening.

THE COURT: I am assuming, Mr. Hobart, that you are representing your motion?

MR. HOBART: Yes. I desire to renew my motion. It seems to me it shows on the morning when this man took charge of it everything was in first class order, absolutely nothing the matter with the crown sheet. He had trouble with one injector on his way up, but had the other one in operation, and then proceeded to work one or the other as the case may be, running up, for eighty miles. He swears positively that he did not burn his sheet or allow the water at any time to get below the level of the top of the sheet. It seems to me the plaintiff has absolutely proven himself out of court now, if he has not done so before.

MR. RECORD: I do not object at all to the assertion that this man shows that there was no trouble with the crown sheet in the sense he conceives it. I put him on to show this fact. That he, an experienced enginer had a trouble which he himself describes as the interruption of the flow of the water to the crown sheet, an interruption sufficient to destroy the crown sheet. I didn't pretend that. But he says that from his experience the cause of the trouble was that there was a clogging in the flow of water in the hose, so bad that when he turned it in at night

he turned it in for repairs, and reported this "clean-out," as he says; that is to be cleaned out. Now, that is the specific thing that will lead up to this trouble, not that day, but the next day, or perhaps in another man's hands in Mr. Morgan's hands.

THE COURT: I do not remember anything in Mr. Morgan's testimony which shows the injector was not working.

MR. RECORD: I agree to that. All I am proposition in the way of mud or refuse, saying is that there was something in this which he says was in the hose. Now, if that wasn't cleaned out it is obvious that it would have a tendency to increase; otherwise, he would not have reported it if there was no danger, and you might reason from that that there is a specific thing that, if allowed to increase, might suddenly, when some other thing came along to join with it, make an obstruction that would instantaneously lead to this result without any fault of Mr. Morgan or anybody else, but because that had not been cleaned out. Now, I took up a specific thing, a clogging of the water supply. I put up the further thing—that here is a man who takes an engine out of the repair shop, having the marks upon it that showed it came from the repair shop, and yet he finds it in the condition—turned out in a hurry, as he expresses it; not as it ought to be, and he has to go to a lot of steps to get it in shape to go. I have introduced a specific clogging of this water supply. Now, they have got to remove that sediment that had continued to an extent of clogging this up temporarily. That might have gone on for days; it might have continued until Mr. Morgan got it up

at Suffern, and suddenly clogged again with additional scale. Of course, they can swear it was not put in there; it was a sediment; it came in. Now, as that gradually increased at some time that might have caused that trouble. At all events, it is all I can show and it is a specific thing—direct interruption of the flow of that water, which is all I have got to prove—I mean what I have to prove if I can prove. Now, I have gone further in this case. I have shown the history of that engine and have traced it up for two or three hours in the hands of Mr. Morgan. Two days before a man got it out of the repair shop showing it had been turned out in a hurry, and he had such trouble with it on the eighty mile run that he had to turn it in for repairs. If that does not put burden on a man of showing bad insuection I don't know how you can produce an action or a case.

THE COURT: The only difficulty is, Mr. Record, that your last witness, even though he does say all that—that he has had difficulty, yet, as I remember his testimony, he says that notwithstanding all that he might have made the run from Jersey City to Port Jervis with the right hand injector.

MR. RECORD: That is not my point. My point is not that he blew up the engine. My point is that I have introduced a defective working of that engine. It is not working right. What more have I got to do? I have shown that the engine does not work; I have shown that it comes out of the repair shop when it is all fresh and new it does not work.

MR. HOBART: You have shown it works all right.

MR. RECORD: I understand it worked for a few hours, but I have shown all of the facts that are essential—that are available in this case. Here is an engine that was defective obviously defective two days before. Haven't they got to clean that dirt out of that hose?

THE COURT: I am going to make this disuosition gentlemen; I a going to deny the motion to nonsuit at this time. Counsel may have leave to renew it, however, at the conclusion of his case.

MR. HOBART: I won't take exception to that; I will raise the point in a subsequent motion.

SAMUEL W. EVANS, recalled.

BY MR. HOBART:

Q. Did you run this engine 957 on the 20th of October, 1910, the day after the date that you have already testified to? A. I did.

Q. Where did you run it? A. From Port Jervis to Jersey City.

Q. Did you examine it at the Port Jervis shops on the morning of October 20th, before you started it? A. The afternoon.

Q. It was an afternoon run, was it? A. Yes.

Q. You examined it? A. Yes.

Q Same as you did at Jersey City the day before? A. Yes; at the terminal.

Q. Did you observe the firebox to see whether that was all right? A. I looked at the firebox.

Q. What examination of the firebox did you make; that is to say, did you look at it? What did you do? A. Well, before I done anything else when I got on the engine I opened the firebox

door and cast my eye at the crown sheet, taking in with the same glance the side sheet, flue sheet and so on.

Q. And the bolts? A. That includes the bolts.

Q. Was there anything at that time? A. I did not see a thing wrong with it.

Q. Did you test your injectors before you started out? A. I did.

Q. Did you have any particular reason for testing them on that trip back from Port Jervis? A No; no reason at all; could not give no reason why I should.

Q. Well, you had made some complaint about cleaning out the hose, or made some report about that the day before, had you not? A. Yes.

Q. When you ran your engine that day did you at that time recall the fact that you had made a report about the hose? A. Yes.

Q. Did you make any test of your injectors before you started back from Port Jervis? A. That you have to do.

Q. Well did you? A. I did yes.

Q. And how did they work? A. They worked all right.

Q. Did you have any trouble with your injectors on the way down from Port Jervis to Jersey City on October 20th? A. Not a particle; I had a very pleasant trip down.

Q. Did you have the same fireman that you had on the day before; that was Mr. Rose, I think, wasn't it? A. Mr. J. H. Rose.

Q. On your trip on the 20th of October, did you at any time let the water get below the level of the crowsheet? A No; decidedly not.

Q. Did you burn that crownsheet on thattrip? A. I did not.

Q. Was there any leak or anything of that kind on that trip on October 20th? A. No; I didn't see any leak anywhere.

Q. Well, if there had been, you would have seen it, wouldn't you? A. On the road the fireman would have seen it and notified me of it.

Q. Your attention then, was not called to any such condition at any time on that trip? A. No; that is the duty of the fireman; one of their duties and a very important duty; the first one when they get on the engine, the last when they leave it.

Q. And you saw no leak of any kind on that trip? A. How is it?

Q. Did you see any leak of any kind on that trip? A. I did not.

Q. Did your injectors or either of them, break up, as you call it, at any time on that trip? A. There was not a break from Port Jervis to Jersey City.

MR. RECORD: That is all; no cross examination,—I will just ask him one question—the question I was going to ask I think would be hearsay, and I will not ask it.

(Witness excused.)

MR. HOBART: By consent I will read the testimony of one William H. Gould, who testified upon a former occasion in this matter, as follows: reading from page 74 in a printed book in the New Jersey Supreme Court:

"DIRECT EXAMINATION BY MR. HOBART:

"Q. What is your business? A. Actuary.

"Q. For what company? A. I am employed by the Equitable Life Insurance Society at the present time.

"Q. How long have you been in the life insurance business? A. About twelve years.

"Q. Have you made any study in connection with your duties as actuary of the expectancy of life according to the insurance tables? A. I have."

THE COURT: Of the life of this party? If there is not, what is the use of reading at all? I don't want to limit you.

MR. RECORD: The shortest way would be for him to read direct and I the cross examination.

"BY MR. HOBART (Reading):

"Q. I will ask you to refer to the tables that are recognized in life insurance business and state what is the expectancy of life of a man seventy-two years of age, in reasonably good health. The expectation is 8.16 years.

"Q. That is according to the table? A. According to the Carlisle table.

"Q. Are those tables recognized in this country as standard? A. I believe they are statutory in New York and used in nearly all the states of the Union.

"CROSS EXAMINATION BY MR. RECORD (Read by Mr. Record):

"Q. Do you know how those figures are made up? A. They are made up from a population of a parish in England.

"Q. Well, that is not quite what I mean. Perhaps I had better make myself clear. Isn't

it a fact that those figures are made up by taking the actual lifetime experience of particular individuals over certain period of time and averaging it? A. No. A mortality table is constructed by observing the number of lives exposed to risk and forming a table of the probability of dying from an observation of deaths.

"Q. Well, if the expectation of life of a man of seventy-two is eight years, those tables are made up, are they not, on the theory that a portion of the people in good health at seventy-two which came under your observation will die before the eight years and another portion will die after the eight years; is that so? A. That is so.

"Q. And what the table represents is the average of all those deaths? A. The expectation of life is the average after life time of all persons under observation over seventy-two.

"Q. And a lot of them die before the six or eight years? Some of them die the first year, don't they? A. Yes, sir.

"Q. Some the second? A. Yes, sir.

"Q. And some the third? A. Yes, sir.

"Q. And some the fourth, fifth, sixth, seventh and eighth? A. Yes, sir.

"Q. And then enough live beyond the eight years to carry the average up to eight years; isn't that right? A. That is correct."

CLAUDE E. LESTER, sworn.

DIRECT EXAMINATION BY MR. HOBARTS

Q. On the date when this accident happened, that is, the 21st of October, 1910, and for some time thereafter, were you employed by the Erie Railroad Company? A. Yes, sir.

Q. In what position? A. General foreman boiler maker of the Ohio Grand Division.

Q. Of the Erie Railroad Company? A. Yes, sir.

Q. Did you in the course of your duties become familiar with the condition of an engine known as number 957? A. Yes, sir.

Q. Have known of an engine of that number that was in the service of the company, did you? A. Yes, sir.

Q. Now, was your attention, with that of some other gentlemen, called to an accident that had occurred on the 21st of October 1910? A. Yes, sir.

Q. Did you as a result of your attention being called to that accident make any examination of any part of engine 957 shortly after the accident? If so, when? A. Yes, sir.

Q. When? A. A day or two afterwards.

Q. And who were the other men that assisted you or were present with you? A. Mr. Kuhn, who is general foreman boilermaker of Erie lines east, and Mr. Mansfield, general boiler inspector of the Central Railroad of New Jersey, Mr. O'Malley, foreman boiler maker at Kingston, for the D. L. & W.; Mr. Smith, foreman boiler maker of Jersey City; and some other, I don't recall.

Q. Did you examine in particular the condition of the crown-sheet and the flues, and so on? A. Yes.

Q. Will you state what you found as a result of that examination? A. I found about 160,

I think—to be exact 166 crown bolts had pulled out of the sheet; that caused by the sheet becoming overheated and dropping down and pulling off the heads of the bolts.

Q. What part of the crownsheet were these bolts from? A. It extended from the third row, from the front end of the box back about twenty rows, and—

Q. (Interrupting.) Do you recollect on which side or the other of the crownsheet, that is whether right or left? A. Well, the deepest portion of the defect was on the left side, at the left of the center.

Q. I think you said toward the front? A. Toward the front of the box, to the left of the center.

THE COURT: What do you mean by the front of the box?

A. Toward the front end of the engine.

THE COURT: Towards the front of the fireman?

A. Toward the front end of the engine.

THE COURT: And you railroad men refer to front as being away from the fireman —the front of the engine?

A. Yes.

Q. Did you see some of the bolts? A. Yes, sir.

Q. Can you tell me whether either of the two bolts which I show you are similar to the kind that were used on that engine on the crownsheet (handing bolts to witness)? A. They are both used.

Q. Now, what do you call these bolts? A. This bolt (indicating), is called a crown bolt or button

head radial stay, either one; and this bolt is called a stay-bolt, or a hammer-head radial.

Q. Now, which of the two kind of bolts that are before you was used for the purpose of holding the crown sheet up above the firebox? A. Both kinds.

Q. And is there any particular place where one kind is used? A. As I recall, there are eight rows of these bolts; that is eight rows crosswise and extending from the fourth row. The first four rows are "drove bolts," extending from the fourth row straight back to the end; and all the rest are of this type (indicating).

Q. This type, meaning the type you called— A. Stay-bolts.

Q. Is that the customary method of construction? A. Yes, sir.

Q. And was it at that time? A. Yes.

Q. How long have you been employed as a boiler maker and otherwise in railroad companies? A. About twenty years.

Q. Have you made a specialty in any particular department? A. Yes, sir.

Q. What line? A. Boiler.

Q. I don't think I asked you how long you have been foreman boiler maker for the Erie at the time of this accident. How long was that? A. About four years, I think.

Q. And prior to that time what had been your position? A. Foreman boiler maker for the C. H. & D., another railroad.

Q. C. H. D., is Cincinnati, Hamilton & Dayton? A. Yes, sir. And Cincinnati, Indianapolis and Texas Pacific.

Q. When you examined the crownsheet and the other, the bolts, as you have described, did you make any observation to see if you could determine the location of the water line? A. Yes, sir.

Q. What is that? A. The water line is a line of demarkation that shows where the water was at the time the accident happened; that is, the height of the water.

Q. Now, what is there about it that shows that? A. The color of the iron changes.

Q. In what way does it change? A. Where the iron is overheated.

Q. (Repeated by the stenographer.) Now, what is there about it that shows that? A. The color of the iron changes.

Q. In what way does it change? A. Where the iron is overheated.

THE WITNESS: It turns it a bluish color, from a light to a dark blue, various shades of blue.

Q. And that is due to what? A. Overheating.

Q. Explain a little more fully just what you mean by overheating?

MR. RECORD: Mr. Hobart, has this witness testified anything about this particular crown sheet?

THE COURT: Yes; that is what he is testifying to. I understand his testimony is directed to this particular crownsheet in this particular engine. His language wasn't that way.

Q. What do you mean by overheat? Explain that more fully, please? A. Well, in a case of this kind the overheating is meant when the water gets below the level of the crownsheet, and uncovers the iron so that the iron is exposed to the heat, with nothing to protect it—no water to protect it.

Q. What effect does that have upon the sheet as far as the color is concerned? A. It discolors it.

Q. What color does it cause or produce? A. Well, at the line of demarkation where the water leaves off and the steam begins it has this fatal blue color, as it is termed in boiler making parlance.

Q. Have you seen such lines as that in other cases of boiler emplosions—overheating? A. Numbers of them.

Q. Please state your opinion as to the cause of the dropping of the crownsheet of engine 957? A. In my opinion it is a clear case of low water; that is, water below the level of the crownsheet.

CROSS EXAMINATION BY MR. RECORD:

Q. To what extent does this blue appearance go upon this crownsheet; how many square inches or feet, or what? A. It doesn't show—it shows in a line, the line of demarkation, as we call it; the line between the water and the steam, where the water leaves off when the sheet is overheated, that is the point where the sheet is cool and the point where it is overheated—where those two points meet.

Q. How wide is that; how wide is the mark? A. Well, I could not explain it exactly that way; but it is simply like, say, a rough chalk line; take a rough chalk line along this surface, been placed in there.

Q. That is a quarter of an inch wide or half an inch wide? A. In that neighborhood; yes.

Q. About an inch wide? A. No, probably not; it would vary. It may be clearly and sharply defined at the center of the line and gradually drifts off to the original color.

Q. Gradually drifts off how far? A. Oh, it might be a quarter of an inch or three-eighths, or half an inch, or an inch.

Q. And that would mean that there were varying depths of water, wouldn't it? A. No.

Q. What would make it fainter at the edge than at the beginning? A. Well, it would work on the plan of taking any hot plate of iron and dipping it into water, along that line; it would show the line of demarkation, but yet it would not be sharply and clearly defined like a pencil mark would be.

Q. Now, this crownsheet comes to a point where it goes down from the tank—where the tank is? A. Yes.

Q. And if the water is drawn off of the top of that crownsheet and goes down below the edge of it then would this discoloration come there before the water came back? A. Yes.

Q. Would it come there from just the mere absence of the water? A. Yes.

Q. Well, where would it come to any particular point then; if the water was drawn off from all of the crownsheet and the crownsheet got overheated, where would the point be? A. The point would be at the edge of the water, at the top surface of the water.

Q. That is caused by the fact that at that point, above that point is the heat; or is it caused by the contact of the water with the hot surface? Which is it? A. Well, at the line of demarkation it would be caused by the contact of the water at that point, but still further your heat is discolored —or your sheet is discolored, but it is not this bright blue color that is at the edge of the water.

Q. That means that as the iron recedes from the point of contact the effect is less; that is all that means; isn't that it? Same effect only in lesser degree? A. Yes, sir.

Q. That is so, isn't it? A. Yes, sir.

Q. Now, supposing this water was drawn off suddenly, then came back over the whole crownsheet after it got heated; what would be the ef-

fect of it? A. Well, there might be several things, but it would probably result in a rupture of the plate.

Q. What kind of eruption? A. Tear the plate, possibly, from increase of pressure; of course, putting cold water on a hot plate would be like pouring cold water on the top of a stove; the steam would expand very rapidly, and it may increase the pressure enough to cause an explosion.

Q. That would depend, would it not, upon the length of time that the water was withdrawn? A. Yes, sir.

Q. If the water was withdrawn a longer time then the effect as it came back suddenly upon the heated metal would be more disastrous, exclusive of whether it resulted in an explosion or not than if it was withdrawn a fraction of a second or a very short time; is that right? A. Yes.

Q. Then the degree of the weakening process upon the crownsheet or any piece of iron, when you withdrawn water from one side of it, if there is a fire upon the other side, depends upon the length of time that the water is withdrawn before it comes back fresh and cold upon the hot surface; is that right? A. Absolutely.

Q. Now, it would follow then, would it not, that that might be withdrawn and returned again so as to weaken the crown sheet without destroying it, if the water came back quick enough, isn't that so? A. That would not well apply in this case.

Q. Well, I am talking about now the proposition of the law that you are talking about. You now said that the effect of withdrawn water upon the surface, where it is heated underneath, and bringing the water back upon the hot surface depends in its destructive force upon the length of time that the water is withdrawn? A. Yes.

Q. And the quickness with which it is returned.

Now, if it is off long enough and the sheet gets hot enough, and that is brought back, you say that would result in an explosion or eruption, or what ever you termed it? A. Yes.

Q. Now, if it was not off long enough and the water was returned quick enough, so that it did not result in an eruption or an explosion, why wouldn't it result in a weakening of the structure without an explosion? A. It might do so, but the effect would be plainly evident.

Q. I am talking about now—I am talking about the fact that it might be so. You say it might do so? A. Yes.

Q. Now, if the eruption took place it might take place instantaneously or the iron might bulge out about the stay-bolts before they gave way, either way, might it not? A. Yes, it would.

Q. Either way? A. It might.

Q. Then the result, so far as eruption or destruction or explosion goes, depends upon the degree of heat at the time cold water is applied to it? A. Yes.

Q. That is right, is it? A. Yes, sir.

Q. Now, supposing that that had been weakened, would a man—could a man see if he looked in over a bright fire, with just a casual glance in? A. If there had been any repairs made he could, because it would leak.

Q. It would leak if the impression had not been strong enough to result in a rending of the surface, a rent in the surface? A. A very slight overheating of the surface will loosen the bolts, loosen the thread of these bolts—it does not show clearly the thread here (indicating), but this bolt is threaded into the sheet, and a slight overheating will loosen that so that it will almost invariably leak.

Q. And then, if there was a slight overheating

could there be a damage, or a weakening of the structure that did not result in leak? A. Not in my opinion.

Q. You say you could not weaken that structure unless you weakened it so it would leak? A. Not in my opinion.

Q. Now, why? Why can't you apply water to a hot surface and have the degree of damage to the iron depend on the degree of heat? A. Simply because—here is a large surface here, this large heavy bolt, and this light plate; if the water is left off here for an instant——

THE COURT (interrupting): Pardon me, I don't want to interrupt you, but you say here, and here, and here. Unless you designate what you mean it does not get in the record. Unless I am watching you carefully or the jury is, we may not understand. So when you refer to the bolts, say the bolts, and the thread, the thread. Don't say here, and this and that.

Q. (Repeated by the stenographer.) Now, why? Why can't you apply water to a hot surface and have the degree of damage to the iron depend upon the degree of heat? A. Simply because, here is a surface here, this large heavy bolt, and this light plate. If the water is left off here for an instant——

THE WITNESS: We have a light plate here, the crown sheet, and a heavy bolt, and the degree of heat is different in those two. The length of time that the water uncovers the sheet is the same, yet the degree of temperature that they both attain is different, due to the fact that one is considerably lighter than the other. Then, of course, when the water comes back over the crownsheet it

cools the lighter plate much more rapidly than it does the heavier bolt. This results in a separation of the threads in the sheet, and on the bolt.

Q. Supposing the effect of the withdrawal of the water was such that it did not destroy the light iron to that extent. Supposing the adverse effect of the cold water when it came back was not sufficient to separate the iron from the bolt—or the crownsheet from the bolt, wouldn't it still affect the chemical substance of that thin piece of iron? A. It is barely possible.

Q. It is not only barely possible, it is necessarily so. A. Well, the point of contact between those two is so slight that the very slightest change in the degree of temperature will separate these threads in the plate and on the bolt. Those are simply a screw fitted in there, screwed in by hand, with a wrench about eighteen inches long, and hammered over. Then if the temperature is changed it is a very easy matter for them to leak.

Q. Now, you testified here before that the effect of this proposition was not leakage but bagginess, and this was affected by the heat and the water coming back in such a way that it bagged around the bolt. You didn't say anything about the leak. You said the effect would be to bag it, so that if a man looked in under he would see this bagginess, where is sagged down around the bolt. Didn't you so testify? A. I don't think so.

Q. What is the fact? What is the fact? A. I think I testified that that sheet was overheated.

Q. I am not talking about the sheet. I am talking about the law that you speak of. Didn't you testify at the former trial that the effect of water upon this substance would be such as to create a

bagginess around the bolts before the bolts gave way? A. I think—I am not positive—but I think I said the overheating of the plate would do that. I don't recall——

Q. (Interrupting.) All right. Now, is that a fact? A. Is what a fact? What I say or what you say?

Q. Is that a fact; is that your opinion that that might take place? A. It is my opinion that overheating the sheet will bag it.

Q. Before it breaks? A. Before it breaks.

Q. And before it leaks? A. But I didn't say anything about putting water on it as I recall.

Q. All right. What did you say, that bagginess is due to the fact of not putting water on it? A. I say the bagginess is due to the sheet becoming overheated. I did not refer to water on it at all.

Q. Is the bagginess—supposing the baggy condition had arisen; now, it would depend upon how quickly the water came back as to what the subsequent development would be, wouldn't it? A. Yes, if water was put on there again.

Q. If the fire was drawn out, the water was put on there again, nothing would be left but the bagginess, would there? A. That is all; if the boiler was cold it would not have any effect.

Q. Would not what? A. If the boiler was colld, if the fire was drawn out and the boiler was could it would not have any effect.

Q. No. I am appearing about after this bagginess has developed. You say there is a condition in these boilers that may develop a bagginess around the bolts before the bolts give way. That is what you say? A. Yes.

Q. And before there is any leak there; that what you say,—or is it what you say? A. Yes.

Q. That is what you say. Then the effect of this overheating might be that the crown sheet will bag around the bolts before any leak shows,

and before the bolt is drawn out? A. There wouldn't be any bagginess to affect if there is no water there, and if there is no water there it can't leak.

Q. Then, we will get the way you testified before. I don't care which. The overheating may result in bagginess around the bolt before the bolt gives way, is that right? A. It is between the bolts, not around the bolts; it is between them.

Q. It has to be around them? A. It is between them the bagginess would come, between them.

Q. Now, why? A. It would come there from overheating.

Q. Why? A. Because the sheet is weakened.

Q. What weakens it? A. Overheating.

Q. Overheating does weaken it? A. Most assuredly.

Q. Then why does it bag down instead of bagging up? A. Because the pressure is on that side.

Q. What pressure? A. Steam pressure.

Q. Well, if your water is withdrawn what is in there? A. Steam.

Q. And the steam pressure drives it down? A. Most assuredly.

Q. Now, what is the temperature of that steam? A. Well, saturated steam is about 200F.

Q. Well, I mean in a rough way; is it the same general heat as the overheated piece of iron? A. No.

Q. Cooler? A. Yes.

Q. It is cooler? A. Yes, sir.

Q. Is it sufficiently cooler so that the pressure of the cooled pressure of the steam upon the hot iron makes this chemical change? A. No; the heat of the crownsheet will rapidly change the steam—or rapidly increase the temperature of it.

Q. Rapidly increase the temperature of it? A. Yes, sir.

Q. That does not answer. (Repeated by the stenographer.) Is it sufficiently cooler so that the pressure of the cooled steam upon the hot iron makes this chemical change? A. What chemical?

Q. Well, whatever you say is the chemical change, when you say the iron gets overheated? A. Yes; I say that the iron becomes overheated. As the changes take place in the structure of the iron it stretches, because it is overheated.

Q. Yes, and because there is steam that is cooler than the iron pressing against it on the other side; is that so? A. Yes.

Q. It is the two things that make the result, isn't it? A. Yes, most assuredly.

Q. Then the degree of effect upon the iron depends upon the degree of the heat, the coolness of the steam, doesn't it? A. Not necessarily the degree of the temperature of the steam.

Q. I am talking about the heat of it. A. Not necessarily. The pressure instead of the degree; the pressure of the steam is what has the effect, not the degree of heat.

Q. How is that? A. The pressure of the steam is what has the effect, not the degree of heat.

Q. Isn't the weakening process of the steam dependent upon how hot the steam is? A. No, sir.

Q. It is immaterial about that? A. It is immaterial about the heat.

Q. The weakening process comes not from the heat, but from the pressure; is that your point? A. Yes, sir.

Q. Well, doesn't it come from the heat of the fire below? A. Yes, sir.

Q. In combination with the steam? A. Yes, sir.

Q. In other words, the effect of the heat of the fire if the top of the crownbox was exposed to the air, would be different than if the top of the

crownbox was covered with steam under pressure; is that right? A. Yes, sir.

Q. And it is the two things together that affect the structure of the iron? A. Yes, sir.

Q. Now, if the process of bagginess or if the process of weakening that iron had taken place so that it did not result in an explosion but did result in weakening of the iron, what would be the manifestation of that fact? A. As I said before, leakage.

Q. Well, what about bagginess? A. There might have been some bag—if the sheet got weak enough so that it would bag there would be some leakage.

Q. And there would be no bagginess without the leak; is that your position? A. It is barely possible. Now, let me explain: The sheet might bag at times if there was a hot collection on top; if there was something there to keep the iron from being thoroughly cooled by the air; that might cause a bagginess there.

Q. Without a leak? A. With or without a leak.

Q. With or without a leak? A. But that generally is very local, possibly in one spot only.

Q. But it might happen? A. Yes.

Q. Now, I am asking you if this bagginess exists without the leak ordinarily or probably? A. Not ordinarily.

Q. Well, didn't you testify when you were here before that this bagginess was an indication—a waviness or bagginess that could be seen only after careful observation and just a mere glance would not show it? A. It would depend upon the extent.

Q. Yes; it would depend upon the extent of it? A. Yes.

Q. If it was sufficiently baggy and wavy that could be seen by an observation that would not reveal it if it was not so pronounced; is that it? A. Well, it could be seen if it is very slight.

Q. Can it be seen by casual looking in or by a careful inspection, which? A. If the light is very good, you have a big bright fire in there, one can see things very clearly.

Q. Well, now, in the last case I asked you if you could see that by looking in the firebox and you said, "Yes, after careful observation; one not notice it just glancing in." Is that your testimony now? A. It is now; yes.

Q. Is that true? A. Yes, that is true.

Q. That is your judgment. You don't know what became of the crownsheet, I take it, after you saw it? A. I am not positive; it is my opinion that it was never taken out.

Q. I mean you don't know where it is; it was not in your charge? A. No, sir.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. This bagginess that has been talked about, is that what might also be called a sort of bulging? A. Yes, sir; a dropping down slightly between the bolts. Perhaps I could explain it more clearly. These bolts are placed in squares about four inches apart, and this bagginess would come central between these bolts.

Q. When the sheet bulged in the way you have been explaining it bulged so that it would bulge towards the fire? A. Yes.

Q. So that a person loking into the firebox could see that condition, could he not? A. Yes, sir.

Q. Could an experienced engineer or an experienced fireman—could he tell that by observation, by looking at the firebox? A. The extent of the observation and the extent of the bagginess would have a different relationship to one another.

Q. I mean an engineer of experience making the ordinary observation, such as they make in preparing the engine to go on the road.

MR. RECORD: This man is not an engineer; he does not know what they are doing in the morning; he doesn't know whether——

Q. Do you know how engineers ordinarily prepare their engines? A. I fired a locomotive for about a year, and I have been around locomotive shops for about twenty years.

Q. Well, do you know about engineers and firemen, what observations they make in getting their engines ready to go out? A. Yes, sir.

Q. The ordinary observation, such as an experienced engineer or fireman would make, would that disclose the bagginess if the fact existed? A. Certainly.

Q. Your answer is what? A. Certainly; I understand what the requirements are.

Q. (Repeated by the stenographer.) Well, do you know about engineers and firemen, what observations they make in getting their engines ready to go out? A. Yes.

Q. (Repeated by the stenographer.) The ordinary observation such as an experienced engineer or fireman would make, would that disclose the bagginess if the fact existed? A. Certainly.

Q. (Repeated by the stenographer.) Your answer is what? A. Certainly. I understand what the requirements are.

THE COURT: I thought from that last question and answer he did not understand the question. The preceding question was not answered. He thought he was answering another question, Mr. Hobart.

Q. You have referred also to leaks as one of the effects of the crownsheet having been burned or overheated? A. Yes.

Q. Is that a condition that can be discovered by ordinary observation by an experienced engi-

neer or fireman? A. Yes, sir; can't miss it if they look.

Q. Could you tell when you examined the crownsheet of this particular engine—could you tell when you saw it after the accident whether or not there was any bagging or waving condition? A. The sheet was inverted about nine inches; that is dropped about nine inches at the deepest point from its normal condition.

MR. RECORD: How much of the sheet?

A. As I recall there was between thirteen and fourteen square feet of surface; that does not mean that it was all dropped that far; it began to hang and gradually bagged down.

Q. Well, could you tell from the condition in which you found it when you examined it, whether or not there was any previous condition of bagginess or waviness? A. No, not at that time; no.

RE-CROSS EXAMINATION BY MR. RECORD:

Q. I would just like to get clearing in my mind this dropping part. You say there were ten or twelve square feet that had dropped down? A. Yes, sir.

Q. Where did the drop commence, toward the engineer or toward the front? A. Toward the front end of the engine.

Q. There is where it broke off and went down? A. It didn't break off; it didn't break off; it gradually pulled down—well, it worked on a plan of blowing a soap bubble; it gradually began to hang here, and dropped down into a sort of an arc.

Q. It began to hang at both edges of the point of depression? A. It would, yes; all the way around where the defect began; then gradually dropped down to the deepest point.

Q. Until it broke? A. No; it did not break; it pulled off the bolt head.

Q. Pulled off the bolt head? A. The sheet did not rupture at all.

Q. The sheet did not break anywhere? A. No, sir.

Q. And the water that went down in the fire went over the head—where the bolt heads down? A. Went to the hole.

Q. Where the bolt heads down? A. The probability is there was very little water went down with the steam.

Q. Whatever went through went through the bolt holes instead of the rent in the fabric itself; is that right? A. Yes, sir.

Q. Where in reference to the cut was the line—this blue line? A. That was on the extreme edge of it.

Q. Extreme edge all the way around? A. All the way around.

Q. How far away from the forward edge of the crown sheet was the other end of this circle, or the other circumference of this circle? A. As I recall, it was within about—oh, between eighteen and twenty-four inches of the back end.

Q. Well, how far would that be from the front end? A. About four feet, I should judge—four and a half or five feet.

Q. How big was the circumference of the edge of this cup where the depression began? A. Well, it had a diameter of, I should judge,—if you want to call it that.

Q. Yes. A. It had a diameter of about four feet.

Q. A diameter of about four feet? A. Perhaps I had better correct that. The distance forward and back was greater than it was crosswise of the boiler.

Q. How much greater? A. Oh, possibly two feet; it is hard to recall.

Q. That is, it was a wider cut one side than the other? A. It was long—it was rather eliptical in shape.

Q. Eliptical in shape? A. Yes.

Q. And that blue shade ran around the edge of it? A. Yes, sir; on the side sheets, particularly.

Q. On your theory where had the water receded to? A. To about three inches below the crown sheet.

Q. Let me see that I get that picture right. That means that the crown sheet came to an edge like this, and the water was down below that edge instead of going to and fro, it had sucked down below? A. The crown sheet is an arc that comes over like this and drops down, and the line of demarkation was about three inches lower than the highest point of the sheet.

Q. That is, this circular rim? A. Yes, sir; perhaps I make something more clear to you; that the back end of the crownsheet is about two inches lower than the front end; that explains for the difference in the height of the water line at the back end than at the front end.

Q. I have never had a thorough picture of that in my mind yet. Perhaps you understand it, but I have never had a mental picture, and I despair of getting a mental picture.

MR. HOBART: I will lend you my model.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. Was there any part of the crownsheet which had been dropped down and from which the bolts had not been pulled out? A. Yes.

Q. Now, as to that part of the crownsheet were there any indications of leaking or bagginess or

waviness, such as you have described? A. No, sir.

Q. None whatever on the other section of the crownsheet? A. No, sir.

(Witness excused.)

JOHN J. MANSFIELD, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You are in the employ of the Central Railroad of New Jersey, I believe? A. Yes, sir.

Q. What position? A. Chief boiler inspector.

Q. How long have you held that position? A. Twenty-two years.

Q. On the course of your duties in that position did you have occasion, or have you had occasion to examine locomotive boilers, study their construction? A. Yes, sir.

Q. Have you had to do occasionally with boiler explosions? A. Yes, sir.

Q. And you have observed conditions resulting from such explosions, have you, from time to time? A. Yes.

Q. Did you in common with Mr. Lester, the last witness, in common with one or two other gentlemen, examine 957? A. I did.

Q. And with particular reference to the crown sheet, please state whether you observed anything about the fatal blue line, or the water line, as has been already described by Mr. Lester? A. I did.

Q. Tell us just what you saw? A. I found that the crownsheet had dropped a distance of about nine inches, and in between the crown bolt and the radial stays it had buttoned, and down about between the sixth and seventh row, if I remember

right, was the blue line extending from the front end of the firebox back to within about twenty inches of the fire.

Q. What does the blue line indicate? A. Scarcity of water.

Q. Have you observed such conditions as that on other occasions? A. Oh, yes; yes.

Q. What is your opinion as to the cause of this crownsheet dropping, based upon the examination you made of the crownsheet? A. Scarcity of water in the boiler, and allowing the sheet to become overheated and stretch between the stays, loosened the fastenings, and the pressure from the inside pushed the sheet down.

MR. RECORD: I don't think I will cross-examine him.

EXAMINATION CONTINUED BY MR. HOBART:

Q. Who in the locomotive engine has the control of the water so as to determine whether it has to be kept above or below the level of the crownsheet? A. Engineer.

MR. RECORD: I will just ask this one question perhaps of all the witnesses you are going to put on.

Q. The effect of the lack of water is to make the metal weaker, is it? A. Well, it would make it weaker if it becomes overheated.

Q. And the overheating and the lack of the water together will make it weaker? A. Yes.

Q. And the degree of weakness depends upon the degree of heat and the length of time the water is removed before it is put back? A. Yes, sir.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. What effect does it have upon the bolt? A. Why, it would soften the metal—sheets.

Q. And if there had been any weakening would that result in any leaking around the bolts? A. Yes; result in leakage.

RE-CROSS EXAMINATION BY MR. RECORD:

Q. That would depend upon how weak it was? A. Depends on how hot it was.

(Witness excused.)

PATRICK J. O'MALLEY, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. Mr. O'Malley, you are employed by the Lackawanna Railroad, I believe? A. Yes, sir.

Q. What is your position with that company? A. Foreman boiler maker.

Q. Located at Kingston? A. Kingston; yes, sir.

Q. And how many years' experience have you had in boiler making? A. About twenty-five.

Q. Now, did you examine this engine, 957, with Mr. Mansfield, Mr. Lester and some others? A. Yes, sir.

Q. Did you observe anything about the water line? A. Yes, sir.

Q. Did you see anything about it which enabled you to form an opinion as to the cause of the explosion? A. Yes, sir.

Q. What did you notice about it? A. I noticed that the sheet had dropped about nine inches at the lowest point, and at the outer edge of this bag was a blue line.

Q. Did that indicate anything to you based upon your experience—— A. (Interrupting.) Yes.

Q. (Continuing.) As to whether or not there had been low water at any time? A. Positively, in my opinion; it was low water.

CROSS EXAMINATION BY MR. RECORD:

Q. What experience have you had? A. What experience? I have had twenty-five years' experience.

Q. When did you see a similar boiler that had blown out that way? A. I have seen a number of cases similar to that.

Q. Where? A. I have seen some on our own road.

Q. When? A. On the Lackawanna.

Q. What? A. When?

Q. Yes. A. We had one about eleven years ago.

Q. Eleven years ago? A. Yes, sir.

Q. What other one did you see? A. I seen one at Buffalo on the Lackawanna.

Q When was that? A. About twelve years ago.

Q. You were not present on either occasion when anything happened to these engines, were you? A. No.

Q. All you saw was a blue line? A. I seen several other things.

Q. Now, wait a minute. In this engine you saw on the Central eleven years ago, all you saw was a blue line around a torn or depressed portion of a boiler? A. No; I seen the hole enlarged; I seen the ends of the bolts were blue.

Q. I mean you were not present at the time of the accident? A. No, not when it happened.

Q. All you did see—you saw an engine, a crown-sheet of a boiler with a blue line around it; is

that right; that is all you saw in these engines in that eleven year instance? A. No; I seen several other things.

Q. What else did you see? A. I seen the points of the bolts; I seen the heads of the bolts; I seen the process; I seen the flues; I seen the back [illegible] sheet.

Q. Well, now, how do you know that this blue surface or line was caused by the lack of water? A. Because I was sent there for the express purpose of making an inspection.

Q. All right. That doesn't answer it. If you saw the blue line how did you know how the blue line was caused? A. It was caused by the sheet becoming heated.

Q. How do you know? A. How do I know?

Q. Yes. A. My experience.

Q. Well, you just show your experiences are apparently confined to two engines? A. What?

Q. Now, did you have any other experience besides these two engines? A. Yes.

Q. What are they? A. We had a number of others.

Q. Well, now, name them? A. I inspected two on the New York Central at Albany.

Q. Now, each engine that you ever saw, that you have inspected, you only saw it after the accident happened; isn't that right? A. After the accident happened.

Q. Yes. And you saw a blue line on some metal? A. Sir?

Q. You saw a blue line around on this metal, on this sheet? A. Yes.

Q. And the other things you have testified to? A. Yes.

Q. How do you know what caused that blue line? A. I do know that it was caused by overheating.

Q. Well, how do you know that? A. My experience tells me.

Q. What is your experience? A. Sir?

Q. Your experience is that you go to an engine and see a crownsheet with a blue line on it? A. Yes.

Q. How do you know what caused the blue line? A. Yes, sir; I do know.

Q. Well, how? A. Because I seen them before; that is, I seen engines before they got low in water and I have seen them after they got low in water.

Q. Now, have you ever been on an engine with crownsheet showing, with water in there? A. No.

Q. Well, how can you say you have seen the sheet when the water was in there in operation? A. In operation, no; I didn't say that. I said I seen them before they were overheated, and I seen them after they were overheated. I have seen them when they were in cool condition. I have seen them when they had steam up, with the fire out; I have been in the firebox a number of times with a hundred and fifty to a hundred and sixty pounds of steam, with the fire out, with the fire out.

Q. All you know is that when you have seen these disasters, when you have seen these crownsheets after the accident happened, there is a blue line; that is all you know, isn't it? A. If it is caused by low water there is a blue line.

Q. Yes, but how do you know that the blue line is caused by low water? A. I don't know of any other cause; I don't know of anything that would cause it.

Q. That is your theory? You don't know of any other cause? A. That is my practical experience.

Q. You don't know of any other cause; that is the only reason? A. No.

Q. You have never actually tested that out in the laboratory; you have never put water on a hot metal and drawn it off and produced the blue line, have you? A. Yes.

Q. You have done that? A. Yes.

Q. You have done that? A. Yes; I have done that myself.

Q. You have seen that, and that is the basis of your experience? A. Yes.

Q. Instead of these inspections? A. Sir?

Q. That is the reason why you say that, instead of what you saw on the engines? A. No; that ain't the reason. The reason I say that is because a sheet becoming overheated and low in water will produce a blue line, which is very clear for anybody to see.

Q. If a sheet becomes overheated a blue line will come near the edge of the water? A. Yes.

Q. That is your theory? A. Yes.

Q. How wide is the blue line? A. How wide?

Q. Yes. A. Well, like a pencil mark.

Q. Does it extend sometimes as far as an inch in width? A. Sir?

Q. Is it an inch in width at any time? A. The line?

Q. Yes. A. It might be; I don't know.

Q. Did you ever see it? What is the widest one you ever saw? A. I never measured one.

Q. Well, you think it was a pencil mark or an inch wide, don't you? A. Yes; I noticed the line.

Q. Well, how wide was it on this particular engine? A. The line?

Q. Yes. A. The line was the difference between the part that was overheated, and the part that was not overheated, due to becoming low in the water.

Q. How wide was that? A. Well, just like as I say, like a pencil mark, it was just the difference between one and the other.

Q. That is one-sixteenth of an inch, something like that? A. Yes; just——

Q. (Interrupting.) Did you ever see it in any boiler half an inch wide? A. I could not say that I have.

Q. Did you ever see it shade off to the extent of an inch, being stronger at the edge and shade off a little fainter at the edge? A. Now, when I say the blue line—everything above that line that I describe is a different color, but at the edge of this blue line that I have mentioned, where the water stops, that is where I noticed the difference between the two shades.

Q. And that is only just a thread that could be marked by a pencil mark? A. Well, it is just a line; it is just like the tide going out and leaving an impression on the beach.

Q. The tide on the beach can leave an impression of a foot or two? A. Or a pail of soapy water, and drawing it off, and it leaves a line where the water was.

Q. Well, such a line is always a very narrow one; it is not an inch. A. I didn't say it was an inch; I said it was like a pencil mark.

Q. You have never seen one that was not that way, have you? A. Sir?

Q. You have never seen any line that was not like a pencil mark? A. Oh, I could not say that; I could not say that; it might be wider; it might be narrower; but that is my observation, just a line so that I could notice the difference between one and the other.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. Now, the part of the crownsheet that was immediately next to this line, like a pencil line, was that of the same color as the rest of the crownsheet, or was that also discolored in some way? A. Yes, sir; it was discolored.

Q. In what way was it discolored? A. Well, it was perfectly clean, showing that it had been hot, and as a rule there is a scale that forms on the far side of a firebox, just the same as it would on the lid of a stove or anything that is exposed to smoke and gas and dust and various things.

Q. What I am asking you is this; was there any difference in the color of this crownsheet one side of this pencil line as compared with the color of the crownsheet on the other side of that line? A. Yes.

Q. What was that difference? A. That is what I tried to explain; that where it was protected by the water it was still scaly, but on the other side of this line it was perfectly clean, which showed that it had been overheated and was burned off and made clean.

MRS. FARMER, recalled by Mr. Hobart:

DIRECT EXAMINATION BY MR. HOBART:

Q. You have already testified that your brother Patrick had been living with you since the preceding May. Now, was there any other of your brothers also living with you during that time from May down to October? A. Yes, sir.

Q. And who was that? A. Martin.

Q. Now, did your brother Patrick—the one that was killed—did he pay board for his brother Martin? A. No, sir.

Q. Didn't you so testify at the last trial? A. No, sir.

Q. Calling your attention to the testimony given on another occasion: "How much had he helped to support your brother?" referring to this brother Martin—you answered, "Five dollars a week." Next, "And how long would he do that?" you answered, "Ten months." A. Not Martin, Edward.

Q. The youngest brother? A. Yes; he was seventeen.

Q. Now, what I want to find out is whether or not your brother Patrick, the one that was killed —whether he paid the board of your youngest brother while he boarded with you? A. He helped to pay it.

Q. And did he pay five dollars a week, as you testified at the last trial? A. Yes, with the others.

Q. And did he pay that five dollars a week during that last few months, from May to October? A. Not all the time; my other brothers helped pay it.

Q. How much did Patrick pay; that is what I want to find out? A. Well, I can't recall how much he did pay.

Q. Well, didn't you testify before that he paid five dollars a week? A. I do say now that he paid five dollars a week every week in his turn with the others.

HUGH SMITH, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You are employed by the Erie Company as foreman of boiler makers, I believe? A. Yes.

Q. At Jersey City? A. Yes, sir.

Q. How long have you been in that department of the company? A. About twenty-three years.

Q. And how many years' experience have you had altogether with locomotive boilers? A. Thirty-five.

Q. After this accident on the 21st of October, did you see engine 957? A. Yes, sir.

Q. Where was the engine when you saw it? A. At Suffern.

Q. What time of day was it when you saw it? A. Oh, it was between half past ten and eleven o'clock.

Q. Did you examine the crown sheet? A. Yes, sir.

Q. What did you find about it? A. I found the crownsheet was down, bolts—

Q. (Interrupting.) Did you notice whether any of the bolts had pulled out? A. The bolts were pulled over the heads; quite a large number; I don't remember how many just now. They pulled out of the holes entirely and lay on the grates in the firebox.

Q. Were the sheets at that time still hot? A. Yes; it was still hot. The water that was left in the boiler was there yet, and the fire was in the ash-pan.

Q. What was done with that engine? A. 957?

Q. What was done with it? A. What is that?

Q. What became of it? A. It was brought to Jersey City after that.

Q. Brought to Jersey City by another engine? A. It was towed in, yes, sir.

Q. And were you present at this examination referred to by the other witnesses who have testified,—Mr. Mansfield, Mr. Lester and Mr. O'Malley? A. Yes, sir, at Jersey City.

Q. And that was in the Jersey City yard, was it not? A. Yes; the round house.

Q. Did you see it there the next day? A. What is that?

Q. Did you see it at Jersey City the next day? A. Well, I guess it got out the next day; I don't know when I got it down, but right after that; as soon as she arrived at Jersey City these men were notified to be there and we made an inspection together.

Q. Well, did you take part in the inspection with these other men? A. Yes; I was there.

Q. Did you at that time observe anything about this so-called water line? A. Yes, sir.

Q. What did you notice about that? A. Well, I noticed it was right around the edge, where the bolts had started and give way, all the way around.

Q. How many times did you examine the engine at Jersey City? A. Well, only that one time. I didn't bother with it after that.

Q. That was the time when these other men were there? A. Yes; I made a report of the first inspection.

Q. Can you state from your examination how far below the level of the top of the crown sheet the water line was? A. Well, it would be about from four to six inches according to the water line; but the crown sheet itself when falling came down about eight or nine inches,—between eight and nine—in the lower space, measuring from the edge of the bolts that remained to the top of the boiler.

Q. What in your opinion was the cause of this

accident? A. Why, low water; the crown sheet overheating.

Q. Who has the control of that on the engine? A. The engineer.

Q. Now, do you recollect whether you saw that engine at any time shortly before the accident on the 21st of October, 1910? A. We did work on the engine before that, before she went out of the shop on the 19th or 18th of the month; but I didn't have anything directly to do with that The engine was there and we did the work on it, but other men worked on it.

Q. Did you personally do any work on it? A. No.

Q. And that was on the 18th of October? A. I think it was; just a few days before the accident.

MR. RECORD: This is not up in Port Jervis; this is down below.

Q. Was the engine repaired? A. The engine was there for—the test and boiler inspection; it was put to the hardest sort of tests.

Q. Where was that done? A. In the Jersey City round-house.

Q. Did you have anything to do with those tests? A. No; I did not, personally; but to see that it was done.

Q. You mean some men under you made the tests? A. Yes; there was a foreman there to look after it, and the foreman boiler inspector made the inspection; the foreman saw that the inspection was properly made, and witnessed the test of the engine.

Q. Was Mr. Patrick Collins one of the men under you that had to do with the inspection? A. He was boiler inspector at the time.

Q. Do you know where he is now? A. What is that?

Q. Where is he now? A. Well, he died since.

Q. When did he die? A. I don't know; I only heard that.

Q. Well, did he die recently? A. Yes; a couple of years ago.

CROSS EXAMINATION BY MR. RECORD:

Q. How old was this engine? A. What is that?

Q. How old was this engine? A. Well, I could not say offhand; about eight or nine years.

Q. You had seen it during that time? A. What is that?

Q. You had seen it for eight or nine years? A. Yes, sir.

Q. Do you know how much older than that it was? A. How much what?

Q. Older? A. Older?

Q. Yes. A. No; I don't know; it was new when it came on the New York Division where I worked—brand new.

Q. When you first saw it it was new? A. Yes; I could not say how long ago that was; I didn't keep any record of it.

Q. You didn't do this inspection yourself? A. No, sir.

Q. Was the engine turned in to you by somebody for inspection? A. It was turned into the round-house for inspection.

Q. Was it turned in to you as the manager or superintendent or boss? A. Yes.

Q. It was? A. Yes.

Q. By whom? A. Well, it was ordered in for to have the hardest test made.

Q. By whom? A. By the master mechanic through the orders that all boilers must be inspected once a year.

Q. Once a year? A. Yes; and this boiler was

due for inspection, and when it was held in we went ahead with the inspection and repairs to the boiler that were necessary.

Q. Well, now, how long did that inspection take? A. Well, that inspection took in itself about two days.

Q. About two days? A. Yes, to get ready and finish the inspection.

Q. You saw the blue line that you speak of around the edge of this depression? A. Yes, sir.

Q. How wide was the blue line? A. Well, it was not any width; it just ran from black to blue to yellow.

Q. How wide? A. How wide? Well, you could notice it—just so you could notice it.

Q. Black, blue and yellow were the colors? A. Yes, sir.

Q. Did you ever see such a line as that an inch wide? A. I didn't hear you.

Q. Did you ever see a similar line to that an inch wide? A. Why, I have seen them as wide as that, yes, and a good deal wider.

Q. Where did you ever see one an inch wide? A. Why they run that wide, over where the crown sheet slopes down, and it keeps gradually to the extent of the thickness of the plate. That crown sheet had a drop two inches, and at the back the line was wider than it was at the edge on the side.

Q. What would that indicate? A. That would indicate that the water was more on the sheet, the latter part.

Q. Yes; that there was a greater depth of water at one part than at the other? A. Yes, due to the thickness of the plate.

Q. What is the effect of drawing off the water and the overheating of the iron; does it tend to weaken it? A. Why yes; it weakens it right

away, as soon as it gets warm enough, hot enough.

Q. And the degree of weakness depends upon how long the water has been withdrawn, does it not? A. No, no; it depends upon the heat that is on the sheet; depends entirely on the fire in the firebox itself. It will heat up quickly just as soon as the water leaves.

Q. Well, I say if the water leaves one sixtieth part of a second it would heat up less than if the water had left half a second, wouldn't it? A. Well, I am speaking of the fire, the heat in the furnace, the firebox, against a sheet at that particular part. The crown sheet is the highest—and the fire is not always the same heat throughout the length of the fire, as on the grates, and the hottest place gets it first. Even if it is full of water, or the same level, the crown sheet—the crown sheet is the part that will collapse first; that is, it will weaken and bulge between the staples under it pulls over—over the heads.

Q. Yes. Well, now, is it not possible for the crown sheet to become weakened without blowing out? A. Without blowing out?

Q. Yes. A. Why, yes; it will weaken enough to cause the bolts to leak.

Q. It can't weaken without blowing out? A. Yes, sir, but that sheet, you know, just as soon as it commences to weaken—just as soon as it commenced to get overheated, the bolts will get loose; the sheet will be hotter than the bolts, and will pull away from it, and as the pressure comes on it it tends to pull on the bolts; but there is no water coming out there. An engineer wouldn't notice the leak, because the dry steam comes out and burns off, until the sheet gets so overheated it collapses over the heads of the bolts. After it gets overheated it gives way; after the heat required to drive it over the bolts, it drives down, but it is leaking.

Q. But the steam takes it up? A. The steam blows off, the steam is dry.

Q. That takes off the leak? A. Yes, sir; you wouldn't notice the leak unless the water is put back on there again. Then, of course, it will leak bad.

JOHN J. BUCKLEY, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. Mr. Buckley, you are employed by the Erie Company? A. Yes, sir.

Q. In what department? A. Round-house.

Q. At Jersey City? A. Yes, sir.

Q. Do you know engine 957? A. Yes, sir.

Q. Do you recollect that engine being in the shops at Jersey City in the month of October, 1910? A. I do, yes, sir.

Q. What was your position there? A. Why, foreman, cab work.

Q. Did you have anything to do with the inspection of engine 957 after it had been put in the shop and certain things done to it? A. Well, yes, I supervised the work that was done on the boiler fixtures.

Q. Including the injectors? A. Yes, sir.

Q. You count the injectors as part of the boiler fixtures, do you? A. Well, those are tested after the engine is put in service.

Q. Well, did you have anything to do with the inspecting the injectors? That is what I want to find out? A. Yes, after the engine was fired up again; had to test them out.

Q. I show you a paper on which appears your name, signed J. J. Buckley, foreman (paper shown to witness.) A. Yes.

Q. Is that paper signed by you? A. Yes.

Q. Does that assist you in refreshing your memory as to whether or not you did examine any part of 957? A. Why, I didn't examine it; I supervised it.

Q. Well, what did you do personally; what did you have to do with it? A. Personally?

Q. It is marked "Correct, J. J. Buckley, foreman." A. That form was made out after the engine—when the work is finished and the engine is put in service.

Q. Yes. A. A man does the work here on the cab fixtures, and then the tops are set after the engine is fired up.

Q. That is, Mr. Olean? A. Olean done the work, yes.

Q. Olean is here? A. Yes, sir.

Q. He does that under your direction? A. Yes.

Q. Now, what I want to find out is whether you check it up in any way before you signed it? A. I checked it up to see that it was done.

Q. Was it done on this date? A. Yes, sir.

Q. Was it done on the date this report contains, October 18, 1910? A. Yes, sir.

Q. Does that examination include the injectors? A. Well, it includes one part that pertains to the injectors; it is not on the form.

Q. What is that? A. That is the check valve.

Q. What has that got to do with it? A. Well, that is the valve that holds, retains the water in the boiler after the injectors force it into the boiler.

Q. Keeps the water from flowing out? A. Yes, sir.

Q. Did you know this Mr. Patrick Collins? Did you know him? A. Patrick Collins—I did know him, yes, sir.

Q. What was his position? A. Boiler inspector.

Q. Do you know whether or not he is living at this time? A. So far as I know he is dead.

Q. Well, how do you know? A. Well, I was told; that is all.

Q. Who told you? A. Why, I don't just recollect now.

Q. Was it some of the men? A. Some of the men who knew him.

Q. Who knew him, were acquainted with him? A. Yes; I don't just recollect who.

CROSS EXAMINATION BY MR. RECORD:

Q. Did you make this inspection yourself, or is that the result of some report made to you by somebody? A. I don't make the inspection myself, no, sir.

MR. RECORD: Well, what is the force of this, Mr. Hobart, if he didn't make it?

MR. HOBART: He said he checked it up; supervised it; that is all.

THE WITNESS: I will say I didn't make it myself; I had a man do it, and I saw that the man did the work.

Q. For instance, what did you say to the man? A. Beg pardon?

Q. What did you say to your man? A. Why, I told him what work he had to do.

Q. How long did it take? A. Well, that part of the work took him probably about two hours.

Q. Did you stand over him all that time? A. Not all the time; it wasn't necessary.

Q. How do you know he did it? A. Well, I saw the fixtures when he put them together again.

Q. Was all of his work that he did visible? A. Yes, sir.

Q. He did no work inside that could not be seen? A. No, sir.

DOMINICK OLEAN, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. Did you examine this engine 957 under the orders of Mr. Buckley, foreman? A. Yes, sir.

Q. Where did you examine it? A. Examined it in gauge-cocks, tested the steam gauge, examined the water glass cock, examined the box.

Q. Where was the engine when you did that? A. In the round-house.

Q. In Jersey City? A. Yes, sir.

Q. How long did it take you to do that? A. About a couple of hours. Couple of hours and a half; find out anything wrong may be take a couple of hours; find anything better maybe less.

Q. Have you seen this report before that Mr. Buckley was looking at a moment before on the stand; did you have anything to do with that? A. Yes, sir; the top.

Q. You had to do with the top? A. Yes, sir.

Q. Well, now, what is that, please; tell us what you mean by the top? A. Well, keep the fire up, got to set it.

Q. I don't understand yet quite what you mean. Is it the steam gauge? A. Yes, sir.

Q. The safety valves? A. Cleaning out of the gauge cocks, the water glass cocks, testing steam gauge.

Q. And when you speak to the top do you refer to the safety valves? A. Yes, sir.

Q. What was the condition of those things when you inspected them or examined them; what condition were they in; was anything the matter with them? A. Fixed up; that's all.

Q. What did you do? A. Well, he told me, clean out everything, gauge cocks, water glass cock, steam gauge; that is all I do except the cab work.

Q. Well, did you test them to see if they were all right? A. Yes, to see if they were all right.

MR. RECORD: That is kind of leading this witness. He doesn't seem to know anything unless you tell him.

MR. HOBART: Well, it is a little hard for him to understand English.

MR. RECORD: He understands enough English so that when you tell him he can answer.

MR. HOBART: I did not mean to lead him. You know what he testified to before.

MR. RECORD: Keep within the line.

MR. HOBART: I will try to.

Q. What we want to know, Mr. Olean, is this? Did you make any inspection or test of any of the gauges or anything of that kind? Did you or did you not? A. I used to work and test anything.

Q. Well, did you with regard to engine 957? A. Yes.

Q. Well, what did you do in regard to 957 under the orders of Mr. Buckley. Now, what did you do? A. Got to do—he say, you look at the gauge cocks, water glass cock, and test the steam gauge, have the fire up and look after the top.

Q. Well, did you do that with this engine? A. Yes, me do that with this engine.

Q. When you were ordered by Mr. Buckley? A. Yes; Mr. Buckley, the boss, he gave me order; I have to do it.

THOMAS KUHN, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You are employed in Jersey City? A. Yes, sir.

Q. As general foreman of boiler makers? A. Of boiler makers, yes.

Q. Did you examine this engine 957 in company with Mr. Lester and some others? A. Yes, sir.

Q. And where was the engine then? A. Jersey City shop.

Q. And what examination did you make? A. What examination is that?

Q. Yes, what did you do in the way of examining it? A. We made an examination of the firebox.

Q. Including the crown sheet? A. Yes, sir.

Q. What did you find about the crown sheet? A. Found 166 bolts pulled out of the crown sheet.

Q. Did you observe anything about this water line? A. I did.

Q. What about it that you noticed? A. Why, the hot water line between the sixth and seventh row, each side of the car sheet, extending back to the twentieth and twenty-first row, towards the back end of the boiler.

Q. What did that indicate? A. That indicated that the boiler was low in water.

Q. How far below the level of the top of the crown sheet was that? A. Three inches below the level of the crown sheet.

Q. Now, you have had to do with locomotives and locomotive boilers for some time, haven't you? A. Thirty-four years.

Q. What is your opinion as to the cause of the accident? A. Low water.

Q. Upon what do you base that opinion? A. I would base that upon the condition I found the crown sheet in.

Q. Now, I have here what purports to be an exact model of a locomotive boiler on a small scale. You have seen this before (indicating)? A. Yes, sir.

Q. Will you kindly describe it? What it is intended to represent? A. This is the cylinder part of the boiler, the outside sheath; these little marks indicate the space (indicating).

Q. First of all, which is the front of the engine? A. This is the front; this is the back, this is your fire box (indicating). Your fire comes on this end where you take fuel. The hot water line on this fire box ran between the sixth and seventh row on each side of the center.

Q. Does that indicate it? A. This line indicates—indicated on the line here (indicating).

Q. You have marked a line here on this model which indicates approximately the line you found? A. Over here (indicating).

Q. I see, now, tell us a little something more about this, this little round hole I am pointing to now—A. (Interrupting). Wait a minute, what are you pointing to now.

Q. This little round hole is the fire box door, is it? A. Yes, sir.

Q. I am calling your attention to wnat seems to be marked with a red pencil, in here; is that on the top of the fire box? A. Yes, sir.

Q. Now, is there a space between the top of the fire box and the top of the boiler? A. There is, all the way from eighteen inches up.

Q. And does the water flow over that space? A. Over the space, yes, sir.

Q. Reference has been made to certain kinds of bolts or stays. Are they indicated in this

model? If so, in what way? A. No, sir, they are not. Some boilers are equipped with eight and ten rows, and some eleven.

Q. Yes. A. This bolt is a button head bolt. This bolt here is a screw bolt, driven on both ends. This bolt is driven on one end and screwed against the crown sheet (indicating the screw bolt.)

Q. What kind of bolts were there on this particular crown sheet? A. There were screw bolts and buttonhead bolts.

Q. Both kinds? A. Both kinds.

Q. Well, are they indicated by these rough projections? A. No, it don't give the number of buttonheads on there.

Q. It does not give it accurately? A. No. The number, I think, on those, are between eight and ten rows on that class of car.

Q. Now, tell us where the flues would be in this model, or where they are intended to be represented? A. The flues pass from the fire box here to the front flue sheet. Those little marks inside there indicate tubes.

Q. Does the water flow around those tubes? A. The water flows around those tubes.

Q. Do those tubes get heated when the fire is going in the fire box? A. Yes, sir.

Q. The fire, of course, also heats the crown sheet just immediately above it? A. The crown sheet.

MR. HOBART: I offer the model.

THE WITNESS: This bolt here, I know, with the buttonhead, has a greater pulling power than the other bolt.

Q. That is the difference between the two bolts? A. Yes, sir.

MR. HOBART: I offer the model.

The model was received in evidence and marked Defendant's Exhibit 1.

CROSS EXAMINATION BY MR. RECORD:

Q. The top of the crown sheet is curved, is it? A. Curved.

Q. It is not square? A. No, sir.

Q. Did you ever see an engine that had collapsed in this way before? A. Yes, sir.

Q. How many? A. Well, I could not exactly say the number, but I have seen a great many of them.

Q. How wide was this mark when you saw it? A. The top line—that was on each line of the center, between the sixth and seventh row, on each side of the center was where the hot water line passed between the bolts, extending back.

Q. Was it a circular line all the way around, or part way around? A. Well, it was a wavy line, it was not exactly straight.

Q. Did it go around all the way or only on either side? A. Just on the side, between the bolts, and raised up going to the back ends, on account of your crown sheet being higher than the back door sheet.

Q. Was it a line that ended anywhere or was it in the nature of a circle that came around and connected? A. Well, this line ran right direct between the bolts, passed right back and extended out.

Q. Well, it started where and ended where? A. Yes.

Q. (Repeated by the stenographer.) Well, it started where and ended where? A. It started between the sixth and seventh row, and ended between the twentieth and twenty-first, back in.

Q. Will you tell the jury where that started, using this model (Defendant's Exhibit 1)? A. This hot water line started between the sixth and seventh row, each side of the center.

Q. Between the sixth and seventh row? A. Yes, and then ran back to the 21st and twenty-second I thinnk; to the twenty-first and twenty-second row back here (indicating).

Q. On each side? A. Yes, sir; on each side.

Q. But it did not extend across? A. Oh, no, it could not, because this is lower on the back.

Q. It didn't extend across, is that it? A. It did not extend across; it tapered back gradually.

Q. And it was two parallel lines? A. Two parallel lines.

Q. And it was not a circle? A. Oh, no, not a circle.

Q. And this crown sheet was detached, was it? A. Yes, sir.

Q. In a cup shape? A. In cup shape.

Q. With two lines on either side? A. With two lines on either side of the center.

Recess to 10 o'clock, January 12, 1915.

Jersey City, N. J., January 12, 1915, trial of the cause resumed, at 10 A. M.

JOHN HENRY ROSE, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You work for the Erie Railroad, I believe? A. Yes, sir, I do.

Q. Are you employed as a fireman? A. Yes, sir.

Q. Did you work with Engineer Evans on the 19th and 20th of October, 1910? A. I did, sir.

Q. And on the 19th of October do you recall whether you were firing for Mr. Evans on the trip from Jersey City to Port Jervis, with engine 957? A. I was fireman for engineer Evans.

Q. And did you fire with him on the same engine on the trip from Port Jervis to Jersey City on the next day, on the 20th? A. I did, sir.

Q. On your trip to Port Jervis on the 19th of October, did you have anything to do with the operation of the injector? A. I did; I used my injector half the ways.

Q. How did it work? A. First class.

Q. Was your engine at any time low in water that day? A. No, sir.

Q. Was your crown sheet at any time burned that day? A. No, sir.

Q. Do you know whether engine number 957 was left at Port Jervis when you arrived there on that trip? A. She was left there; she lost part of her pony wheel, she was left there for that.

Q. The pony wheel is what? A. The engine truck; the little wheel in front of the engine.

Q. What time did you get to Port Jervis, if you recall, about? A. It must have been then around 11.05—11.10, somewheres thereabouts.

Q. In the morning? A. Yes, sir.

Q. Then did you make a trip from Port Jervis that day on another train? A Yes, sir.

Q. And did you go back to Port Jervis again the next morning? A. Yes, sir.

Q. What time did you get to Port Jervis then? A. Between 11.05 and 11.10, somewheres thereabouts; I don't know the exact time.

Q. That would be the 20th of October? A. Yes, sir, the 20th.

Q. What time did you start out with 957 on October 20th when you left Port Jervis? A. I don't recall the exact time, but it was around 3 or 3.25; I just forget now what time we left there.

Q. Now, before you started out from Port Jervis did you have anything to do in the way of examining or inspecting 957? A. Well, I looked at the crown sheet and the fire box and it was O. K. when we left Port Jervis.

Q. Where was the engine when you looked at the crown sheet and the fire box? A. She laid on a pit-track alongside of the round-house.

Q. How much time did you spend in looking at the crown sheet and fire box? A. Oh, maybe four or five minutes.

Q. Was there a fire in her at the time? A. Yes, sir.

Q. Did you observe whether or not there was any leak of any kind in the fire box or in the crown sheet? A. There was no leak in 957 when I looked at it.

Q. Was there a crack or blister, any sign of burning or anything of that sort? A. No, sir.

Q. When you ran engine 957 on that trip from Port Jervis to Jersey City on October 20th, state whether or not there was any trouble with the injector that day? A. Had no trouble at all going east from Port Jervis.

Q. Coming back now for a moment to the trip the previous day—that was October 19th—do you know whether the water glass is located on that engine? A. Yes, sir.

Q. Did you observe it on that trip up? A. Yes, sir.

Q. State what the purpose of the water glass is? A. It is there so both of us can look at it.

Q. What is that? A. What did you say?

Q. What is the purpose of the water glass; what is it used for? A. To denote the level of the water in your boiler.

Q. Can you by looking at that tell whether there is low water or not? A. Yes, sir.

Q. Or whether or not the water gets below the top of the crown sheet? A. Yes, sir.

Q. Did you observe the water glass on your way up to Port Jervis on October 19th? A. I did, sir.

Q. How was the water in the boiler? A. Had plenty of water at all times.

Q. When you looked at your crown sheet on the 20th of October, before you started out from Port Jervis, did you observe whether or not there was any bulging or bagginess, or anything of that sort in the sheet? A. The crown sheet was in first class condition when we left Port Jervis with it.

Q. Well, did you observe any such thing as bulging? A. No, sir.

CROSS EXAMINATION BY MR. RECORD:

Q. You say that on this trip on the 19th at Port Jervis you used an injector on your side of the engine? A. I did, sir.

Q. Why did you do that? A. Because the engineer had trouble with his injector for a ways.

Q. How do you know that? A. Well, I could hear it.

Q. What could you hear? A. Well, I know I could hear that it was not working; that is why I got out and put mine on.

Q. Did he tell you to put yours on? A. No, sir; he did not.

Q. Did he make any motion to you to put it on? A. Not to my knowledge, no.

Q. Who is boss of the engine? A. The engineer.

Q. Don't you take his orders? A. I do, sir.

Q. Do you act from his orders? A. Well, that is a good fireman's trait, when one breaks up to put another one on.

Q. Isn't it his business to tell you to put one on? A. Yes, sir, but I didn't think it was necessary for him to tell me; it is my lookout just as much as it is his, to have water in the boiler.

Q. Isn't it his business to tell you when it is necessary to work the injector? A. Yes, sure.

Q. You are clear in your recollection that he said nothing to you? A. I don't understand.

Q You are clear in your recollection that he said nothing to you? A. I don't claim anything about it; I don't know whether he said anything to me or not; I can't just recall that time.

Q. You said he did. Now you say you don't remember; which is right? A. Maybe he did; maybe he didn't.

Q. Your present story is now, that you don't remember; is that right? A. Maybe he did; I don't know. That is four years ago that happened —five years ago.

Q. Yes, I thought so. So that your recollection, as you testified to it, isn't true; you don't remember, do you? A. Well, I do remember that I put the injector on.

Q. You remember that? A. I remember that all right.

Q. When you say it was four or five years ago I suppose you mean by that that you have to do this thing every day and that is a long while ago? A. Do what every day?

Q. Run this engine—the fire? A. Yes, sir.

Q. You have been steadily employed ever since? A. Yes, sir.

Q. How many different engines have you been on since that time? A. I could not tell you; maybe a different one every day.

Q. A different one every day? A. Sometimes; sometimes have the same engine two or three weeks.

Q. And you have probably been on a hundred ever since then? A. Very likely I have.

Q. Been on duty pretty steadily ever since then, that is worked every day? A. No; I have not worked every day; I am on the extra list. I work when they need me.

Q. But you probably have been fireman on perhaps one hundred different engines since that time? A. Maybe I have, sir.

Q. When you speak of your going on the following day from Port Jervis on this road, have you any distinct recollection of that day different from any other day? A. No; it is all the same day to me; it is the same work every day.

Q. This was on the 20th that you came back? A. Yes, sir.

Q. On the 25th of that month what engine did you run? A. I could not tell you.

Q. Could you tell what trip you made on the 25th? A. No, sir; I could not, unless I went back and looked at the time book.

Q. Could you tell from your time book how long a time you spent in looking over the engine on the morning of the 25th before you got on it? A. No, sir.

Q. Could not tell? You would have to tell that from recollection, if you told it at all? A. Yes, sir.

Q. And your recollection would be simply that you do this thing every day and did it on a hundred engines? A. Yes, sir.

Q. And you don't have any particular recollection, of a particular morning, with a particular engine, do you? A. I don't get that question.

Q. Well, do you mean to say that four years ago you can remember about a particular engine at a particular time? A. Four years ago?

Q. Yes. A. Could I remember?

Q. Yes. A. Yes; I do the same thing every morning on a case like that.

Q. Oh, no. Can you remember the engine that you have gone on on the 25th day of October, four years ago? A. Yes, sir; I do.

Q. What was that engine, what was its number? A. 943 we had west that morning.

Q. 943? A. 943, yes.

Q. The 25th? A. Yes, sir.

Q. Can you remember what engine you had on the 25th day of November that year? A. No, sir; I do not.

Q. How do you recollect the 25th day of October then, that year? A. Because the records show that.

Q. Where are these records? A. In Jersey City.

Q. When did you last see them? A. Well, I didn't see them at all; I can look at my time book. I know when this case happened; it happened on the 26th, and therefore I had the 957 on the 26th, and I ought to know I had it.

Q. You recollect that on the 25th you were on the 943? A. Yes, sir.

Q. You recollect that distinctly? A. Yes, sir.

Q. Can't be any mistake about that? A. No mistake at all.

Q. You are absolutely positive? A. Positive 943 on the 25th.

Q. Why do you recollect it was on the 25th? A. Because I remember on account of this unfortunate case; that is why.

Q. What? A. I remember it through this man being killed on that trip on the 26th, that I had it on the day before.

Q. Well, do you recollect that it was the 26th that he was killed? A. Well, I am pretty sure of it, yes.

Q. You remember that? A. Yes, pretty sure of it.

Q. You are quite positive about that? A. Well, I would not want to swear my life on to it.

Q. No, I should think not. But you recollect three days after the 25th the particular engine you ran? A. No, sir; I do not.

Q. Don't remember what time you spent inspecting it? A. No, sir; I do not.

Q. But you do remember the 25th? A. Well, I inspect—I take about four or five minutes to look at the crown sheet on every engine I get on.

Q. You are testifying on that simply from your habit and not from your recollection of the day; is that so? A. That is it.

Q. That is true, is it not? A. That is my habit—I don't quite get that question.

Q. You are testifying that when you spent such and such a time on the 25th looking at the engine —you are testifying because that was your habit to do it every day and not because you recollect that day; is that so? A. That is my habit to do it every day, every engine I get out.

Q. But you don't remember doing it that day specifically? A. Yes, sir.

Q. You have a specific recollection of that day, different from your habit? A. No; but it is done every day by me.

Q. I know that. But I say you recollect it because it is done every day and not because of that particular day; that is, there was nothing about that particular day that you remember, do you, as

distinguished from the 26th or 7th or 8th; you can't remember those mornings, can you? A. No, but I could safely swear I looked at an engine every morning I got on. Therefore, I must have looked at the 957.

Q. That is reasoning. I am talking about your recollection. That is not to argue from; but it is plain that you have no recollection of one day against another? A. No; just one continuous round of work, as they call it, to look at it every day.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. Was your attention called to this accident? A. Yes, sir; it was.

Q. You, of course, did not see it? A. No, sir, I did not.

Q. But you heard of the unfortunate occurrence, as you have called it. Did that in any way help you to fix in your mind the fact that you had been running 957 before the accident? A. Yes, sir; that is what makes me know the date so good about it.

Q. Well, have you looked up the exact date as to whether it was the 25th or some other date? A. Yes, sir; I have, by my time book.

Q. Well, have you also a time slip handled by Mr. Evans?

MR. RECORD: One minute. He is cross examining him on his recollection on that date. Let us see what he recollects.

Q. Have you got your book with you? A. No, sir, I have not.

Q. It is customary for the engineer to keep what is called a time slip, showing his running record, is it not? A. Yes, sir.

Q. Have you looked at that recently for the purpose of determining the exact date? A. No, but I looked at my own time book. Of course he keeps his own time and I keep mine.

Q. Now, regardless of the particular day of the month, state whether you have any recollection of running 957 with engineer Evans at some time which has a relation to the time when you heard of this accident? A. I had her down the evening before.

Q. Now, how do you recall that fact? That is what we want to ascertain. How do you remember the fact that you ran this engine the evening before? A. Because I was told when I arrived at Jersey City the next morning—my brother told me that Ruane had lost his life on Engine 957. That is how I recall it.

Q. And did that bring back to your mind that you had been running that very same engine? A. Yes; it did.

Q. (By Juror No. 6.) I would like to find out from the witness whether this engine was an extra engine, used to fill in in case one of the regular engines broke down. They sometimes have a so-called extra engine. I want to know if that is a fact? A. Why, it was not a regular engine for us. It was an irregularly assigned engine for us. We had an engine out, but our engine broke down that morning.

THE COURT: Does that answer your question?

JUROR No. 6. Yes, that is all right.

LOUIS LICRACLE, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. Are you employed by the Erie Railroad? A. Yes, sir.

Q. Where do you work? A. Erie Railroad.

Q. Do you work in Jersey City? A. Yes, sir, Jersey City.

Q. Now, speak up, we all want to hear. How long have you worked for the company in Jersey City? A. I worked five years in Jersey City.

Q. And whereabouts in Jersey City have you worked? A. I worked in the round-house.

Q. At the round-house? A. In the fore pit.

Q. Did you have any special work at the round-house those five years? A. Yes, sir.

Q. What was your work? A. My work—I get down on the engine—I start to work at six o'clock; I go down on the engine at 957, twenty-five minutes after six; I get on that engine; I try the gauge cocks, take hot water.

Q. Tell us what else you do? A. I put the blower on; I look at the fire flues and see it was all right. I get off that engine then I go look at some other engine.

Q. How do you remember engine 957? A. What, that day?

Q. Yes. A. Well, I remember I got on it.

Q. How do you remember that you had anything to do with 957? A. Well, I remember he brought it on the road. Every one on the job said it blowed up; that is how I remember.

Q. Now, you have already said that you looked at that engine about twenty-five minutes after six? A. Yes, sir.

Q. Was that in the morning? A. Morning.

Q. Was the engineer there at that time, Mr.

Morgan? A. He was at the left side filling up the cups—pouring oil on.

Q. Did you look at the fire box of that engine? A. Yes, sir.

Q. Was there any leak of any kind? A. No.

Q. When you looked at the fire box was there a fire? A. Yes, sir.

Q. Was there any steam coming out or anything of that kind? A. No.

Q. When was it that you were told, or that you heard that this engine had blowed up, as you call it? A. He said it blowed up on the road; I don't know what place.

Q. Well, when was it that you heard about that? A. Went out around the 21st of October.

Q. Did you hear of it the same day; that is what I want to find out? A. Yes, sir.

CROSS EXAMINATION BY MR. RECORD:

Q. How came you to go upon this engine after the engineer got there? A. I get on twenty-five minutes after six. I don't understand what you say.

Q. It is your duty to go upon the engine after the engineer takes charge of it? A. I go on the engine. I don't see engineer—I see the engineer on the left side; I get on and I put the fire gauge cock so he get water; I put the blower on; I look at the fire box.

Q. That was after the engineer had come, though, wasn't it? A. Oh, yes.

Q. The engineer was there? A. He was on the left side of the engine, on the ground.

Q. He was on the ground, on the left side of the engine? A. On the ground.

SAMUEL W. EVANS, recalled.

DIRECT EXAMINATION BY MR. HOBART:

Q. Did you keep a record of your runs, and the date, and where you went, and so forth? A. I think that I could find almost every day since I commenced running.

Q. I show you two yellow slips of paper and ask if those are made out, or were made out by you? (paper handed to witness.) A. I recognize that for the 19th.

Q. Of October? A. Of October.

Q. What year? A. That I can testify for the 20th (indicating.)

Q. Of October? A. Of October, 1910.

Q. And do those slips give the engine number and the train number? A. They designate everything that is required for the time, that is the train number, conductor's name, time, and the engine, signed by my name, just as I did.

Q. Are they made out by you? A. Made out personally by me.

Q. And do those slips also give the name of the fireman? A. It does.

Q. And what is the name that appears on that time? A. What is that?

Q. What is the name that appears on it? A. Of the fireman?

Q. Of the fireman? A. J. E. Rose.

Q. Is that the same man who just testified this morning? A. That is the same man who just testified. Compare that writing with that and you will find it is the same (indicating.)

Q. That is another slip? A. That is another.

MR. HOBART: I offer these time slips.

Time slips dated October 20th and October 19th received in evidence and marked Defendant's Exhibits 3 and 4 respectively.

Q. You were asked yesterday about a report that you made of engine 957 when it arrived at Port Jervis on the 19th of October. Was that reported in writing? A. Yes, sir, I am positive, because we are required to be put in the book. I am positive that I indicated on the book that there was some obstruction between the tank and the engine, but I didn't leave the engine in Port Jervis for that purpose. It was a burnt wheel she was left there for.

Q. I now show you a book. It is marked on the front of it, "Work book." I call your attention to one of the pages therein and ask if your handwriting appears? A. Yes; I can recognize that all right—"Glass put in; left front window" —I don't remember that that glass was broke out.

Q. You have not seen it since that time? A. No; this is the first time I was shown it.

Q. Do you recognize it now? A. Yes; I would swear to that positively.

Q. Your name appears on it, doesn't it? A. My name appears there, scrawled out, "Evans", as if it was in a hurry.

Q. Engine 957? A. Engine 957,—right foot front engine truck, cellars gone, and wheel very hot—and it certainly was—couplers O. K.; tanks cleaned out round tank valve, and strainer put in tank; clean out hose strainers.

Q. Is that what you had in mind yesterday when you were speaking about cleaning out the hose? A. That was the difficulty with the injector—"Packed blower valve", also "left steam valve of injector. Evans."

Q. Was it the custom at that time—and it may be yet for all I know—but at that time was it the custom to make a report of anything that needed attention? A. It was and is now.

Q. And what is the date of this report? I don't know whether you put that on? A. That is put on by somebody else; I very seldom put a date on, but all these other slips will corroborate that. I very seldom put the date on. We are supposed to do it, but I skip that. You will find all my slips that way; that is, work slips.

Q. Was this writing that you have read—A. (Interrupting.) From "engine 957" to the last letter of "Evans", I can swear is my writing.

CROSS EXAMINATION BY MR. RECORD:

Q. Who puts the date on? Who puts the date on it? Mr. Evans, who puts the date on it? Who writes the date in? A. Why, I presume the clerk that had the slips. You know they keep those with the order blank. I presume he put it on when he put it on the others.

Q. (By Juror No. 6.) If your Honor please, these crown plates—I would like to know if there engines running, and if these crown plates were taken down, wouldn't they show a blue print, the same as happened in this engine—If the crown plates were taken down from some of the engines that are running at the present time?

THE COURT: Is that a question that this witness can answer? Does that go to what we heard here as to the fatal blue mark.

Q. (Repeated by the stenographer.) If your Honor please, these crown plates, I would like to know if there are engines running, and if these crown plates were taken down, wouldn't they show a blue print, the same as happened in this engine, if the crown plates were taken down from some of the engines that are running at the present time?

THE COURT: Did you understand that?

A. Why, no; I don't quite catch the drift of that question, because it is not really in line with what would take place. Now, when the crown sheets are taken down—it was all boiler work—there was no occasion for any mark to be shown on it. When I took that engine on the morning of the 19th—you can always tell where an engine comes first out of the shop. You will see the crown sheet, the side sheet absolutely clear of everything. What I mean by that is that after an engine has run for a while there is what forms on some of the crown bolts, the head of the crown bolts, what we call hornet's nest, or bee's nest. It is simply the ashes and so on that is taken up, and the moisture that passes through, that will fasten itself to the crown sheet, and sometimes you will see that all covered with it.

Q. Well, in a new engine coming out of the shop you will see the crown sheet, just the bare, natural color of the iron, and absolutely free from that, or this white matter that comes from the coal that is brought forth by the exhaust; and that was the condition of that engine that morning.

Q. The iron, of course, after she had made a trip to Port Jervis, would be discolored a little, but the blue marks that you are referring to is what is left when an engine has been left bare of water; that would not show on the outside. You probably were speaking about the inside, between the inner and outer shell, the line mark of the water where they found it on examining the engine. That is the way I understood their testimony.

Q. (By Juror No. 6.) Well, the point is, doesn't that happen to other engines sometimes that are running? Isn't it so that sometimes an-

other engine will run short of water, and water get below the crown plate, you call it, and yet not blow up? A. An engine won't blow up from being short of water. It is overpressure that blows an engine up, not short of water. You can take a crown sheet and bare it, and the modern crown sheet heated red hot, and turn the water on. Now, I will prove this to you if you can get permission to do it—to take any engine that they will pick out. I will go down there and literally clean that boiler of water and keep the coal fire, and I will turn the injector on flush, and you can stand right there and see me do it. I can prove that to you. An engine cannot blow up from that, any more than a stove will blow up when you pour hot water on the lid. That is cast iron. The other is steel tested to a tensile strength at some fifty to seventy thousand pounds per square inch. Steel under those conditions will be softened.

MR. HOBART: And it is the pressure?

A. It is the pressure. That is the case where an engine is short of water. It is the pressure over the sheet, burning of the sheet, and the pressure forced it down over the head of the bolts, pulling out the plate.

Q. The sheet would have to be burned first, wouldn't it, under that arrangement? A. Oh, yes, sir. Once in a while it used to be from a hot burn, but it is not so now. I will say this—with the modern boiler you have to be more careful of the water than you have to with the flat crown sheet,—because of the round sheet, being round in front, the man has to be more careful with the modern boiler.

CROSS EXAMINATION BY MR. RECORD:

Q. What, in your opinion, caused the blue mark? Do you know anything about the blue mark? A. No; I would not feel myself capable to enter into that subject.

Q. So you don't know whether there are any engines, as a matter of fact that are running, which have a blue mark on top of the crown sheet, do you? You don't know whether that is so or not? A. We never see the crown sheet. That is impossible to see it; only the inside shell. You see that; that is, the outside shell next to the fire. The inside shell next to the water you never see. Those are the things that come in shop inspections, you know. We never see them.

Q. Then, you cannot see the top of the crown sheet, the inside portion of it, can you? A. No more than a man can when the steam is on the engine.

Q. When the steam is on the engine.

Q. If the water was drawn off from the engine, from the top of the crown sheet,—according to what you say now, that of itself wouldn't make the explosion or the break; it would be the steam? A. No; it would be the pressure of the steam.

Q. And if the pressure of the steam was not there it would not break at all, would it? A. If the pressure of the steam was not there?

Q. Yes. A. It would not. If you wish, I can tell you of an instance where an engine lay on her back for pretty nearly twenty-four hours, with a large hard coal fire in her, and there wasn't a crown bolt broke in her, and she had the old radial stay. Here we have the modern—not the radial stay, but the old crown bolt—here we have the modern radial stay, the best stay for boilers that there is.

Q. What do you mean? You say lying on her back, that is that the water could not get there? A. The water was all out of the boiler, the engine hot and drawn out on a certain part of the road. This is some years ago; and she turned over down the bank and rested on her back. Of course, the steam valves were knocked off, allowing the pressure to get off the engine, and at the same time, of course, the water disappeared. Well, that engine laid there; I think it was the following day before they turned her over and got her up the bank on her wheels; and I don't believe there was anything done at all to those crown bolts. In fact, I remember asking a question of the man in the shop, and he said there was not a thing occurred—on the inside of the fire box. Now, any man that is short of water, or you cannot get the water in the engine, cannot get the fire out, and get the pressure off, you can sit down and rest easy; there would be no damage. You might burn the iron a little. The modern steel fire box equipment, you would simply anneal it—soften it; that is about all.

Q. Well, if you burned the iron it might weaken it some, wouldn't it? A. Well, any iron that is stretched beyond its limit of elasticity and not allowed to come back, that is, kept on that strain, why, you know it has reached its breaking point. There is nothing out of the usual in any kind of machinery that does not hurt it, if it is put to the extreme test, you know. It is like a human being; you can't stretch them beyond their limit without a break.

Q. Is the water passing from the tank into the engine continuously in a stream and being consumed into steam; is that the process? A. No; the working of an injector is intermittent; that means that the water passing from the tank to

the boiler is intermittent. They use it just as required. Now, an engine under ordinary work—well, you might say they use from six to twelve thousand pounds of water per hour, according to the amount of work that they are doing. Well, an injector, I believe, they claim, will throw ten and one third pounds of water per pound of steam, and it requires about one third of the amount of steam that a boiler makes to provide that for the injector. Now, this steam is turned on the injector, and your siphon or air here puts the water from the tank in the engine—the pressure of the air forces that water up. The two streams combine, passing through the various tubes—there are three or four tubes in there—and finally at the combining tube the two combine. Now, anything that will break up that combination breaks up what we call—breaks up the injector, interferes with the work. At that point the velocity of the steam is imparted to the water. It is the velocity of that water that leaves the chug in the boiler. Of course, the positions of the chug vary; there it is delivered to the boiler at a weight of about two pounds per cubic foot. Then as it takes that heat, that waste heat from the flues, and continues in its buoyancy, it works its way back to the back part of the fire. Now, the part that we are particularly speaking about, the crown sheet, the amount of water there over that point from the entry of the water to the boiler is about seventeen times hotter than the poin where the water enters.

Q. How do you explain the process? That is all I want.

THE COURT: Mr. Evans, is the working of the injector automatic, or do you work it manually?

A. Yes, sir; that has to be done by hand, and, of course, after you start it working it is automatic in its operation until something interferes with it.

THE COURT: Until it is shut off or something interferes with it?

A. Yes, sir.

THE COURT: And having been shut off by you, then to start its operation you must do something to start it; it does not start automatically?

A. Yes.

THE COURT: You could not have anything—

A. (Interrupting.) You could not have anything automatic; you see, it is altogether different. They have what they call a self-starting injector; that is an engine which will break up and then start itself, throw that all out, take a large quantity of this stuff and then catch the water again. But, like all other machinery, if the conditions are favorable, that is all right; and if the conditions are not favorable it is not all right. You see, the water in the tank varies so much, and it is from one side to another. There are places where an injector will break up because the water is flushed away from there. The left hand injector might work good for miles under those circumstances. Then the water gets obstructed in there and the right injector will work all right. That was the trouble that day. As the water gradually went down in the tank this suction that is constantly in operation when the injector is at work drove these particles that got in the tank down in the strainer. Then when the in-

jector breaks up, as I explained, the steam blows back and it blows that away from the strainer, and the injector might work again. That is what I meant by my statement that I could run to Port Jervis with one injector.

THE COURT: So the process of keeping water in your boiler is watching it by the gauges that you have spoken of; as you find water is needed you start the injector; when you find the proper level has been reached, you shut it off?

A. Yes, sir.

THE COURT: While you are watching it, and you find it down below the proper level, you again start the injector, allow the water to come in until it reaches the proper level, and then shut it off?

A. Always bearing in mind that different trains require a different course of action. A train that is working hard and using steam constantly—say, for instance, we were using steam constantly the eighty-eight miles, that injector might not miss from the time you leave Jersey City until you reach the point where you have got to take water again. It might not do on a through train where they have water to take, but on other trains the injector would more than supply the amount of steam that is being used, and consequently we would have to shut off the injector, and a person has to keep his eyes on the water tank.

EDWIN JAMES HOLT, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You are at the present time employed by the Public Service Gas Company, I believe, Mr. Holt? A. Yes, sir.

Q. Were you at one time in the employ of the Erie Railroad Company at Port Jervis? A. Yes, sir.

Q. Were you working for the company in the month of October, 1910? A. Yes, sir.

Q. In what department? A. In the round-house.

Q. Will you state what kind of work you did at that time? A. Well, I handled injectors, cock valves, safety valves, water glasses, and so on.

Q. Was it the custom at that time to keep any record of the work that was done by the men in the shop? A. Well, not to my knowledge.

Q. Well, were there what is called work slips? A. There were work slips.

Q. I show you a document under date of October 19, 1910, or rather two of them of the same date, on both of which appears the name of E. J. Holt; that is your name, is it not? A. Yes, sir.

Q. And does that slip show any work done on engine 957? A. It does.

Q. By you? A. Yes, sir.

MR. RECORD: Mr. Hobart, is that signed by him?

MR. HOBART: I will ask him.

Q. What is there on that that enables you to recognize it? A. My signature.

MR. RECORD: Was the report made out by him.

Q. Was that report made out by you? A. No;

the work slip was not made out by me, but the work was done by me and signed for.

Q. Well, how do you know that it was done by you? A. By signing; I never signed an order unless I did the work.

Q. That is the question we are not clear about. Did you sign it? A. Yes, sir.

Q. Then that is your signature which is on the slip? A. Yes, sir.

Q. You would not sign such a paper unless you had actually done the work; at least that was the rule and the custom, was it not? A. Yes, sir.

Q. Let me ask you further in that connection—was your attention called to an accident that happened to this very engine, 957? A. It was.

Q. Did you hear of it very soon after? A. I don't remember whether it was that day or the next day—not later than the next day.

Q. Can you state by reference to these time slips or work slips rather, to which your attention has been called, and also by reference to the fact that you heard of an accident to engine 957 within a day or two thereafter, after the accident happened—

MR. RECORD: (Interrupting.) Now, isn't this pretty well loading him up with what you want him to say?

THE COURT: He has testified to that.

MR. RECORD: He has not said a word about the accident.

THE COURT: Yes, he said he heard of it.

Q. (Repeated by the stenographer.) Can you state by reference to these time slips, or work slips, rather, to which your attention has been called, and also by reference to the fact that you heard of an accident to engine 957 within a day or two thereafter, after the accident happened—

Q. (Mr. Hobart continuing.) Can you tell whether you did any work on that engine at the Port Jervis shops on the 19th of October, the date that appears on the slip, 1910? A. I can.

Q. You can tell? A. Yes, sir.

Q. Very well, then tell us what you did? A. There is one slip here calls for the blower valve to be packed, and also the left steam ram on the injector?

Q. Well, did you do that? A. I did.

Q. Very well; what is the next one? A. Examine injectors.

Q. Did you do that? A. I did.

Q. What did your examination of the injector consist of? A. The examination consisted of taking them apart, looking at the tubes, then after they were together again we had to try them to see that they worked properly.

Q. Did you try them? A. Yes, sir; I did.

Q. How did they work? A. They worked all right.

CROSS EXAMINATION BY MR. RECORD:

Q. Have you any recollection of this particular work except as you see that slip; can you recollect doing that work on that day? A. I remember doing the work on that engine according to these slips.

Q. On that day? What did you do the next day? A. I don't know.

Q. On what engine? A. I could not tell you.

Q. What repairs, do you know? A. I could not tell you that.

Q. Can you tell any other day except this day? A. That is all.

Q. If I produced a slip that showed what you did on the following day, all you would know about it would be what the slip said, wouldn't

it; you could not recollect? A. I know I would have done it if it had my signature attached to it.

Q. That is it. You argue from the fact of seeing your name to a slip that you did certain work; that is the way you reason it out in your mind isn't it? A. Not on this particular occasion.

Q. You remember that particular work? A. I do, on that.

Q. How long did it take you? A. What was that question, please?

Q. How long did it take you? A. To do that work?

Q. Yes. A. Why, that day.

Q. How long did it take you to do that work that day? A. That I cannot say.

Q. Exactly; that is all.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. You said you can remember this particular engine. How do you remember that? A. By this accident happening. Brought it back in my mind that I worked on that engine, did that work.

HARRY E. BARBOUR, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. I call your attention to a book marked "Work-book", which has already been identified by Engineer Evans, and I call your attention to the first item that he described there of your work on engine 957, something in regard to a glass in the window? "Put in left front window."

Q. Can you tell by reference to that book or anything thereon, whether you had anything to do with that work, and if so what? A. Well, I could say that is our line of work—Putting in glass.

Q. Does your name appear there? A. No; my name does not appear, no.

Q. Isn't that it right there (indicating) "Repaired by", and then follows certain names? A. That is my name.

Q. Does that indicate anything to you according to the way the work was handled in the shop? A. Yes, sir.

Q. As to whether you had anything to do with fitting some glass in the window? A. Yes, sir.

Q. What does it indicate to you? A. It indicates that when we got an order from the office to do this work we get it and do whatever kind of work that is on the slip to do.

Q. And then a record is kept in this book? A. It is.

Q. You have no personal recollection of doing that particular work, aside from the book? A. Only as I see it in the book.

Q. Only as you see it in the book? A. Yes, sir.

Q. Well, by seeing it in the book does that enable you to say whether or not you did that particular work? A. That was my line of work.

Q. Well, was it the custom to keep a record in the book in the way that that appears in this book? A. Yes, sir; I know it was at that time.

Witness excused without cross examination.

AUGUSTUS RIGGS, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. I call your attention to this book which Engineer Evans referred to. You are familiar with the method of keeping a record of work done in the shops at that time? A. Yes, sir.

Q. You are employed at the Port Jervis shops, I understand? A. Yes, sir.

Q. What department were you in? A. Box packing.

Q. You find your name appearing in this book as having done such work on engine 957? A. Yes, sir.

Q. Your name is Riggs, is it? A. Yes, sir.

Q. And your name appears there? A. Yes, sir.

MR. RECORD: I take it that is his signature that you referred to, isn't it?

MR. HOBART: I don't know whether he signed it personally.

Q. Did you sign it personally? A. I did not.

MR. RECORD: I suppose, of course, when you say, "Your name appears here", it is his signature. Let's get that other gentleman to correct on that. You mean to say that other gentleman's name was not his signature?

MR. HOBART: We will find out.

Q. Was it the practice in the shop to keep the record in the way you see it in that book? A. Yes, sir; that is the way we did it.

Q. Now, who was the man that kept the record of the names of the men who did the work, if you know? A. Shop clerk.

THE COURT: At that time?

Q. Do you recall who it was? Well, if you don't remember never mind? A. No.

Q. You don't remember? All right.

Q. Have you any recollection of having done any work on 957 aside from the fact that your name appears opposite certain work—

MR. RECORD: Now, just wait a minute. Well, that is all right. Aside from its appearing there—that is what I object to; so far as this book now appears with reference to this witness it is made up by some other people—therefore it does not refresh his recollection.

THE COURT: Particularly as to this witness, because he says it is not his signature.

MR. RECORD: What has the book got to do with this witness; he didn't make it out; he didn't write anything in it. You have no right to stick that under his nose and ask him if his recollection is refreshed by this.

Q. (Repeated by the stenographer.) Have you any recollection of having done any work on 957 aside from the fact that your name appears opposite certain work?

MR. HOBART: I expressly excluded that.

MR. RECORD: Yes; but you got that in front of him, get him refreshed by that, and then you ask him the question.

MR. HOBART: I will close it up.

MR. RECORD: I think that is going beyond all bounds. I supposed this was signed by this man.

THE COURT: Suppose, Mr. Record, he had not incorporated that in his question. Then, you might have reasonably objected, and said, "Your recollection is probably

based on what has been shown to you." As I understand the question, counsel is attempting to exclude from this witness' mind this record.

MR. RECORD: After having put it there; I am only protesting against that. I was at fault. I would have objected to showing him that document if I had supposed that it was not his signature. He has done the harm; I cannot change it now. All I can do is to object to showing him that book at all. Now that he has it in his mind, of course, he can testify. That is going beyond all reason.

THE COURT: Now the witness is asked—"Putting that which I have shown you out of your mind altogether—

MR. RECORD: (Interrupting.) Of course, that is just simply an impossibility.

THE COURT: (Continuing.) Have you any recollection of working on engine 957?

MR. HOBART: I think I ought to say further, if your Honor please, I think it is competent to show the customary course of a business, and the way records are usually kept.

MR. RECORD: By those who keep them.

MR. HOBART: Not necessarily.

MR. RECORD: By those who keep them.

MR. HOBART: When we are dealing with a large company that employs literally thousands of men, it has been frequently held that you have a right to produce and offer in evidence if you like, records that are referred to as being kept in the usual way. However, I am not pressing that point now. I am only calling attention to that now lest it be presumed that I agree with Mr. Record.

THE COURT: It must be shown that the witness you are attempting to show that by has some personal knowledge of the custom, facts and circumstances which would give him a knowledge from which and by which he could testify.

MR. RECORD: Suppose we put this book down here while the witness is testifying.

Q. (Repeated by the stenographer.) Have you any recollection of having done any work on engine 957 aside from the fact that your name appears opposite certain work? A. Yes; I was a box packer up there; that is all I know about it.

Q. What do you mean by box packing? A. Putting oil waste into the boxes, into the box part of the engine works, just the same as oiling an engine.

Q. Does that have anything to do with the injectors? A. No; nothing at all.

Witness excused without cross examination.

PHILLIP SCHUMACHER, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. Mr. Schumacher, you are employed by the Erie Railroad Company? A. Yes, sir.

Q. And in October, 1910, what was your position with that company? A. Engine inspector.

Q. Located where? A. Port Jervis.

Q. I show you another book—not the one that we have been referring to here before—marked on the front page "Inspection book", and ask you whether or not, on the page to which I call your attention, any writing appears in your handwriting? A. Yes, sir, that is my signature.

Q. This is your signature at the bottom of one of the pages in this book? A. Yes, sir.

Q. Under what date? A. 20th.

Q. 20th of what? A. 1910.

Q. 20th of what month? A. Tenth month, twentieth day, 1910.

Q. Is that in your handwriting? A. Yes, sir.

Q. Is the signature in your handwriting? A. Yes, sir.

Q. Refreshing your recollection by reference to that, can you tell whether you did any work on engine 957? A. No, sir; I inspected the engine; that is what I had to do with the engine; I reported this work in the round-house foreman's office.

Q. Tell us what you did in the way of inspecting it? A. I reported this work and the round-house foreman's clerk copied it off and turned it over to the round-house foreman; that is all I know about it.

THE COURT: Your question was, what did he do.

Q. What did you do in the way of inspecting it; that is what we want to get.

MR. RECORD: Now, just before you get to that, may I just ask the indulgence of the court to find out what he means. I don't understand it at all. What does he mean to say by copying off?

THE WITNESS: I inspect the engines.

MR. RECORD: What is your name?

MR. HOBART: Schumacher.

MR. RECORD: This is your signature at the bottom?

A. Yes, sir.

CROSS EXAMINATION BY MR. RECORD:

Q. Do you recollect putting it there? A. Yes, sir.

Q. Was this writing above it there, at the time you signed? A. No, sir; I put it down myself.

Q. Is this your writing at the top? A. Yes, sir.

Q. This is all your writing? A. Yes, sir.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. Now, you have said you inspected the engine, and we want to know a little more in detail what you did in the way of inspection? A. After I inspected the engine I went in the office and reported this work.

THE COURT: That is not what you are asked.

Q. That is not it yet. You say you inspected the engine. Tell us what you actually did.

MR. RECORD: Now, wait a minute: Your first question was—your question, I thought was refreshing his recollection by this. This does not show anything about inspection of an engine.

MR. HOBART: I don't know. I am trying to find out.

THE WITNESS: I inspected the engine after the arrival in Port Jervis, and done this work, and I, for my part, don't do the work. After I found this work, I go in the office and report it, put it in this book.

Q. Now, wait a minute. Close the book up. You say you inspected the engine. What we all want to know is what did you do in the way of inspection? A. Well, I crossed the engine, looked the engine all over, if there is anything loose or broke, or lost off, or any leak anywheres. When I get through with that I go in the office and make the report out, and the round-house foreman's clerk copies it off and turns it over to the round-house foreman, that is all; the round-house foreman distributes it around among the men that is working for him.

Q. Go on? A. That is all I—

Q. (Interrupting.) After the work is done do you have anything more to do with the engine? A. No, sir.

Q. Then you inspect and report what work is to be done? A. Yes, sir.

MR. RECORD: That is, as to a certain part. He says he goes under the engine.

MR. HOBART: Looks all around it.

THE WITNESS: There is a pit where the engine stands over, and I go under and look all over the engine, if there is anything lost on it or broke off that is reported in the office, when I get through looking over the engine I go there and put everything I find wrong with the engine.

CROSS EXAMINATION BY MR. RECORD:

Q. But you report only what you can see with your eye? A. No, sir.

Q. And you don't take the engine apart? A. No, sir.

Q. And you don't examine the tank? A. No, sir.

Q. None of those things. You just go and see what is wrong with the wheels, and what you can see underneath and around the engine; that is all you look at? A. Yes, sir.

Q. You didn't look at anything on the inside of the engine? A. No, sir.

Q. And you don't do this work that you report; you just hand that over and somebody else is supposed to do it? A. Yes.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. If there are any leaks do you report those? A. Yes, sir.

Q. Do you inspect or examine for them? A. Yes, sir.

THE COURT: Where do you inspect? Where do you look for leaks?

Q. What part of the engine do you look at to see if there is leaking? A. All over; all over; the whole engine.

RE-CROSS EXAMINATION BY MR. RECORD:

Q. Do you try to get inside of the fire box and see in there? A. No, sir.

Q. It is only outside? A. If there is any leak the water runs down; if there is any water or leak anywheres.

THE COURT: Where do you look, Mr. Schumacher, when you are examining the

engine or inspecting the engine, as you say, for leaks? Where do you look to find leaks? Tell us every place you look to find leaks?

A. Why, I don't inspect them particularly for leaks; but, of course, if there is any water running down anywhere from the boiler, from a seam, or anywhere, why, I report that.

THE COURT: Now, that is from a boiler, from a seam. Where do you look to find out if there is a leak from a seam?

A. Why, I am supposed to look all over.

THE COURT: Where do you look? Where did you look in 957 to find that out? Do I understand you to say that in this inspection or inspections you make, amongst other things you look for leaks in were seams?

A. Yes, sir.

THE COURT: From the boiler. Now, where do you look? Where do you look? What do you do, and where do you look to ascertain or learn whether there are any leaks from seams? You don't look at the pilot in front of the engine?

A. I start on the pilot.

THE COURT: You don't look there for leaks?

A. No, sir.

THE COURT: Tell us where you look for leaks?

A. I start on the pilot; I go all the way around. The fire box is right in front of me. If there is a

leak anywheres, a steam leak or water leak, why, you can see it without going any further. You can see it right there, by going around the engine and looking the engine carefully all the way through.

Q. When you speak of leaks, you mean leaks where the water is dropping down on the ground? A. Yes, sir.

Q. That is what you mean by a leak? A. Yes, sir.

Q. A leak that you can see by walking around the engine, or getting under the truck and looking around; that is the leak you mean? A. That is the leak I mean.

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. Did you get up on the engine? A. No, sir.

Q. How much time do you spend, or did you spend, inspecting the engine? A. Oh, probably twenty-five or thirty minutes.

MR. RECORD: Now, Mr. Hobart, I think we have to straighten out this man and hear what he really did mean.

MR. HOBART: Mr. Barbour?

MR. BARBOUR recalled.

DIRECT EXAMINATION BY MR. RECORD:

Q. Can you identify this book in any way?

MR. HOBART: I have been calling it the workbook.

Q. I show you book known as work book, which was shown to you by Mr. Hobart, and your name is—A. (Interrupting.) Barbour.

Q. Do you find your name here? A. That is my name (indicating.)

Q. The word "Barbour" in pencil, which is here written; is that your signature? A. No, sir, it is not.

Q. You have no personal recollection of doing any of the work opposite your name here, so far as personal recollection of a day? A. That was my line of work to do.

Q. Yes, but you have no personal recollection of this day, or this engine as against any other day or any other engine?

THE COURT: What do you say as to that?

A. Well, it is along my line of work; I could not swear.

THE COURT: Aside from that have you any knowledge?

A. Aside from that, no.

GEORGE MITCHELL, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You are employed at Port Jervis, Mr. Mitchell? A. Yes, sir.

Q. And you worked there in October, 1910, did you? A. What was your occupation? A. Machinist's helper, I guess, at that time.

Q. I show you a little slip of paper on which your name appears. Before looking at what appears on the paper tell me if that is your name, or rather your signature? A. Yes, sir, that is my handwriting (paper shown to witness.)

Q. Your own handwriting; the name Mitchell that appears on this paper that I show you? A. Yes, sir.

Q. Was it the custom at that time for the men to sign these slips to indicate what work they had done? A. Yes, sir.

Q. Referring now to this slip, or refreshing your memory by reference to it, can you tell whether you did any work on 957 on the 19th of October, 1910, the date that appears on this slip? A. No, sir; only by that slip.

Q. That is what I asked you, if you can tell by reference to the slip? A. That is all.

Q. Well, can you tell by reference to the slip? A. Yes, sir.

Q. Very well. Then, referring to the slip or refreshing your memory by it tell us what work you did, if any, tell us what work you did on that day on engine 957?

MR. RECORD: He just now said he doesn't know anything about it except what appears on the slip.

MR. HOBART: Exactly, but he signed it.

THE COURT: He asked to refresh his recollection from the slip.

MR. RECORD: He has already said he has no recollection except what he finds on the slip.

THE COURT: There is his signature. He said it was the custom when the work was done by them to—

MR. RECORD: (Interrupting.) I don't object to the custom: He is handed a paper—"Is that your signature? A. Yes. Have you any recollection of what took place." He says "No." They are handing him that. He says, "No, I have no recollection of whatever appears on it; all I know is I signed it."

THE COURT: Why isn't it a proper paper to use for this purpose, Mr. Record, to refresh his recollection?

MR. RECORD: I am not saying this. He has said that being refreshed by it that he has no recollection.

THE COURT: If he says yes after looking at it?

MR. HOBART: I will ask him again. He said it three times, but I will ask him again.

Q. Can you tell by referring to this slip on which your name appears, and refreshing your memory by reference to it, can you tell whether or not you did any work on engine 957 on October 19th, 1910—by looking at the slip can you tell? A. Yes, sir.

Q. Well, very well, look at the slip.

MR. HOBART: He said no, and he said yes.

Q. Well, take the slip and tell us after you look at the slip whether or not you can now say whether you did any work on engine 957? A. Yes, sir.

Q. Your memory or recollection is based upon what appears on the slip, is it not? A. That is all.

Q. Very well. Now, look at that slip again, and having refreshed your memory by looking at it, tell us what, if anything, you did on 957? A. Cleaned the engineer's brake valve.

Q. Well, is that right—"Brake valve"; is that right? Look at it; we don't know. Is that what appears on the slip?

MR. RECORD: Here this man says yes. He can't remember anything unless he reads off that.

THE COURT: He is even asked, Mr. Record, to read off it, and he can't read off it. I don't know how we can get it unless we insist that he read it.

MR. RECORD: Yes, but if a man reads from a paper and says my recollection is now refreshed, has he got to glue his eyes to it?

MR. HOBART: Of course—

MR. HOBART: (Interrupting.) If that does not bring it to his recollection the paper is the evidence.

Q. (Repeated by the stenographer.) Well, is that right—"brake valve"; is that right? Look at it. We don't know. Is that what it is on the slip?

THE COURT: Now, what have you to say as to that, Mr. witness? Is that what you did, what appears on the slip?

A. Yes, sir.

CROSS EXAMINATION BY MR. RECORD:

Q. What is the brake valve? A. That is a valve on the engine that we use to stop trains with, make a reduction in the air.

Q. Have you any recollection of doing that work as distinguished from any other day? A. No, sir.

Q. All your recollection is what appears on here? A. Yes, sir.

Q. You have no personal recollection about it at all? A. No, sir.

Q. Have you any personal recollection about it after you look at that? A. Yes, sir.

Q. That is, after you look at that do you remember that you did that thing that day? A. No; I don't remember that particular day.

Q. So all you know is that you find something there signed by you, and you presume you did the work because your signature is to it; is that right? A. That is right.

Q. You have no recollection of doing it? A. No, sir.

ADAM WILLMAN, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You are also employed by the company, Mr. Willman? A. Yes, sir.

Q. At Port Jervis? A. Yes, sir.

Q. Did you work there on the 19th of October, 1910? A. I think I did; I don't know whether I worked that day or not.

Q. Well, I will show you a work slip and ask you if your signature appears on it (paper handed to witness.) A. That is my handwriting.

Q. What part of the slip is your handwriting? A. The signature.

Q. A. Willman? A. Yes, sir.

Q. A. Willman? A. Yes; that is my signature.

Q. Was it the custom at that time in the Port Jervis shops, for the men to sign the slips showing what work they had done? A Yes, sir.

Q. Was that your custom? A. Yes, sir.

Q. Now, looking at this work slip on which your name appears, can you by refreshing your memory, by looking at the slip, tell whether you did any work on 957? A. I must have done that work or I would not have signed that slip up; that is the only way I can remember it.

Q. That is the only way you can remember it? A. That is the only way I can remember.

Q. Well, can you remember it by looking at the slip or refreshing your memory from it? A. Yes, sir.

Q. Well, now, look at the slip then, and tell us what work you did, if anything, on engine 957? A. I repaired a cylinder cock.

Q. Where is that located, in what part of the engine. A. Bottom part of the engine cylinder.

Q. Does that have anything to do with the injectors? A. No, sir.

Witness excused without cross examination.

HENRY T. KIRCHNER, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You also work at the Port Jervis shops? A. Yes, sir.

Q. In what position? A. Pipe fitter.

Q. Did you work there on the 19th of October, 1910? A. Yes, sir.

Q. Was it your practice, like the other men, to keep a work slip of the work that you did from day to day? A. Well, we made a work slip and we signed the name after we did the work and turned it back in again.

Q. I show you a work slip dated October 19, 1910, and ask you if your signature appears on it? (paper handed to witness.) A. Yes, sir.

Q. That is your name, signed by you? A. Yes, sir.

Q. Can you tell by reference to this work slip —refreshing your memory by reference to it— whether you did any work on 957 on October 19th? A. Yes, I must have done it or my name would not be there; but the particular engine I don't remember.

Q. You don't recall the fact aside from this work slip? A. No, sir.

Q. Well, look at the work slip and tell us by reference to that, what work, if any, you did? A. Why, I cleaned out the sand pipes.

Q. Does that have anything to do with the injectors? A. No, sir.

CROSS EXAMINATION BY MR. RECORD:

Q. What is the sand pipe? A. Keeps the engine from slipping.

Q. What is the sand pipe? A. It is a pipe that runs from the top, front end of the boiler,

where the sand is in, down under the front wheel in the engine, and when they start the engine on a wet—

MR. RECORD: That is all.

JAMES J. BRADLEY, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You are employed at the Port Jervis round-house, I believe, Mr. Bradley? A. Yes, sir.

Q. In what position? A. Round-house clerk.

Q. State generally what your duties were in in the month of October, 1910? A. Why, keeping of the work that the engineers and inspector report.

Q. In what book was it your practice to keep them? A. Why, the inspector has a book, and engineer has a book—two books.

Q. And is this book which I show you, and which we have been describing as the work book, the book that you mean the engineer signed? (book shown to witness.) A. Yes, that is the engineer's book.

Q. Now, state more in detail the manner in which you keep the record of what work was done? A. We cut each slip off separate, and then hand them to the round-house foreman. He gives them to the men. After the men have worked on them they turn the slips back again with their names on them. I take the work slip and sign on the work slip.

Q. That is, you put the names of the men on the work book? A. On the big work book, and the work slips the men turn in.

Q. When you say big work book, do you mean this book? A. That is the engineer's book.

Q. Is that the book you are talking about? A. That is the book I am talking about.

Q. For example, there was some question about the name of a man here by the name of Barbour, who did something with the front window. Whose writing is that? (indicating.) A. That is my writing; I take from the work slip. I don't put any name down unless a work slip is turned back. I copy off the work slip, and the work slips are put away, filed away.

MR. RECORD: Who are work slips signed by?

A. The round-house foreman; he signs the work slips.

Q. Well, after the work has been done by the men do they sign these slips? A. They sign the slips and turn them back into the office.

Q. For example, I have several slips referred to by Mr. Holt and Mr. Willman and Mr. Kirchner and Mr. Mitchell. Are those what you mean by the work slips? A. Yes: them is the slips.

Q. Then you take those slips? A. Then I take those slips and take the names right off there—"Repaired by," and sign up the book.

Q. Let me ask further. If all of the names that appear under this column, under the heading, "Repaired by," are those names in your handwriting? A. Yes; that is my handwriting, and I would not sign it unless the slips were turned in with the men's names on.

MR. RECORD: Mr. Hobart, may we enter on the record that this man that you have on the stand—that this name is signed by this man.

Q. The name of Holt appears on this book, does it not? A. E. J. Holt, right there (indicating).

Q. That is signed by you? A. That is signed by me.

Q. The name of Holt also appears on two work slips to which Mr. Holt has already testified. That is not signed by you, is it? A. No, sir; that is Holt's signature; that is his own signature on there, on the work slip.

Q. Have you tried to get together all of the work slips that related to engine 957? A. I did; could not find half of them; must have been misplaced or mislaid.

Q. The one I show you, which Mr. Kirchner identified as signed by him, another one signed by Mr. Willman, another by Mr. Mitchell, and two others by Mr. Holt? A. Yes, sir.

Q. Did you find those? A. Yes, sir, you got them—we got them.

Q. You found these in your regular records, did you? A. Yes, sir, I found them in the regular records.

Q. Now, for example, there is a man named Riggs that appears. Were you able to locate his slips? A. We could not find that slip; and we could not find a slip for Barbour.

Q. What is the last name? A. That is Collins (indicating).

Q. That is someone else? A. (Reading.) "Lost motion between engine and tank."

Q. You could not find that one either, I understand? A. No.

Q. Well, then, these five slips, two signed by Holt and the other three by the men whose names I have mentioned; that is all you are able to locate; is that correct? A. Yes, sir.

Q. The work that was done by Riggs, for example, you have not been able to find the corresponding slips? A. No, sir.

Q. What other name was there that you could not find? Collins? A. Yes, sir, and Riggs.

Q. Collins, Riggs, Barbour—those three. Well, would those names appear according to your regular custom—would those names appear in the book in the column where you put them unless you had some time slips? A. No unless we got the work slip back I would not sign it, unless we had the work slip back; we take the names from the men's work slip and sign up that book.

CROSS EXAMINATION BY MR. RECORD:

Q. What do you mean by saying that the foreman of the round-house signed the slip? A. Why, he signs the work slips on the bottom, where it says "Round-house foreman"—on the bottom of the work slips.

Q. Does his name appear on any of those that Mr. Hobart has shown you? A. No; them is not signed up on the bottom by him.

Q. What do you mean by saying that he signs the slips; you mean that is his custom; that is the custom of the office? A. Yes, sir.

Q. That is his duty? A. Yes, sir, sign the work slips.

Q. And he is supposed to have the work slips turned into him? A. The work slips is supposed to be turned into the office.

Q. How did he get possession of them? A. Why, they turned them back in the office.

Q. Monthly? A. Yes, sir.

Q. After they go in the office they come to him? A. No; they come in to me, and I take the names off the work slips; then I turn them over to him.

Q. Now, you say he is supposed to sign them and you are supposed to file them away; is that the plan? A. He files them away.

Q. He is supposed to sign them? A. Yes, sir.

Q. And file them away? A. File them away.

Q. Now, that is a part of his duty? A. Yes, that is a part of his duty.

Q. How does he know whether they are right or not? A. Well, he knows who he gives any work to, to begin, what men.

Q. And he is supervising the work? A. He is supervising the work.

Q. And he is the man who would know work was done, as far as observation goes? A. He is the man.

Q. You don't know whether the work is done from observation; that is, you only know the slip comes in with men's names on; but he does know from personal observation because he gives out the work and is supposed to know that it is done; is that right? A. Yes, sir.

Q. Then under the rules of the company he signs the slips? A. Yes, sir.

Q. And files them away. That is the rule, is it; that is the plan? A. That is the rule.

Q. And those are the orders? (No answer.)

RE-DIRECT EXAMINATION BY MR. HOBART:

Q. Who was the roundhouse foreman? A. Mr. Hadrick—Mr. Frank Hadrick.

Q. Are there times when the slips were not signed by him that were turned into the office signed by the men? (No answer.)

MR. RECORD: Well, why don't you put that question the other way around? He has testified positively to a plan. Now, you ask him whether there are times instead of other times. Let's get it fair now.

MR. HOBART: I will leave it to his Honor whether the question is fair or not, if you object to it,—

MR. RECORD: It is leading.

THE COURT: The only result would be, possibly getting away from what was leading to a general question wouldn't it?

MR. RECORD: There are times when I do not object to leading questions at all. It saves time and all that. Here is a man who has testified to a practice. It is obviously embarrassing to the company. It is a critical moment. If he remembers anything let it be asked what he remembered. Let us not have the suggestion to him.

THE COURT: Well, what is the question?

MR. HOBART: Well, I will withdraw the question.

THE COURT: All right.

Q. These slips that have been referred to are apparently carbons; at least, they have a carbon on the back, haven't they? A. No; them is the regular workslips.

Q. With carbon paper on the back? A. Yes, sir.

Q. Which is liable to rub off? A. Rub off.

Q. But you keep them together and file them together? A. And all the writing that appears on these slips is in pencil, is it not? A. Yes, sir.

Q. Can you tell me whether on the slip of Willman any initials appear, or anything other than the name of Willman? A. That is all.

Q. What is this down in the right hand corner (indicating). A. Why that is nothing on there.

Q. Well, there are apparently certain letters; I can't read it to make it out; I don't know whether you can or not.

MR. RECORD: I think that is going very far, if your Honor please. This witness

looks at a piece of paper and nothing there.

THE COURT: Do you find anything there as indicated at the place indicated, Mr. Witness? Do your eyes show anything as indicated in the lower right hand corner?

MR. HOBART: May I point it out to him?

THE COURT: Yes.

THE WITNESS: Well, I can't make out what that is.

Q. Well, is there anything there? That is my question? A. Why, there is something there, but I don't know what it is.

Q. All right. That is all.

EDWARD DREW SIMPSON, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. Were you employed by the Erie Company in October, 1910? A. Yes, sir.

Q. What position? A. Clerk to the boiler maker foreman.

Q. I show you a book on which appears on the outside, "Boiler work." State whether or not that was kept by you? A. Yes, sir.

Q. Does the date of October 19th, 1910, appear in the book? A. Yes, sir.

Q. What had you to do with keeping the records; state what your practice was? A. The work slips after they left the workmen were handed in at my window, and the following morning I copied them just as they appeared on the slips, over on the boiler work book.

Q. That is a separate book from what we have been talking about is it not? A. Yes, sir.

Q. And this book, as I understand you, is limited to work in connection with the boilers? A. Yes, sir.

MR. RECORD: Is this another book, Mr. Hobart?

MR. HOBART: This is another one, called the "Boiler work book."

MR. RECORD: Well now, is that distinguished from this other book? It is different class of work?

MR. HOBART: I understand so.

THE COURT: Where was this witness employed, Port Jervis?

THE WITNESS: Port Jervis boiler works.

Q. Is that part of the roundhouse? A. That is aside from the roundhouse; a separate department.

Q. And a separate record was kept, separate from this work book that the other witnesses have been talking about? A. Yes, sir, in a separate office.

Q. And the only record that you kept was in connection with this so-called boiler works, is that right? A. Yes, sir.

Q. Was it your practice to keep a record of everything that was done in your boiler shop? A. Everything that work slips were turned in for and signed.

Q. That were signed by the men, were they? A. Yes, sir.

Q. Of course, you have no personal knowledge of what work the men may have done? A. No, sir.

Q. Aside from what appears on the slip? A. Just what appears on the slip.

Q. Can you state whether or not you copied the slips correctly? A. I copied them off the slips word for word, just as they appeared, over on my books.

Q. State whether or not that record shows any work on engine 957 on October 19, 1910. Now, don't answer that.

MR. RECORD: Let me hear the question.

Q. (Repeated by the stenographer.) State whether or not that record shows any work on engine 957 on October 19, 1910?

MR. RECORD: He can answer yes or no to that.

Q. Is the answer yes or no.

Q. (Repeated by the stenographer.) State whether or not that record shows any work on engine 957 on October 19, 1910? A. Yes.

Q. State what the record shows?

MR. RECORD: Now, ought not the record to speak for itself? It is here and he has got it.

MR. HOBART: I am willing to offer it.

MR. RECORD: My only point is I want to be very careful about it.

THE COURT: I should say yes, the record will speak for itself. The only way it will speak for itself is through the mouth of somebody else reading it. In other words, you don't want him to enlarge upon what the record shows?

MR. RECORD: Let the record speak for itself.

MR. HOBART: I offer the record.

THE COURT: Of October 19, 1910, with reference to 957.

MR. HOBART: Of October 19, 1910, with reference to 957.

MR. RECORD: I object to it on the ground that by the testimony of this witness, it is not an original record. The original

records are in existence; are not accounted for. He states himself that he handed those slips in; those were the records. This is not competent.

THE COURT: Isn't there merit to that?

MR. HOBART: Well, it has been held over and over again that the slips, like telephone slips—that while in one sense slips signed by telephone operators are original, yet at the same time the transcript of those records kept in the regular way, copied in the books of the company, may be offered in evidence.

MR. RECORD: These are from original slips, some of which appear here. Something comes in the window and he copies it off, and the thing disappears.

MR. HOBART: Of course, the book is not conclusive, but I think it is competent for whatever it may be worth. It shows what the custom is—to put everything down, copy it literally.

THE COURT: Did you or did you not know the signatures of these several men whose names appear on these work slips?

A. Yes, sir.

THE COURT: Did you know at that time the signatures of each and every one of the workmen who turned in slips to you?

A. Yes, sir.

Q. Let me ask one further question in that connection, if your Honor please. Do you know in particular the signature of a man by the name of Jost? A. Yes, sir.

THE COURT: I am inclined to admit the record for what it is worth.

(Book received in evidence and marked Exhibit 5, of defendant.)

MR. HOBART: Of course, only that part of it which relates to this particular engine. I speak of that because it apparently contains other numbered engines mentioned on the same page.

THE COURT: If there be no immediate occasion for the reading of it to the jury, withhold the reading of it to the jury. If there is any reason why I should change my mind as to the reading of it, there will be no harm in just having it formally marked. I don't want to take from you, Mr. Record, any right of cross examination If that is necessary, of course, we will have to stand on it as it is; but if in your cross examination it is necessary to convey to the jury what this record contains in words, then if I should conclude later that the admission was improper, no harm will have been done by my then excluding it. I presume—as I remember it, there has been no reading of what may appear in that book.

MR. HOBART: I just simply called his attention to the name of one man—Jost.

THE COURT: Of course, Mr. Record will understand that he is not to be in any way curtailed in his cross examination. Of course, if his cross examination makes it necessary to bring in any part of this, he shall have that right.

CROSS EXAMINATION BY MR. RECORD:

Q. In accordance with that suggestion may the witness just tell me what this language is.

(Witness and Mr. Record speak in tones inaudible to the stenographer.)

THE COURT: I might make this further suggestion: This witness is going to be here for the balance of the trial, I suppose?

MR. HOBART: Yes.

THE COURT: If you wish to leave your cross examination of him until some later time you may do so, having the opportunity to cross examine him before defendant closes his case.

MR. RECORD: That is all right.

THE COURT: My point is this: Whether or not this is not secondary proof, and whether or not you must not account for the original before the secondary proof can be accepted. I understand the rule to be that you must prove the execution of the original, that it existed, and that it is beyond reach, before secondary proof can be used. That may apply here. I am just turning it over in my mind to see whether or not it does not apply.

MR. RECORD: The witness may be withdrawn for the present.

(Witness excused for the present.)

FRANK P. HADRICK, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. You are the roundhouse foreman, Mr. Hadrick? A. Yes, sir.

THE COURT: At Port Jervis?

Q. At Port Jervis? A. Yes, sir.

Q. And were in October, 1910? A. Yes, sir.

Q. Now there is a book here that has been called "Inspector's book," referred to by the witness Schumacher; was that one of the books kept at the roundhouse? A. Yes, sir.

Q. Is there any part of the writing that appears in that book in your handwriting? A. No; not there.

Q. Not on that book? A. No.

Q. Not on that book? A. No.

Q Now, was your attention called to the fact of an accident to 957 shortly after it had happened? A. Yes, sir; it was.

Q. Do you remember how long after? A. What is that?

Q. Do you remember how long after the accident? A. Not exactly.

Q. Well, can you say whether it was a year or a month or a day, or what? A. Oh, it might be a day or two afterwards.

Q. Have you any recollection of whether or not any work was done on 957 at your roundhouse a day or two before the accident, having in mind that you heard of it a day or two afterwards? A. Yes, sir.

Q. What is your recollection on that subject? A. Why, I had a man working on the injector, examining it; also had a man clean the tank.

Q. Do you recall who it was that worked on the injector? A. Mr. Holt.

Q. That is the witness who testified this morning? A. Yes, sir.

Q. Do you recollect who it was that had something to do with the boiler; do you recollect the name, I mean? A. You mean the tank?

Q. I should have said the tank? A. Why, Jost.

Q. Did you see any of the men working on the engine? A. Seen Mr. Holt.

Q. Do you recollect seeing Mr. Jost? A. Why, I seen him coming from the engine, but I didn't see him do the work.

Q. You don't know what work he actually did then? A. I know he was to clean the tank.

Q. I mean you didn't see him do it? A. I did not.

Q. Was it the practice at that time to make a report, or to have a report made by the men of the work that they did? A. Yes, sir.

Q. How was that report made, in what manner? A. When they got the slip done they most generally signed the slip, and the boiler shop slip used to come to the boiler shop foreman clerk, and he used to copy them in the book, and they would come over in our office.

Q. Does the boiler shop come under your jurisdiction? A. In a way, they have a boiler shop foreman.

Q. Are you over the boiler shop foreman? A. I am in regard to the roundhouse work.

Q. Would cleaning the tank, for example, come under you? A. Well, I most generally came and asked if it was done.

Q. Well, are you charged with seeing whether or not it is done, that is what I want to get at? A. Why, in a way.

Q. Now, reference has been made to some time slips that have been mentioned by several of the witnesses? Did you sign personally all of

the slips? A. Well, some I might skip; some, if

Q. Is this in the boiler shop? A. No, in the roundhouse.

Q. And what was done with the slip? A. After the work was done they were taken and copied in the workbook, and were filed away.

Q. Now, did you have anything to do with the slips for work in the boiler or in the tank? A. The tank?

Q. Yes, in the tank? A. Why, when it comes back we put it in the book.

Q. That comes under you, does it? A. Yes, we put the slips away.

Q. Have you personally looked for the slips, or have you left that to your clerk who testified here? A. Why, had a clerk look for them; I also tried to help find them myself at times.

Q. Have you been able to find any slips except those that have already been mentioned by your clerk? A. No; I have not.

Q. Now, with reference to work in the boiler shop, would that also be recorded on a slip of some kind by the men? A. These same kind of slips that you have here.

Q. Have you tried to find those? A. No, sir.

Q. Have you been able to find them? A. No. We moved the stock from one place to another; I don't know whether they got lost or not.

Q. I show you this book, which one of the witnesses has called the boiler book; was that kept— A. In the boiler shop.

Q. In the boiler shop? A. In the boiler shop.

Q. Of course, you had nothing to do personally with these books? A. No, sir.

THE COURT: Do I understand, Mr. Witness, that the slips referred to as the boiler house slips—that you have control over those or not? Did they come to you or didn't they?

A. They go from me to the boiler shop, and when they get the work done there the boiler clerk most generally used to copy them off for reference; then he would send them back to our office, and we would file them away.

Q. You filed them away the same as these roundhouse slips? A. Yes.

Q. You tried to find the boiler house slips? A. Yes, sir.

Q. Have you been able to find any slips, either roundhouse boiler shops, except those that have been referred to? A. No, sir; only the four.

Q. By the four do you mean the slips by Willman, Kirchner, Mitchell and Holt? A. Yes, sir. (Papers shown witness.)

Q. Now, you have already told us that you recall Mr. Holt having done some work on that engine? A. Yes, sir.

Q. Were you present when he was doing it? A. No, sir.

Q. Did you see it after it was done? A. Yes, sir.

Q. Do you know whether or not he tested the injectors in any way? A. Yes, sir, and I tested them after he got down.

MR. RECORD: He testified that he didn't do any work on it at all. Now he testifies that he did some work.

THE WITNESS: I said I seen him on the engine.

MR. RECORD: You said you didn't see him do any work on the injectors.

THE WITNESS: I didn't see him do a particular thing, but I saw a man on the engine.

Q. You saw a man on the engine? A. Yes; but he had more than one job on the engine; I

don't know whether he was working on the injectors or packing a valve.

Q. Did you have anything to do yourself with the injectors? A. Well, they came under me, but after the work was done I came and asked him—

Q. (Interrupting.) Never mind, did you do—

THE COURT: What did you do?

Q. What did you do in regard to the injectors on engine 957? A. Why, gave him the slip and told him about it.

Q. After that? A. I went and asked him if his job was done.

Q. You must not tell us if his job was done; but after you asked him did you personally do anything? A. Yes.

Q. What? A. Went and tried the injector.

Q. Did you do that yourself? A. Yes, sir.

Q Why did you do it? A Why, it is customary.

Q. Tell us just what you did in the way of trying it? A. I went up and pumped air.

Q. How did that work? A. How do they work?

Q. No, how did they work? A. Good.

Q. Was there anything the matter with them when you tried them? A. No, sir; not when I tried them.

THE COURT: When was that, if you know?

A. Now, I could not just exactly tell you.

Q. Well, with reference to the time of the accident, was it before or after the accident? A. It was the day of Mr. Evans' report.

CROSS EXAMINATION BY MR. RECORD:

Q. Did you have any recollection of that particular job other than what you got from the record? A. Why, it came back to me when I heard of the accident, yes, sir.

Q. When you heard of the accident did you then look up the accident to refresh your recollection as to what you had done? A. No, not right away.

Q. What did you do that day? Don't you oversee a lot of repairs and a lot of engines? A. Yes, sir.

Q. Can you remember any of the repairs on any of the others on that day? A. Not unless I look it up.

Q. You don't recollect it now? A. No, sir.

Q. And all you recollect of any of these engines is what you got on the record, isn't that it? A. Yes, sir.

Q. That is how you refresh your recollection? A. Yes, sir.

Q. Is it your duty when you receive the slip telling what is to be done—it is your duty then to assign a man to do the work? A. Yes, sir.

Q. That is your position? A. Yes, sir.

Q. Well now, when the work is done the slip goes into an office? A. Yes, sir.

Q. Either the roundhouse or the boiler office? A. Yes, sir.

Q. There are two offices? A. Yes, sir.

Q. And then those slips come back to you? A. Yes, sir.

Q And then you sign them? A. Yes, sir.

Q. File them away? A. Well, the clerk copies them in a book.

Q. Well, let the clerk alone now. I am talking about you. A. All right.

Q. When you get the slips back you sign them and file them away? A. Yes, sir.

Q. Is that your orders? A. If—well, yes; that is the orders we have.

Q. You hand in those orders? A. Yes, sir.

Q. Where did you file them—where? A. Sir?

Q. Where do you file them? Where were you filing them during that month? A. Why, we used to keep them in the office until the month was up, then we used to put them upstairs in the storeroom.

Q. Now, do you know anything about what you did that month; did that custom prevail at that time? A. I don't quite understand you.

Q. Well, during the month of October, 1910, you had a custom about these slips, and they were under your orders; is that right? A. Yes, we always did that way.

Q. Well, is it a fact that in the month of October these slips came in acording to custom, were signed by you and filed in your office? A. To the best of my remembrance, yes, sir.

Q. That is right, is it? A. Yes, sir.

Q. It is right as a matter of custom, is it? A. Yes, sir.

Q. That was your custom? A. Yes, sir.

Q. Of course, you have no individual recollection of these individuals slips; you don't remember them as distinguished from any other slips, I suppose? A. Why, I look all of the slips over before I put them away.

Q. Well, but you don't remember one slip as against another four years after? A. I don't what?

Q. Well, I will withdraw the question, it is not important. What do you find them in, what kind of a bag or box or receptacle; what do you find them in? A. I used to file them in an envelope.

Q. Envelope? A. Yes, used to.

Q. Then what did you do with the envelope? A. We used to put them upstairs in the storeroom.

Q. How long did you keep them downstairs? A. In our office?

Q. Yes. A. One month.

Q. Then they would go upstairs and be filed away upstairs? A. Yes, sir.

Q. Now, what did you put in each envelope—each day's work? A. Yes, sir.

Q. Each day's work you put together in an envelope—all of the slips of that day? A. Yes, sir; providing a job was not completed in one day that slip would go over to the next day.

Q. But if the job were completed in a day did it go in an envelope, be kept in your office to the end of the month and then filed away upstairs, is that right? A. Yes, sir.

Q. Now, in what kind of a box or place were these envelopes filed when they went upstairs? A. Why, sometimes we used to put them in a pocket, sometimes we used to put them in a box.

Q. Sometimes you used to put them in a pocket? A. Yes.

Q. What do you mean by a pocket? A. Why, a partition up against the side of the building.

Q. Kind of a box place? A. Yes, sir.

Q. You put them in there? A. Yes, sir.

Q In whose charge were they when they were up there? Who superintended that part of the building; did you? A. No.

Q. It passed out of your charge? Who had charge of that room? A. Why, it was in the store department.

Q. The storage department. But who had charge of that room—the storage department had charge of that room? A. Yes, sir.

Q. So that when the envelope left your office and went upstairs, it went into the charge of another man, is that right? A. I don't know whether the man was supposed to take care of them or not, but we used to put them up there because we didn't have room in our own office.

Q. I am asking you now in your opinion when those went upstairs were they still in your charge, or were they in charge of some other man? A. That is a question—we put them up there, I don't know whether—I ain't supposed to want them slips that time; I put them up there and store them away. I probably don't go up there once in a month.

Q. Well, isn't that a different department of the railroad? A. No, that is the storeroom where they store them away.

Q. Who is in charge of that? A. Why, that comes under Tucker.

Q. And it was in the storeroom that these things were placed by you? A. Yes, sir.

Q. Did you ever go up there and remove them after you put up there? A. Why, once in a while I would have to go up and hunt up a work report.

Q. Did you ever have to go up and hunt up this work report? A. I think I went up once with the clerk, if I am not mistaken; I am not positive, but I think I went up once or twice and helped hunt up some work reports, look for them.

Q. That was after this suit was begun? A. Yes, sir.

Q. But you didn't go up there and remove these reports yourself for some other purpose? A. For some other purpose?

Q. Well, I don't know how I can make the English any plainer? A. I got the slips.

Q. Mr. Witness, you put that envelope upstairs at the end of the month? A. Yes.

Q. That is what you did? A. Yes, sir.

Q Do you remember ever going and getting an envelope containing those slips or any of those slips out of the storeroom, and taking it to some other place? A Taking it to some other part?

Q. Yes. A. I went up with the clerk once when we were hunting them up, and we got them.

MR. RECORD: I don't know whether this witnes understands or doesn't want to understand.

Q. Did you ever take any of these slips after you carried upstairs—did you ever take them away from upstairs and take them somewheres else? A. No, no; not until lately we moved them out of the storeroom and put them in another place. They took them out of the storeroom and built another place for them.

Q. When was that? A. I don't just remember.

Q. Well, a year? A. Yes.

Q More than a year? A. Well, I can't exactly tell.

Q. Who would know? A. Possibly a year, but I can't exactly tell.

Q. Who would know? A. Sir? I suppose the master mechanic would know.

Q. The master mechanic? A. I suppose he would know.

Q. Who moved those goods out of there—who moved these papers out of there? A. They had some man move them out.

Q. Who was the man? A. I don't know; I wasn't there when they moved them.

Q. You weren't there when they moved them? A. No, sir.

Q. You were not consulted about it? A. Sir?

Q. You were not asked about it by any officer of the road? A. No; They took them over there and had a fellow put them away.

Q. They took them over where? A. Over to the new place where they keep them now.

Q. How do you know that? A. How do I know it?

Q. Yes. A. Since we took the books over there we have to take them over to the other place instead of taking them to the storeroom where we used to.

Q. Now, the custom is to put those slips in the envelope and take them over to the new storage place; is that right? A. Yes.

Q. That is right, is it? Do you do that at the end of the month? A. We have a man to do it, yes.

Q. Well, you see that it is done? A. I see that they are taken over.

Q. Yes. A. But I don't go over with them—now.

Q. But you used to personally take them upstairs when they were in your storeroom? A. No, sir.

Q You sent a clerk up with them? A. No, sir; used to send a laborer up with them.

Q. You sent a laborer up with them? A. Yes, sir.

Q. Do you remember who that laborer was? A. No, sir.

Q. What were his directions? A. Sir?

THE COURT: What was he told to do?

A. Why, take them upstairs, and I used to send a fellow up there to show him where to put them.

Q. What fellow? A. Why, almost anybody; sometimes I would send a clerk up, sometimes I would send a machinist's helper up.

Q. Do you remember any such clerk or any such machinist's helper? A. I know Mr. Bradley was up once or twice, and showed him where to put them.

Q. What do you say his name was? A. Bradley.

Q Why, didn't Mr. Bradley take them up himself? A. Why, because he had his work to do in his office.

Q. Well, how big was the bundle? A. Well, probably a wheelbarrow, a wheelbarrow and a half.

Q. A big mass? A. Yes.

Q. Then you had Mr. Bradley or some other man take a laborer, who carried the bundles? A. Wheeled them over, yes.

Q. Wheeled them over, and then the clerk told him where to put them? A. Yes, sir.

Q. And they were put in these pockets, or some box or some place in a regular way, were they? A. Yes, sir.

Q. Was there any label on the pockets or the box showing the month or the year, by which they could tell where to go or to look? A. Well, some of them were marked.

Q. Why were some of them marked and others not? A. Well, the books were all marked—the envelopes were all marked.

Q. How were the envelopes marked? A. How were they marked?

Q. Yes. A. Every day.

THE COURT: What was marked on the envelope?

A. Why, the first month, 30th day, like that.

Q. Then upstairs they were kept in order so that you could locate them by the order in which they were kept; is that irght? A. That is the way they were supposed to be kept.

Q. That is the way they were supposed to be kept. Were you ever up there? A. Yes, sir.

Q. And were they so kept? A. When I was up there they were in pretty good shape.

Q. I asked you were they kept in order of the day of the month and the year, so that you could go in and pick out your month when you wanted to find a particular slip? A. Yes, sir.

Q. That is the way you tried to have them arranged? A. Yes, sir.

Q. And that was the custom? A. Yes, sir.

Q. Now, try again to fix a little more accurately, when you commenced to go—when these were moved over to the other side. When was this storage place moved over to the other place? A. I could not tell you.

Q. Well, was it two years? A. I could not tell you; it is a year.

Q. Who would know? A. Why, I suppose the master mechanic would know.

Q. How can you—did anybody give you orders to take them all over; or was somebody else in charge of that work? A. I suppose somebody else did, I did not.

Q. You got no orders to move these over? A. Why, I had no authority to tell them to take it out of the storeroom and put it over there.

Q. When you went up and looked over with a clerk, these slips, was that before they were moved over to the new place, was it? A. I don't just remember.

Q. You don't remember whether it was in the new place or the old place? A. I don't just remember whether it was in the new place or in the old place.

Q. And you don't remember who went with you?
A. I just forget the man I had with me.

THE COURT: Do you know how many times you made a hunt for these slips?

A. I do not.

THE COURT: The slips in this particular matter I mean now.

A. I don't just remember.
Q. Was it more than once? A. Yes, sir.

THE COURT: More than twice? That is, you personally; I don't mean giving directions to anybody, you personally.

A. Well, I ain't sure whether it was once or twice; I ain't positive.

THE COURT: Do you know how long ago the last time was that you personally made a hunt for them and looked for them?

A. No; I do not.
Q. Can you give us some idea whether it was a month ago, a year ago, a week ago? A. Oh, it must be about a month ago, I think, as near as I can remember.

THE COURT: About a month ago. Now where did you hunt for them on that occasion.

A. I had to go over to the new place.

THE COURT: Was there any occasion that you recall now that you made a hunt for these particular slips at the new place other than this time that you have just told us of?

A. Was there one?

THE COURT: Was there any other occasion when you personally made an effort to find these slips other than the one you have just spoken of, at the new place?

A. I think once before; I am not positive. I think I looked for them twice.

THE COURT: Now, that time you referred to, where did you hunt to them, the new place or the old place?

A. I don't remember; it is quite a while ago.

THE COURT: Have you any recollection at all as to whether you made any hunt for them in the old place?

A. I am not positive; I think—I am not positive whether I did or not. I looked for them twice, but I could not really say whether it was once in the new and once in the old; but I went in the old place, but I don't know whetre it was looking for these slips purposely or some other slips.

Q. When you made the hunt the last time did you find any of the slips? A. Only what you have there.

Q. That is all you found? A. Yes, sir.

Q. Did you find those? A. Sir?

THE COURT: Did you find those slips that are here now, did you personally find those that are here now, or any of them?

A. No, sir; I don't think I did, that I can remember.

Q. Now, Mr. Witness, what do you mean by saying one minute that you found these and the next minute saying you didn't find them? A.

I dind't find them; I didn't say I found them, I had them hunted up; I said I went with the man trying to find them; that the man found them and I didn't find them.

Q. And you went up with a man. Did you stand alongside of the man while he hunted? A. Not all the time, no, sir.

Q. Where were you? A. In other parts of the store room.

Q. In other parts of the store room? A. Yes, sir.

Q. What did you tell him to do? A. Told him to try and find the work reports.

Q. Where did you tell him to look? A. Why, in the pocket of the date we wanted.

Q. You told him to look in the pocket of the day you wanted; is that right? A. Yes, sir.

Q. Did you point out the pocket to him? A. I don't remember.

Q. Did you pay much attention to him? A. I don't remember.

Q. But you do remember that you told him to go to the proper pocket? A. I told him to go to pocket.

Q. What was his name? A. Well, now, I don't just remember which one it was; I don't just remember who it was.

Q. Was that a month ago; was that a month ago that you are talking about? A. What, the slips? No, not a month ago; a month ago—as far as I can remember I was over in the new place looking.

Q. Didn't you tell the court that you could not remember whether you were over in the new place or the old place when you sought for them the first time? A. The first time? No; he asked me about the second time.

THE COURT: You are asked now, didn't you say as to the first time when you hunted them that you didn't know whether it was in the old place or the new place?

A. Well, I don't just remember; I think it was the new place the last time; the first time I ain't sure whether it was the old place or the new, but I think it was the old; I am not positive. We don't only have a few slips to hunt up.

Q. Let's take the first time. Who told you to go and look for the slips? A. Well, I just forget. I had orders, but I just forget who it was.

Q. And you don't remember how long ago? A. No, sir.

Q. What did you do when you got those orders? A. Why, sent a fellow to hunt for them.

Q. You sent a fellow to hunt for them? A. Yes, sir.

Q. Did you go with him yourself? A. Why, I went with him once, but I don't remember just when.

Q. Then you don't remember whether you went with him the first time or not? A. The first time?

Q. Yes. A. Well, I was up in the storeroom. We go in the storeroom to get all the materials, and the books is right there upstairs; I told him what pocket to go, and I am pretty sure that is the old place, but I could not just swear to it.

Q. This was the second? A. That was the second time.

Q. And the first time you say now that you think you went to the old place? A. Well, I think I did, as near as I can remember. Now, that is a good while ago.

Q. How long ago? A. Well, I couldn't remember; I could not tell you.

Q. Now, when you went to the old place have you any recollection whether you went yourself or whether you sent a man there to go and get it and told him how to get it? A. Why, I think I was in the storeroom at the time when I told him.

Q. When you told him what? A. When I told him to get that.

Q. When you told him to get them? A. I think I was.

Q. Doesn't that enable you to tell who the man was? A. No; I don't just remember.

Q. Can't you refresh your recollection by who would be at the storeroom at the time? A. No, sir.

Q. Your recollection is that you told a man in the old storeroom to go to the proper date and find the envelope containing the slip, is that right? A. As near as I can remember.

Q. And you didn't go with him in person? A. I was in the storeroom.

Q. I mean you didn't go to the pocket and you didn't take the envelopes out and finger the slips in your own hand? A. No; I didn't take the slips in my own hand out of the pocket.

Q. How is that? A. No, sir; I didn't take the slips out of the pocket in my own hand.

Q. And if anybody did it it was this man that you told to do it? A. As near as I can remember it.

Q. Do you remember distinctly that you did tell him to do it, some one? A. Yes, sir.

Q. You remember that? A. Yes, sir.

Q. That is the first time then? A. Yes, sir.

Q. And that is in the old room according to your best recollection? A. That is as near as I can remember, yes, sir.

Q. Now, then, did this man bring any slips back to you? A. I think he did; I think he sent pieces, I am not positive; I don't remember.

Q. You don't remember whether he did that in the old place or the new places? A. I think he got them from the old place as near as I can remember.

Q. That is the best of your recollection? A. Yes, sir.

Q. Then when you made a search in the new place did you go in person or send a man over? A. Why, I went over there with a man in the new place.

Q. Well, did you handle the envelope yourself and go to the pockets and take them out yourself, or did you tell him? A. No; I was there with him.

Q. Who picked them out; who picked the envelopes out of the pocket? A. I just forget who it was.

Q. You don't remember whether you did or he did? A. I ain't positive which one of us did.

Q. And you don't remember whether anything was found that day or not? A. I don't think there was.

Q. You don't think anything was found there? A. I don't think so.

Q. You don't remember who this man was this second time? A. No, sir.

MR. BRADLEY, recalled.

DIRECT EXAMINATION BY MR. HOBART:

Q. You have already told us about a search that you made for the roundhouse slips? A. Yes, sir.

Q. And about finding them, or those that are here to-day? Did you have anything to do in the way of searching for the work slips at the boiler shop as distinguished from the round house? A. The boiler shop work slips were turned into our office, and I copied off the slips the workmen's names.

Q. Did you have anything to do with those slips? A. No, sir.

Q. Did you look for them any time under the orders of Mr.— A. (Interrupting.) I did; I looked for the work slips but I could not find them.

THE COURT: That is, the boiler shop slips?

A. Yes.

Q. You could not find them? A. No, sir.

Q. Where did you look? A. I looked over in the storeroom.

Q. When did you look? A. I looked a little over a month ago.

THE COURT: Is that the new place referred to as the new place?

A. No, the old place.

Q. When you looked a month ago did you look in the old place and the new place? A. Well, I didn't go over in the new place. Mr. Hadrick, I think, sent a machinist's helper over to the new place, or else went himself. There are two places.

Q. You went to the old place? A. Yes.

Q. Were there any slips in there? A. I could not find any at all.

THE COURT: What did you do to find them?

A. I went upstairs in the store room and looked in the pocket to see if I could find any work slips on engine 957 for the 19th and 20th of October.

THE COURT: You say pockets?

A. Pockets or box, whichever they were kept in; sometimes they were kept in a pocket; sometimes they were kept in a box.

THE COURT: And you went through each and every pocket and box and looked for these slips?

A. I looked for those, yes. I looked for those dates.

THE COURT: Oh, only those marked—

A. (Interrupting) 19th and 20th.

THE COURT: Of October, 1910?

A. Yes, sir.

Q. How many work slips pass through your office in the course of a month? A. Well, I could not just tell you that.

Q. Well; just give us some idea. A. Oh, probably a thousand.

CROSS EXAMINATION BY MR. RECORD:

Q. Were these arranged in order in pockets, with a date labelled on the pocket? A. Yes.

Q. Were they all mixed up so that you had to go over the whole business, or could you locate the day? A. No; they were just put in an envelope and marked on them, like if it was the 19th and 20th.

Q. Well now, what kind of a box were they in; were they in a box against the wall or were they arranged—how were they arranged? A. No; sometimes—there was no box against the wall; they were just in a square box, wooden box, that is all.

Q. Did you have pockets that the last witness testified to in the old storeroom? A. Well, there were some pockets upstairs, in the storeroom; they kept the work slips in there; they were like square pockets, like that (indicating).

Q. Against the wall? A. Right against the wall.

Q. That is a sort of place made for the filing? A. Yes, sir.

Q. Now, were those envelopes arranged in those pockets in series according to the day of the month? A. Yes, sir.

Q. Or were they all stuck in together, the 1913 with the 1901? A. No; they were all together.

Q. All in order? A. All in order.

Q. So that if you wanted a certain day you could go to the place where it ought to be? A. (Interrupting.) And find it.

Q. And find it. That is right, is it? A. Yes, sir.

Q. Now, when you went there a month ago you went up to what place? Describe it. A. A pocket.

Q. A box, or what? A. Why, I looked in a box.

Q. Well, in a box. Looked in a box? A. A box and a pocket both.

Q. Now, what made you take the box that you looked in; how did you pick that box out? A. The foreman told me to go and see if I could find any slips there, so I looked in and I seen—

Q. (Interrupting.) Was there only one box? A. No; there were several boxes.

Q. What led you to the one that you looked in?

THE COURT: Did you look in more than one box?

A. Yes; I looked in several boxes.

Q. You have said that these slips were in envelopes—somebody has, arranged in order; now, I am trying to find out when you went up there what you went through first. You certainly didn't go through 1901, did you? A. No, sir.

Q. Now, what did you do? In your own mind, how did you commence to work? A. Well, I started in from the first of the month and looked on.

Q. First of what month? A. First of October, 1910.

Q. How did you know where that was? A. Why, they used to have marks.

Q. Well, and you went to the thing that was marked October 1910? A. Yes, sir.

Q. Was there anything in that box or pocket? A. There was nothing there.

Q. Nothing for October, 1910? A. Nothing there.

Q. Nothing of any kind? A. No, sir; the storeroom was cleaned ut. They cleaned the storeroom out and they put it in the new place; there was nothing but old envelopes up there.

Q. Well, was there anything about November of that year? A. Well, I don't remember about November.

Q. Do you remember about September? A. No; I do not.

Q. But you do remember that you could find no slips of any kind when you went there a month ago in this old storeroom, in the receptacle marked October, 1910? A. No, sir.

Q. No slips of any kind?

THE COURT: Did you make any search in the new storeroom?

A. No, I did not. I think Mr. Hadrick had another man look for that, or do that.

JOHN T. HALEY, sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. Where do you live, Mr. Haley? A. Elizabethport.

Q. Where are you working now? A. Mr. Riley, Thomas Riley.

Q. What kind of work are you engaged in? A. Boiler works.

Q. How long have you been engaged in the boiler business? A. About thirty years.

Q. Were you in the employ of the Erie Company at one time? A. Yes, sir.

Q. Where did you work for that company? A. Jersey City roundhouse.

Q. Were you working there for that company in the month of October, 1910? A. Yes, sir.

Q. Who was your immediate superior, your foreman? A. Mr. Hugh Smith.

Q. Mr. Smith, the witness who was here—Hugh Smith? A. Hugh Smith.

Q. Did you know Mr. Patrick A. Collins? A. Yes, sir.

Q. Did he work with you at one time in the roundhouse? A. He was boiler inspector at one time while I was there.

Q. Did you and he work together? A. We worked together, yes, sir.

Q. Do you know whether Mr. Collins is living at this time? A. Well, the last time I heard of

him he was dead; a friend of his told me, a man who lives over in Harrison, about in the same block where Mr. Collins lived, told me he was dead.

Q. When was that, do you remember? A. Oh, that must be about a couple of years ago.

Q. Well now, you have already told me that you worked in the Jersey City roundhouse in the month of October, 1910? A. Yes, sir.

Q. While you were working there was your attention called to an accident that had happened to a certain engine of the company? A. Yes, sir.

Q. Did you hear of the accident? A. I heard of the accident, yes, sir.

Q. Had you had anything to do with that engine before the accident? A. What engine do you mean?

Q. 957? A. Oh, yes. I witnessed the testing of the boiler, that was about all.

Q. Was that before the accident or after? A. Before the accident.

Q. About how long before? A. About two or three days.

Q. Who was with you at that time? A. Mr. Collins, the boiler inspector.

Q. You were with him when he made this test or whatever it was? A. When he went around the boiler and I went to look at the guage, to see that it had the right pressure on; then he examined the boiler; that was about all I done on it.

Q. How was the guage? A. The guage was perfect.

Q. Do you know whether any inspection was made of the crown sheet at that time? A. I don't know; that was up to Mr. Collins to make the inspection.

Q. You didn't have anything to do with that? A. No, sir.

Q. Will you tell us what the guages are? A. I was just there to witness that he had the right pressure on the boiler.

Q. What was the purpose of that? Tell us a little more about that. A. What is that?

Q. What was the purpose of that? What was the idea of making the test? A. Just in case anybody would not take his word; that he had the right pressure on the boiler. I was there as witness to certify that he had the right pressure.

Q. What were you trying to find out about the boiler? A. Trying to find out if there were any defects in the boiler; she was in there for repairs, and put the pressure on to see that everything was all right before we fired her up.

Q. Was everything all right? A. Everything was all right. That is what he told me.

Q. Never mind what he told you. Of course, you can't testify to that. Was everything all right as far as you know in connection with the guages? A. So far as I know everything was all right. There were no leaks. If there were any leaks, of course, you couldn't get the pressure on.

THE COURT: What do you mean by pressure; what kind of pressure—steam, water, or what?

A. Water.

THE COURT: Water pressure?

A. Yes, sir.

THE COURT: How is that pressure put on?

A. By a pump.

THE COURT: How much pressure?

A. 150 pounds on that boiler.

THE COURT: A hundred and fifty?

A. A hundred and fifty pounds, cold water pressure. Carrying two hundred pounds of steam you put two hundred and fifty pounds of cold water pressure.

THE COURT: Two hundred and fifty pounds to the square inch?

A. Yes, sir.

Q. You said something about a pump. What is that? A. That is a pump to pump the pressure in the boiler.

Q. Well, is that a part of the engine, or is that a separate piece? A. No; that is what they use on every boiler when they put the pressure on; they have a certain pump there; they move it around from one place to another.

THE COURT: Pump used just for that purpose?

A. Pump just used for that purpose.

Q. Was that the way boilers were usually tested? A. What is that?

Q. Is that the way boilers were usually tested by means of this pump and watching the pressure, as you did; is that the way you usually did it? A. Oh, yes, sir; that is the only way we could get at it; by using this pump.

MR. RECORD: I ought to object to the statement that somebody told him Mr. Collins was dead. I think that ought to be stricken out.

That man is in evidence, can be produced. What somebody told him about somebody ought not—

THE COURT: That is a question, I suppose, ought to go to the court, as it is being used for a purpose. Its purpose is to

satisfy the court as to the probability of his death, in order to use his testimony. It cannot hurt, as far as the jury is concerned, Mr. Record. It is a matter for the court to pass upon, any way.

MR. RECORD: I understand, but it is a piece of hearsay. He said, a man told me something. I think that ought to be stricken out. I am asking it anyway; that is all I can do.

MR. HOBART: He says that a man living on the same street told him that he died about two years ago. That is the substance of the testimony.

MR. RECORD: I move to strike it out.

MR. HOBART: I think in connection with proving the fact of death we are sometimes permitted to enlarge on that.

THE COURT: However, that is a question pure and simply for the court—the question of the admission or non-admission of previous testimony. I presume I won't strike out. Leave it to me if any application is made to exclude or admit his former testimony. If it does not come to me I need not pass upon it at all, and it has no relevance to the jury. Keep it in mind, however, and if the question is urged then I will hear you.

MR. HOBART: May I ask another question before you cross examine.

Q. How long after the month of October, 1910, did you continue to work for the Erie Company? A. Up till last May, May 28th.

Q. Now how long after that time did Collins continue to work with you—or how long after that did you know him to be working there? A. I don't remember.

satisfactory manner so as the engine was in perfect condition to run as a first class engine.

Q. Did you make that inspection yourself? A. I did.

Q. Did you observe anything about the condition of the crown-sheet? A. Yes, certainly I did.

Q. What condition was the crown-sheet in when you inspected it? A. First class condition, perfect condition.

Q. Did you observe anything about the flues? A. Yes, sir.

Q. What condition were they in? A. They were in good condition. I got about one hundred and twenty or thirty removals or renewals.

Q. Of the flues? A. Removal and renewal.

Q. Did you inspect it again to see if they had been put in? A. Found them in perfect condition.

Q. When you got through inspecting this engine before the accident was there anything the matter with it anywhere? A. When?

Q. When you got through inspecting it. A. No, sir.

Q. I mean after these changes or repairs had been made? A. No, sir; perfect condition. Can't leave the shop until she is in perfect condition after getting this general overhauling, particular examination inside and outside, she can't leave the shop otherwise until she is in perfect condition——

Latter part of answer objected to and by consent ordered stricken out.

Q. Did you examine it before it left the shop? A. I did.

Q. What condition did you find it in? A. First class working condition.

NOON RECESS.

(Same witness continuing.)

BY MR. HOBART:

Q. Mr. Collins, did you make any examination of the locomotive or the boiler and the crown-sheet, stay-bolts and so forth after this accident? A. Yes, I did.

Q. How long after? A. As soon as she was brought into the shop.

Q. Could you state how long that was, a matter of a few hours, or what it was? A. A matter of a few hours, five or six hours at the most after the accident occurred.

Q. What examination did you make? A. Internal and external examination.

Q. What did you look at when you made your examination? A. All the defects.

Q. What did you find? A. I found a numerous amount of crown-bolts.

Q. Stay-bolts? A. Yes, crown-bolts or stay-bolts. There is crown-bolts and stay-bolts, just the difference in the name of them specifying them. I found a numerous amount of them pulled out of the sheet, the crown-sheet.

Q. Anything else? A. And the sheet bulged down—the crown-sheet bulged down we will say about six inches below its natural formation.

Q. What part of the crown-sheet was down below the proper place? A. The left front corner—the left front part of it.

Q. How large a space? A. About eighteen inches.

Q. Did you make any examination to see if you could tell where the water line was? A. Uh?

Q. Did you make any examination to see if you could tell anything about the water line? A. Yes.

Q. What did you examine in that respect? A. Examined the material, that is the crown-sheet, steel, to see where the water had been previous to the explosion.

Q. That is only one thing. How do you know that it was in for a general overhauling? A. It ain't a general overhauling; it is just what they call a yearly test, they have to be tested at least once a year,—the boilers, then if there is any other repairs to be done they do it while it is in there.

Q. Did they go over it to see if there are any other repairs? A. Yes.

Q. And they are supposed to test it up and see if there are any other repairs, are they? A. Yes, sir.

Q. And they are supposed to make such examination as would tell them what repairs ought to be made, is that right? A. Yes, sir.

Q. And that is the order? A. That is the orders.

Q. And those are the instructions? A. Yes, sir.

Q. And you remember that this machine was in there under those orders and for that purpose? A. Yes, sir.

Q. And the object of the general overhauling is to make sure that the engine is in good order, so that it can go out on the road and do its work? That is the object, is it? A. Yes.

Q. That is the purpose of the inspection and of the repairs, is it? A. Yes, sir.

THE COURT: This hydrostatic test that you speak of, is that the water test that you were talking about?

A. Yes, sir.

RECESS, to 2 P. M.

JOHN J. GAVIN, a witness called and sworn.

DIRECT EXAMINATION BY MR. HOBART:

Q. Where do you live, Mr. Gavin? A. I live on Roosevelt Avenue, 31 North 13th Street.

Q. In Newark? A. Yes, sir.

Q. Where do you work at the present time? A. D. L. & W. Hoboken.

Q. Did you at one time work for the Erie Railroad Company? A. Yes, sir.

Q. In what department did you work? A. The boiler department roundhouse.

Q. At Jersey City? A. Jersey City.

Q. Were you working there in the month of October, 1910? A. That is when Collins died, is it?

Q. Well, never mind about that for the present When did you leave the employ of the Erie Company? A. I am out of the employ now about seven years.

Q. Did you know Mr. Patrick A. Collins? A. Yes, sir.

Q. I am referring to a man who at one time worked as a boiler maker in the Jersey City shops? A. That is right.

Q. For the Erie Company? A. Yes, sir, right.

Q. Did you know him well? A. Very well.

Q. How long had you known him? A. Oh, I had known him for fifteen years.

Q. Do you know whether he is living at the present time? A. No, sir, he is not living.

Q. How do you know that? A. Why, I was at the funeral and wake.

Q. When did you attend the funeral and the wake of Mr. Collins? A. About a year and a half ago.

Q. About a year and a half ago? A. Yes, sir.

NO CROSS EXAMINATION.

MR. HOBART: Now, if your Honor please I desire to read the testimony of Mr. Patrick A. Collins, given at the former trial of the issue in this case.

THE COURT: I assume, Mr. Record, there cannot be any objection to that?

MR. RECORD: No objection.

MR. HOBART: You have no objection to my using the printed book instead of the original minutes.

MR. RECORD: Oh, no.

MR. HOBART: This is the testimony I am about to read of Mr. Patrick Collins, who, the witness says, is dead.

MR. HOBART: (Reading.)

"PATRICK A. COLLINS, called and sworn on behalf of defendant, testified as follows:

DIRECT EXAMINATION BY MR. HOBART:"

Perhaps I should say when this evidence was given. The record shows it was given November 20th, 1911.

PATRICK A. COLLINS, called and sworn on behalf of the defendant, testified as follows:

Q. Mr. Collins, where are you working now? A. Hammond Iron Works—Hammond Construction Company.

Q. Whereabouts do they work, or is their business? A. General contractors all over the United States.

Q. What line of work are you doing there? A. Constructionist, boilermaker.

Q. How long have you been engaged in the business of a boilermaker? A. Thirty years.

Q. Did you at one time work for the Erie Railroad Company? A. I did.

Q. How long did you work for them? A. The last time I worked for them I worked about three years.

Q. On the 18th of October, 1910, were you working for that company? A. I was.

Q. At the point, Jersey City? A. Jersey City terminal.

Q. What were your duties for the railroad company? A. Boiler inspector.

Q. Boiler inspector? A. Inspector of boilers.

Q. How long had you been such an inspector? A. Three years, Erie Railroad Company.

Q. Did you make any inspection of locomotive No. 957?

THE COURT: That is this locomotive?

MR. HOBART: Yes.

A. Please let me look at that.

Q. I show you what purports to be a paper with your signature on it? A. I will tell you in a minute. Yes, sir, I made that inspection.

Q. Dated October 18, 1910? A. Yes, sir.

Q. Is that your signature? A. Yes, sir.

Q. You may state how——

him he was dead; a friend of his told me, a man who lives over in Harrison, about in the same block where Mr. Collins lived, told me he was dead.

Q. When was that, do you remember? A. Oh, that must be about a couple of years ago.

Q. Well now, you have already told me that you worked in the Jersey City roundhouse in the month of October, 1910? A. Yes, sir.

Q. While you were working there was your attention called to an accident that had happened to a certain engine of the company? A. Yes, sir.

Q. Did you hear of the accident? A. I heard of the accident, yes, sir.

Q. Had you had anything to do with that engine before the accident? A. What engine do you mean?

Q. 957? A. Oh, yes. I witnessed the testing of the boiler, that was about all.

Q. Was that before the accident or after? A. Before the accident.

Q. About how long before? A. About two or three days.

Q. Who was with you at that time? A. Mr. Collins, the boiler inspector.

Q. You were with him when he made this test or whatever it was? A. When he went around the boiler and I went to look at the guage, to see that it had the right pressure on; then he examined the boiler; that was about all I done on it.

Q. How was the guage? A. The guage was perfect.

Q. Do you know whether any inspection was made of the crown sheet at that time? A. I don't know; that was up to Mr. Collins to make the inspection.

Q. You didn't have anything to do with that? A. No, sir.

Q. Will you tell us what the guages are? A. I was just there to witness that he had the right pressure on the boiler.

Q. What was the purpose of that? Tell us a little more about that. A. What is that?

Q. What was the purpose of that? What was the idea of making the test? A. Just in case anybody would not take his word; that he had the right pressure on the boiler. I was there as witness to certify that he had the right pressure.

Q. What were you trying to find out about the boiler? A. Trying to find out if there were any defects in the boiler; she was in there for repairs, and put the pressure on to see that everything was all right before we fired her up.

Q. Was everything all right? A. Everything was all right. That is what he told me.

Q. Never mind what he told you. Of course, you can't testify to that. Was everything all right as far as you know in connection with the guages? A. So far as I know everything was all right. There were no leaks. If there were any leaks, of course, you couldn't get the pressure on.

THE COURT: What do you mean by pressure; what kind of pressure—steam, water, or what?

A. Water.

THE COURT: Water pressure?

A. Yes, sir.

THE COURT: How is that pressure put on?

A. By a pump.

THE COURT: How much pressure?

A. 150 pounds on that boiler.

Q. How long after it occurred did you know of it? A. Well, I should say about five or six hours afterwards I knew of it, after the accident occurred.

Q. When you knew of the accident did that call to your mind the point whether or not you had previously inspected this engine? A. Yes; sure we previously inspected it. It is impressed on my mind for that occasion alone—it cost a man's life —and going through this journey, and the engine just after getting a general inspection, overhauling, all repairs done and so forth, and why it should cost a man's life, it certainly would be impressed on your memory.

Q. Is that why you recall this engine 957 as distinguished from other engines that did not have such an accident? A. Yes. I don't need that at all. I just want to verify my own words. I didn't know what engine you had reference to until you showed it to me.

Q. Can you now tell whether on October 18, 1910, three days before this accident, you heard of——

(Objected to as improper. Question withdrawn.)

Q. Your attention was called to an accident to engine 957 some few hours after it occurred, wasn't it? A. You will have to come nearer to me, please.

Q. Was your attention called to an accident to engine 957? A. Yes.

Q. A few hours after it occurred? A. Yes.

Q. Did you at any time prior to that accident inspect that engine? A. I did.

Q. When, how long prior? A. As near as I could say, three days previously.

Q. What inspection did you make? A. A general inspection, internally and externally.

Q. Where did you make it? A. In Jersey City —roundhouse, Jersey City.

Q. In making that inspection what did you do? A. I examined that boiler, stripped her all off naked, a manner of speaking, got her stripped off naked, that is the fire-box and the boiler, examined it thoroughly inside and outside for defects as far as can be determined by any man.

Q. Yes. A. Looking and seeing if there is any defect here or there, and what defects that I had found, why, I had them repaired and seen that she was put in thorough working condition.

Q. How long altogether did you spend in making the inspection? A. Nearly a week.

Q. Now what defects, if any, did you find that you know about, if you can now recall? A. The only defects I found is ordinary wear and tear defects that can be repaired.

Q. Well, what were they? A. Removal of a few stay-bolts—we will say in the number of, as near as I can recollect—let me see—well, put it at twenty-five stay-bolts.

Q. Yes. A. That is as near as I can get to the estimate. I did not keep any record of that.

Q. All right; what was done in regard to that? A. They were taken out and renewed, replaced by new ones.

Q. Did you inspect the engine again after that was done? A. Yes.

Q. Did you find any stay-bolts after that that were not in good condition, I will put the question again. After these stay-bolts had been put in what did you then find as to the condition of the stay-bolts? A. After the work had been done as I reported as necessary to be done to put the engine in good condition, I re-inspected her and found that everything was complied with in a

satisfactory manner so as the engine was in perfect condition to run as a first class engine.

Q. Did you make that inspection yourself? A. I did.

Q. Did you observe anything about the condition of the crown-sheet? A. Yes, certainly I did.

Q. What condition was the crown-sheet in when you inspected it? A. First class condition, perfect condition.

Q. Did you observe anything about the flues? A. Yes, sir.

Q. What condition were they in? A. They were in good condition. I got about one hundred and twenty or thirty removals or renewals.

Q. Of the flues? A. Removal and renewal.

Q. Did you inspect it again to see if they had been put in? A. Found them in perfect condition.

Q. When you got through inspecting this engine before the accident was there anything the matter with it anywhere? A. When?

Q. When you got through inspecting it. A. No, sir.

Q. I mean after these changes or repairs had been made? A. No, sir; perfect condition. Can't leave the shop until she is in perfect condition after getting this general overhauling, particular examination inside and outside, she can't leave the shop otherwise until she is in perfect condition——

Latter part of answer objected to and by consent ordered stricken out.

Q. Did you examine it before it left the shop? A. I did.

Q. What condition did you find it in? A. First class working condition.

NOON RECESS.

(Same witness continuing.)

BY MR. HOBART:

Q. Mr. Collins, did you make any examination of the locomotive or the boiler and the crown-sheet, stay-bolts and so forth after this accident? A. Yes, I did.

Q. How long after? A. As soon as she was brought into the shop.

Q. Could you state how long that was, a matter of a few hours, or what it was? A. A matter of a few hours, five or six hours at the most after the accident occurred.

Q. What examination did you make? A. Internal and external examination.

Q. What did you look at when you made your examination? A. All the defects.

Q. What did you find? A. I found a numerous amount of crown-bolts.

Q. Stay-bolts? A. Yes, crown-bolts or stay-bolts. There is crown-bolts and stay-bolts, just the difference in the name of them specifying them. I found a numerous amount of them pulled out of the sheet, the crown-sheet.

Q. Anything else? A. And the sheet bulged down—the crown-sheet bulged down we will say about six inches below its natural formation.

Q. What part of the crown-sheet was down below the proper place? A. The left front corner—the left front part of it.

Q. How large a space? A. About eighteen inches.

Q. Did you make any examination to see if you could tell where the water line was? A. Uh?

Q. Did you make any examination to see if you could tell anything about the water line? A. Yes.

Q. What did you examine in that respect? A. Examined the material, that is the crown-sheet, steel, to see where the water had been previous to the explosion.

Q. Was there anything there to indicate where the water line had been? A. Well, yes.

Q. What was it? A. There is what we call a demarkation line or what a boilermaker calls a fatal blue, showing where the water had been; it causes a blue color in the metal.

Q. Had you seen that before in your experience as a boiler inspector? A. Yes; in cases where crown-sheet has been blown down, or explosions.

Q. How many such cases have you seen? A. I have seen three or four of them.

Q. Judging from the examination you made a few hours after this accident, what is your opinion as an expert boilermaker, as to the cause of the falling of the crown-sheet? A. The cause of the falling of the crown-sheet is low or want of water. There wasn't water on the crown-sheet. There was no water on the crown-sheet previous to the explosion, causing the explosion.

Q. How would the lack of water on the crown-sheet cause an explosion or make the crown-sheet drop? A. Lack of water wouldn't—in my opinion will not explode a boiler. It will burn it out.

Q. What was it in this case? A. Feeding water into the boiler in the condition the metal is in, at a white heat, causes the explosion. I consider, according to my opinion, that if you put in a quart of water into a white crown-sheet you will tear it apart, or any metal, no matter how strong it is—cold water.

Q. Let me ask you again; what in your opinion caused the crown-sheet to drop in the present case, based upon your experience and your examination of the locomotive? A. Putting water into the crown-sheet—putting water on the crown-sheet when it was not in condition to receive it.

Q. What do you mean by that? A. Eh?

Q. What do you mean, was not in condition?

A. The crown-sheet was without water, and according to my opinion it was in an intense white heat.

Q. What did you base that opinion on? A. On the color of the iron—the discoloration of the iron or steel.

Q. Does that make a mark or line so that you can tell by looking at it? A. It leaves an indelible color that cannot be erased whatsoever.

Q. You cannot mistake it when you see it? A. No; you cannot mistake it."

Cross examination was read by Mr. Record.

"CROSS EXAMINATION BY MR. RECORD:

Q. When did you start to make the inspection on this engine, Mr. Collins? A. Which inspection, sir?

Q. Well, any inspection? A. Oh, the first inspection—the latter inspection. There has been two inspections brought up here. I should say, as near as I can figure it out, about six days; that would make about the 12th day of October.

Q. About the 12th day of October? A. Yes, sir; about that time.

Q. How do you fix that time? A. Sir?

Q. How do you fix that time How do you happen to remember that it was six days instead of six weeks? A. I know, nearly as possible, how much time the engine lay in the shop. Each and every boiler or engine that runs on the Erie Railroad has got to come in at a certain period for a general examination according to New York State laws; therefore, we are all the time on the alert waiting for that time and bringing it in. If it is not necessary otherwise to bring it in, we bring it in previous to this date, so she can have a gen-

eral inspection to satisfy the State laws of New York. We give it a thorough inspection.

Q. That does not answer my question. I am trying to find out how you fix the time. A. Why, don't I fix the time?

Q. How do you tell it was six days instead of six weeks? A. I didn't say six days. I said on or about six days.

Q. How do you fix it as six days instead of sixteen days? A. Why should I?

Q. I am asking you how you fix the time? A. Because I can count, one, two, three, four, five or six, as near as possible.

Q. How do you remember that was the day you commenced work on it? A. I don't remember that was the day. I fix a period as nearly as possible to that period.

Q. I am asking what you had to fix it by. Don't you use this paper that he has given you to fix it by? A. Yes.

Q. That is, if he had not shown you that paper you could not have remembered the date now from your own recollection? A. I couldn't?

Q. Could you? A. I couldn't? A. Yes, sir.

THE COURT: Do not argue.

A. Yes, sir; I could.

Q. How could you have remembered without looking at this? A. Because the case was of such vital importance. If a man gets his mark chopped off and a man gets killed, you keep it in your memory.

Q. Aren't you inspecting all sorts of boilers? A. All sorts of boilers; yes, sir.

Q. When you found this man had been killed, how could you remember that boiler as against a dozen other boilers? A. Why shouldn't I? This boiler I know. I am just as familiar with the

boiler, a manner of speaking, as I am with my own child.

Q. How many boilers do you inspect or did you inspect in the course of a year there? A. Well, we will put in about ninety.

Q. About ninety in the course of a year? A. Yes.

Q. Give me the numbers of those boilers? A. Do you want the numbers of those boilers?

Q. Yes. A. All right. Memory?

Q. Yes. A. You are going to give me A, B, C now.

THE COURT: Just answer the question.

A. B-1 class—I am putting it down, you know, as near as I can remember—602, 603, 605——

Q. Describe me 603 and tell me how it differs from 602? What is the difference in the age of 603 from the age of 602? A. Don't know.

Q. What is the difference in appearance? A. The difference in appearance, different model altogether. One is a flat crown-sheet, boiler square, with crown bars and an old model type.

Q. How many times did you examine 603? A. About two or three times.

Q. When was the last time you examined it? A. Don't know.

Q. When was the last time prior to this accident that you examined 603? A. Don't know.

Q. Can you tell me the last time prior to this accident that you examined any one of these numbers? A. No, sir.

Q. How often do you examine? Did you examine all the time? That was your steady business? A. Which boiler?

Q. All of the boilers; is that your steady employment? A. Yes, my business, nothing else, to examine boilers and see that they are in good condition.

Q. How often was each boiler supposed to be examined? A. Every thirty days.

Q. Every thirty days? What date had you examined this particular boiler prior to this six day period? When was the last time prior to this inspection that you had made a previous inspection? A. I wouldn't tell you. I can't tell you.

Q. You can't tell me? A. I mean I can't tell you.

Q. You do not remember? When you inspected it first what did you find? A. What did I find?

Q. Yes. A. Which, 603 or——

Q. Yes, this particular one? A. Oh, that 957?

Q. Yes, this 957, when you inspected it first what did you find? A. I found three or four stay-bolts in a defective manner.

Q. You said that you made a report in reference to it after your first inspection; is that right? A. Made a report? I made a report of my inspection, yes, to the foreman boilermaker.

Q. In writing? A. Yes, and verbally, too.

Q. Did you make it in writing? A. Yes, yes, I did.

MR. RECORD: Well, I call for the production of that written report.

MR. HOBART: We will have it tomorrow, try to find it. We haven't it this morning.

THE COURT: You will try to produce it in the morning.

MR. HOBART: We will endeavor to produce it; yes.

Q. What is the barrel of a boiler? A. The barrel of a boiler is the cylinder part of it.

Q. Did you inspect that? A. Half inspected it.

Q. Half inspected it; what do you mean by that? A. You can only inspect what you see. Anything that you cannot see you cannot give an

inspection for. That is what "No inspection" means on those reports there, any part I could not see and prove it was not in a normally reliable condition according to my observation and my judgment, it is written down on those forms "no inspection."

Q. Do you remember without any reference to this form whether you inspected the exterior of the barrel or did not? A. I remember that I did inspect the exterior.

Q. You did inspect it? A. I did; yes.

Q. And reported it good? A. And reported it good. Inspection of barrel and inspection of firebox are two different things. Did you say barrel, sir?

Q. Yes. A. Oh, no; I did not inspect the barrel.

Q. You did not inspect the barrel? A. No.

Q. Did you inspect the interior of it or the exterior of it? A. The interior?

Q. Of the barrel? A. Half of the interior I inspected.

Q. But you did not inspect the exterior at all? A. No inspection of the exterior.

Q. Did you inspect all of the interior? A. No.

Q. Inspected part of it? A. Part of it; yes, sir.

Q. Why didn't you inspect it all? A. Can't. It is an impossibility; have to tear it apart and reconstruct it.

Q. You inspected it as far as you could? A. As far as known; yes, sir.

Q. What do you call the throat-stay? A. The what?

Q. Throat-stay? A. That is a piece holding the throat sheet on to the barrel of the boiler, making it secure, so it will hold an equal stress on the boiler.

Q. Can you see it? A. Yes.

Q. Do you remember inspecting it? A. Yes, I remember the inspection.

Q. You made an inspection of that? A. No, no, not on the throat-stay, I didn't do it.

Q. You said you could? A. So I can, providing you tear the boiler apart and strip it naked entirely.

Q. You said you stripped this naked? A. What?

Q. You said you stripped this naked? A. I did not.

Q. When you started to testify? A. I did not.

Q. Then you did not strip it naked? A. I did not strip it naked. I stripped the fire-box naked.

Q. Then you say now that you made no inspection of the throat-stays at all? A. No inspection of the throat-stays.

Q. Did you make any inspection of the back head breasts—back head braces? A. No.

Q. Did you make any of the crown bar braces? A. Crown bar braces, there is none. There is none of that engine.

Q. Did you make any inspection of the fire-box sheets. A. Yes.

Q. You made that inspection? A. Yes.

Q. Now what did you do when you made this first inspection after you turned in your report? Did you do anything about it between that time and the time you saw it again? A. When I made the report, sir, the defects that is in the boiler?

THE COURT: Oh, no.

A. When I inspected that boiler, left her in working condition.

THE COURT: Just listen to the question.

(Question repeated.)

A. No.

Q. Who had it during that time? A. Eh?

Q. Who were the people that had charge of it

during that time after you inspected it first? A. The foreman boilermaker.

Q. It was up to them to do the things that you recommended? A. To do the repairs.

Q. When did you see it again? A. After the work—after work had been completed satisfactory to me. I gave it another examination to see that the work that was necessary to be done was done.

Q. When was the time when you saw it last? A. The last time I saw it was about the 21st or 20th day of October.

Q. You testified on your direct examination that it was on the 18th that you saw it last? A. No; I didn't say I saw it last.

Q. You said that was the day you finished your inspection? A. That was the day I finished my inspection.

Q. Then you did see it after that? A. Saw it after that.

Q. Where did you see it? A. Because it was necessary for me to see it.

Q. Eh? A. It was necessary for me to see it.

Q. Where? A. In the Erie Railroad yards.

Q. On the 18th you finished your inspection? A. Yes, and the 21st I saw it again.

Q. Do you know where it was between the 18th and 21st? A. No, sir.

Q. You don't know whether it was in use or not? A. No, sir.

Q. And when you saw it on the 21st you did not make any inspection of it then, did you? A. On the 21st?

Q. Yes. A. After the explosion?

Q. Yes. A. No.

Q. Oh, you didn't see it on the 21st until after the explosion? A. After the explosion.

Q. Then after the 18th, after you finished your inspection, you did not see it again until after

the explosion; is that right? A. That is right, sir.

Q. You don't know what became of it from the 18th to the 21st? A. No, sir.

Q. Will you tell me what was covered by your report, what repairs were done upon this? A. What repairs?

Q. Yes. A. I will give you very closely just the amount of repairs that were done on it.

Q. Do that, please. A. I had, as nearly as possibly as I can remember, about twenty-two or twenty-three stay bolts renewed that I thought was defective.

Q. What made you think they were defective? A. Because a stay-bolt gets—shows sign of a fracture. That you see, the sign of a fracture coming into it; that is an infinite fracture almost, and you get the bolt removed to be absolutely sure it is perfect.

Q. Could you see signs of fracture in twenty-one of them? A. Sir?

Q. You saw signs of fracture in twenty-one of them A. No, sir.

Q. How many did you see signs of? A. About five or six.

Q. How many more did you have removed? A. We removed the stay-bolts that is fractured and then the bolts in the same radius, the next row of bolts to it within the circle, the next following circle to that; that is, from the central point we will remove either five or six or seven or eight bolts around that that is not fractured at all to make absolutely sure that when that bolt goes back it gets its equal stress.

Q. How many did you remove all told? A. I told you nearly, as nearly as I can remember, about twenty-two or twenty-three.

Q. How many of those were defective? A. Five or six.

Q. What else did you do? A. Well, we had the boiler cleaned thoroughly so as to leave no scale or anything around it; looked through its water legs; examined it thoroughly for fractures, and took out half, or about half of the amount of tubes that is in her and had them renewed.

Q. Had those tubes gone wrong within thirty days? A. Sir?

Q. Had those tubes gone wrong or become defective within thirty days? A. No.

Q. How long had it taken, in your judgment, for those tubes to wear out? A. Wear out according to different conditions, according to different conditions of working stress and also according to different conditions of fuel and different conditions of water. One tube may last two years in a boiler in perfect condition and another may not last six months.

Q. In your opinion could you tell how long these had been in use? A. Well, yes, sir.

Q. How long? A. I think I could safely say they had been about eighteen months.

Q. Been about eighteen months in use? A. Yes.

Q. Why didn't you take them out when you inspected them thirty days before? A. Not necessary.

Q. They had not worn out then? A. No, sir; it was not necessary. It was not necessary then. Only took them out in case of precaution, not because it was necessary; just for precautionary measures.

Q. Why did you take them out this time instead of thirty days later? A. Well, if that engine is doing its duty and the flues are in perfect condition, the tubes are in perfect condition, and in the course of two months afterwards this engine fell down carrying a trainload of people we will say from here to Port Jervis, why, they would tell me I was not very diligent in my work when I

did not have them removed at that time, because they caused like enough to detain the train perhaps two or three minutes on its travelling time.

Q. Then when you took half of these tubes out they were not in a defective condition? A. Not in a defective condition; no, sir.

Q. Why did you take them out? A. For precautionary matters, so she wouldn't have any detention.

Q. Why didn't you take the rest of them out? A. Not necessary.

Q. Were these worse off than the others? A. Yes; there is always more strain on one end of a boiler than another. There is some parts—there must be a weak part somewhere.

Q. So as far as you could see by looking at these tubes they were all right, were they? A. Yes, sir.

Q. As far as you could see by looking at them? A. Yes, sir.

Q. There was nothing about them that would lead you to take them out? A. Nothing about them that would call for me to have them renewed.

Q. But nevertheless you did have them renewed? A. Otherwise I sure have them renewed if there were no defects in them.

THE COURT: I do not think he understands.

Q. These particular—this half that you had taken out, do you understand me when I ask you if those were defective? A. They were not defective.

Q. That is what I understand, they were not defective? A. They were not defective."

"RE-DIRECT EXAMINATION BY MR. HOBART:

Q. Why did you take them out? A. For precautionary measures and also to clean the dirt that gathers around them. The water gets dirty and the mud lodges around those tubes after a certain period of working in a boiler, and we take out the tubes just for the express purpose of cleaning the mud away so we will be able to generate more steam. We want water in the tube instead of mud.

Q. Mr. Record asked you if you made any inspection of the barrel. When you looked at the locomotive after the accident did you find anything wrong with the barrel? A. No, sir. Perfect condition, just the same thing.

Q. You were also asked if you made an inspection of the throat-stays? Did you observe them after the accident? A. Same condition as when she left the shop.

Q. Nothing the matter with them? A. Nothing the matter.

Q. You were also asked to give some of the details as to your inspection of engine 603? A. Yes.

Q. And some other engines? A. Yes.

Q. Did either 603 or any of those other engines have an accident? A. No.

Q. That is the only one that you inspected that had an accident? A. Yes.

MR. HOBART: I believe the matter of receiving in evidence this book, marked Defendant's Exhibit 5, was left open for further consideration. I have no further proof. I don't know whether Mr. Record insists on the objection.

MR. RECORD: Do you offer it?

THE COURT: It has already been offered, Mr. Record. That is the book that was offered, and I admitted it and then I told you after admitting it that I had some doubt about the correctness of my ruling, and the witness that was used to prove it was allowed to be withdrawn from the stand, and your cross examination of him left over until the end of the defendant's case. My object at the time was to be satisfied as to whether this was any different from any other secondary evidence, and whether or not there had been sufficient proof of the original sheets, and of the inability of the defendant company to now produce them; and whether or not this was proper secondary evidence.

MR. RECORD: As the record stands that is admitted?

THE COURT: It has been admitted, but nothing has gone to the jury as to what it contains.

MR. HOBART: I understood your Honor was to finally rule on the point as to whether it was to remain in evidence.

THE COURT: There has been some proof taken since that time, Mr. Record, which may go to the question.

MR. RECORD: If your Honor recollects it, that book is in evidence now, subject to a motion on my part to strike it out?

THE COURT: That is practically the situation, but you will bear in mind that since that time some witness—I think the foreman of the roundhouse at Port Jervis, has been on the stand, and he has testified somewhat as to the original record, and his searching for that; and I think the clerk of the roundhouse was called, and he testified further as to an effort he made to find them. So, since the time of its admission, there has been some other testimony. Now, the question Mr. Hobart is putting to you is whether or not you now insist on your objection to the record.

MR. RECORD: I want to get the record in a certain way. If the record is that your Honor has admitted that over my objection, all you have done is to say that I may renew the objection later. My objection is on the record, is it not?

THE COURT: Your objection is undoubtedly on the record. Now, the question is do you renew your objection?

MR. RECORD: No, I do not renew the objection.

THE COURT: The doubt in my mind, Mr. Hobart, is whether or not you have shown a sufficient effort, or a sufficiently diligent effort to have disclosed sufficiently that these records cannot be found. My impression is, unless you can show me to the contrary, that this is just the same as the ordinary secondary evidence of any other lost document. The general rule is that you must show such a document was in existence, and show that a reasonable effort was made to locate the original and that it could not be found. Now, when that time

arrives, then the court may say, yes, you may use the secondary evidence—unless you can show me——

MR. RECORD: All I am anxious about is this record. One moment your Honor says this is admitted——

MR. HOBART: I can settle this in just a second. I was about to say that, of course, your Honor looked at it from a judicial point of view, rather than from the point of view of the zeal of one side or the other. If your Honor has any doubt about it I will withdraw the offer.

THE COURT: I have, as to whether there has been sufficiently diligent search, and as to proof of search. Now, as I understand the offer is withdrawn. No harm can come from it because no part of it has been read to the jury. I don't know myself what the record contains.

(Defendant's Exhibit 5, withdrawn from the evidence.)

MR. RECORD: Now, I would just like to get all the facts in here at this time, and I will withdraw any objection that I have to that book. I understood it to be in evidence and admitted to evidence, and that I have to take it out. Your Honor so expressly said, it has been offered in evidence and admitted in evidence.

THE COURT: It was, and it was marked Defendant's Exhibit 5, but upon a suggestion by the court, Mr. Hobart as the offerer of it desisted from reading any part of it. I do not know what is in that record. Upon my further suggestion to you you did not cross examine the witness who was used to prove the record, because I indicated to you that I had some doubt as to my ruling in

admitting it in evidence, and after some conversation amongst us all, the better plan seemed to be that we would allow that witness to step aside. You did not even cross examine him at all. He stepped aside, and your right to cross examine him was reserved to you if I finally ruled that it should remain in evidence. That is the point we are at now. My recollection shows that you objected to it.

MR. RECORD: It was marked and put in evidence?

THE COURT: Yes.

MR. RECORD: Now, it is there; it cannot be gotten out of there unless your Honor rules it out, and I make another application to put it out.

THE COURT: I will settle the question, gentlemen. I will rule it out.

MR. RECORD: My point is if your Honor is going to rule it out I will withdraw my objection.

THE COURT: I have ruled it out. I have taken the stand—I have ruled it out. It is somebody else's move.

MR. HOBART: In view of your Honor's ruling on that I am willing to strike out the testimony of the witness who testified in regard to it.

THE COURT: That need not be done, because you could have done that by presenting it and offering it as an exhibit if I had ruled adversely to you. That is all that would appear on the record.

MR. HOBART: Defendant rests.

THE COURT: Any rebuttal?

MR. RECORD: We have no rebuttal.

MR. HOBART: If your Honor please, I

now ask for direction of verdict in favor of the defendant. The basis of the application is, first, that no negligence has been shown on the part of the defendant, and particularly that the negligence alleged in the complaint or declaration, as it was at that time, has not been proven, and that allegation was that the defendant failed to keep the locomotive in safe condition, and failed to inspect it properly.

THE COURT: One moment. The gentlemen of the jury may retire.

The declaration says, or alleges the negligence of the defendant company to be this: "The plaintiff avers that the said defendant company neglected its duty in this behalf, and that the said locomotive was so carelessly and negligently constructed, and so carelessly and negligently inspected and kept in repair, and that the defendant company employed such negligent and careless persons in the performance of the duty of keeping the said locomotive in repair and safe condition—that as a consequence of such neglect of duty on the part of the said defendant company the boiler on the said locomotive at the time and place aforesaid, exploded and inflicted such injuries on the said Patrick Ruane that he died shortly thereafter from the effects of the same."

MR. HOBART: The second ground is that the evidence clearly shows that the cause of this accident was negligence of a fellow servant, to wit, the engineer. The third ground, which is perhaps to a certain extent involved in the second, is that the negligence was in part, at least, that of

the fireman himself, who also had some duty in regard to the operation of the injectors as now appears from the defendant's evidence, so that if there was low water it would be his fault to a certain extent, just as much as it might be that of the engineer.

The fourth ground, which is to a certain extent involved in the first, is that the evidence shows that if there was anything defective about this boiler, the defect was latent and of such a character that it could not be ascertained by such inspection as it was customary to make.

Now, we have already discussed these points at some length, and I don't want to take the time to renew the discussion at any length. I only want to call your Honor's attention briefly to the evidence as it now appears; that is, if there was any doubt about it before, at the close of the plaintiff's case, the defendant has come and produced everything that it has, or could get, and the defendant has shown that while it is true there was some trouble with one of the injectors two days before the accident, it has shown by both the engineer and fireman who were running the engine at that time—the only men who knew anything about it, they both swear positively they did not have any low water. They are asked how they knew. They watched the water guage and compared the injector, and so forth, and they did not burn the boiler. It now also appears, which did not appear before, that the engine had just come out of the shop three days before, and had been thoroughly inspected and overhauled there, certain defects pointed out, and then a

week or two spent in repairing, and then another examination made by this Mr. Collins, who said he found that what he asked to be done had been done. In addition to all that, we have the evidence of the same engineer and fireman who ran the locomotive the next day, and the very day before the accident, and that is absolutely that everything is all right. We have the evidnce of the man at Jersey City, who went there on the morning before it left Jersey City, on the morning of the day of the accident. He says he found there were no leaks or any indication that there was anything wrong with the crownsheet. We have the undisputed evidence that if there had been anything wrong with the crownsheet that fact would have been evidenced by leaking or bulging, or bagginess, as one of the witnesses described it; so that the most casual observation by an experienced engineer, or hostler or fireman would indicate that fact, and the evidence is that there was no such condition found at any time, either at Port Jervis or Jersey City. In addition to that we have the evidence of the men at Port Jervis, and in particular the man who examined the injectors and who inspected them. That is Mr. Hold. There cannot be any question about his evidence. There may be to some of the others, but the other things have nothing to do with that part of the apparatus. Holt's evidence is that he examined the injector, took it apart, put it together again and tested it. The man was then the roundhouse foreman, and he inspected the injectors and tested them, and found everything was working all right. Now, it does seem to me under those cir-

cumstances, there is no possible question of fact in the case that can be submitted to the jury.

I want to call your Honor's attention to one other case, in addition to those which have already been presented, which deals with the general subject of what it is necessary to prove in an action of negligence. I refer to the case——

THE COURT: I will interrupt you right now. I am satisfied that the doctrine of res loquitur does not apply as between employer and servant. I had a little bit of doubt about that yesterday. Since that time I have made further examination, and upon that point I am not as satisfied as I possibly can be.

MR. HOBART: The case to which I was about to call your Honor's attention does not deal with that particular principle, but with the other principle as laid down by the Court of Errors and Appeals.

THE COURT: Of this State?

MR. HOBART: Of this state, yes; that in an action for negligence the trial judge is not justified in leaving the case to the jury where the plantiff's evidence is equally consistent with the absence as with the existence of negligence in the defendant. It is a unanimous opinion of the Court of Errors and Appeals, reversing the Supreme Court in that very case, and, of course, the principle as applied to a case of this kind is that when there are several possible or probable causes, that the plaintiff necessarily has the burden of excluding reasonably those causes for which the company would not be responsible, and that, if the evidence

is equally consistent with negligence, as with the absence of negligence, that there is no question for the jury.

Now, it does seem to me that in this case, taking the argument which was made to your Honor on the application for a nonsuit, that the theory of the plaintiff that it was not properly inspected, that something of that sort was done, and that there was some defect, has not only been exploded and overcome by the evidence showing exactly what was done, and showing that everything was in first class condition, but that the real explanation of the accident was the carelessness of the engineer, and perhaps of the fireman also, in not keeping water properly in the engine. It does seem to me, applying that principle, that the plaintiff has failed to show that this accident was due to a cause for which this company is legally responsible.

MR. RECORD: If your Honor please, it seems to me as the evidence now appears, that we have got a number of facts for the jury to judge as to how this accident occurred probably. We have the testimony of Mr. Evans, as the witness on both sides, that he took this engine out of the shop on the 19th; that he went there a little after six in the morning, that he found it with steam up and the water going, and so on, but with the evidences that it had come out of the shop in a hurry where it had been under inspection. We have the testimony of Mr. Collins, and of—yes; I think he is the only man who testified, except one of those Italians, as to the work in the roundhouse.

THE COURT: There was one other witness; I didn't catch the name of the one,

but there was one witness who testified as to the water tank.

MR. RECORD: The stronger that is the better, to my idea. These men all testified —Collins and these others—that this had been out a year, comes in for its yearly— this hydrostatic test is the yearly performance. Collins testified that the ordinary repair is looked over once a month. Now, this had been in there six or eight days, according to Collins, and had a thorough overhauling—that is what they say, and that is their inference.

THE COURT: Well, doesn't that stand out prominently against you?

MR. RECORD: It would if I stopped there. I don't care how strong they make it. The stronger it is the better it is for me according to the point I wish to make. Now that came out of there inspected, or it did not. But it is there, and it put the burden upon them to inspect it, and they say themselves that it came in for inspection because it needed inspection, needed overhauling, needed inspection and repairing, and it was done before, as Mr. Collins says, to enable it to go out on the road and do its work in perfect condition—that is the object of it. The first man that mans it after it goes out of the house can't run it to Rutherford without trouble, as the trouble is dangerous, and a trouble that in itself might lead us to what? To his manoeuvering it up to the end of his line and putting it in the roundhouse with an elaborate demand for repairs—just had the year's repair, just turned in for six or eight days, and the men going over it and putting it in perfect condition, and he can't run to Rutherford

without trouble—and the most fatal and dangerous trouble, then, of the interruption of the water flow, an interruption of some foreign substance in between the tank and the hose, and so on. Then they put in the evidence here that up there they put in a specific demand in writing, "Clean out the hose, put in new strainers, clean out the tank, put in a new strainer in the tank."

THE COURT: All of which were complied with.

MR. RECORD: Not a bit of it. All of which is involved in that particular report which your Honor rules out.

THE COURT: I don't understand it that way.

MR. RECORD: I know your Honor does not understand it that way, but that is what we were fighting about that report. Where is there an item about cleaning out the tank, about cleaning out the hose——

THE COURT: My recollection is that the foreman of the roundhouse up at Port Jervis testified after assigning the work on the injectors to a certain person, who was previously on the stand, and who also says that after the work was done—whatever it was—to the injectors, as testified by the man who did it—that he himself, the foreman, tested the injectors and found them to be in perfect working order. He also testified as to assigning to some man the work of cleaning out the tank, or cleaning the tank.

MR. RECORD: Yes, but he does not testify as to what was the result of that.

THE COURT: He does—doesn't he now?

MR. RECORD: No; he does not.

THE COURT: One minute, Mr. Record, he says that the work was done, whatever was

done. He does not attempt to say exactly what was done. He himself went upon the engine and tested the injectors and found them working perfectly.

MR. RECORD: Let me hear about that; that is not enough, because Mr. Evans himself said that these injectors would break up for a while and they would run then again all right.

THE COURT: That was on the trip up?

MR. RECORD: Yes.

THE COURT: Now, go one step further. Take Mr. Evan's trip back the next day. Doesn't that go to confirm what the foreman of the roundhouse says, that he found them working correctly?

MR. RECORD: That is for the jury to say.

THE COURT: Pardon me one moment. Let's see if we can get together upon the exact things that we must have.

MR. RECORD: We can't get together unless your Honor lets me put my full point.

THE COURT: Go ahead; don't let me interrupt you.

MR. RECORD: I am saying they put in a demand for specific repairs. That is correct. Now, those repairs in his judgment called for the cleaning out of the water supply. All that we have got in evidence now is that some man went up on the cab under the direction of the foreman, tested up the injector, and it worked; he put it together again. The foreman testified that he tested the injectors. My point is that this evidence is not conclusive evidence by any means that they removed the trouble, because Mr. Evans says he had no trouble for fifteen miles running up to Ruther-

ford—it takes twenty minutes to run to Rutherford—the injector can run for twenty minutes without that trouble showing. In other words, that injector is not a turn valve which does not let the water in and immediately turns up a result. That trouble, as it appeared, is an intermittent trouble. It is a flow of water which is partially obstructed obstructs a little more, then frees itself. For twenty minutes at least it went. Now suppose Mr. Evans had said, "I tried the injector in the morning before it started out," and he had not gone any further on that engine. He would have had your Honor's point. He would have tested to find out if the trouble was there by the injector, and it would not have shown the trouble and did not show the trouble until he got there. Now, that is all right for argument, but it is simply for the jury to say, not for your Honor to say. Your Honor cannot find as a matter of fact that an injector at Port Jervis which runs free for just a fraction of a second or just a minute is proof that there is nothing in the hose, when down below it ran for twenty minutes and there was something in the hose. Don't you see, that bowls that right out. They have put, we have put—we have put, with Mr. Evans' testimony, and they have supplemented it with theirs—they have put the engine in the Port Jervis roundhouse with written request to clean out the tank, to put in a new strainer, and repair the trouble that an intelligent engineer leads to this trouble and occasional stopping and breaking up of this instrument, this injector. Now, if you say that Mr. Evans went

up there and tested it out once or twice—that he did, I don't deny that. My argument is that the facts show that the stuff was not taken out. Now, Mr. Evans may have gone out on the next trip and the thing not have materially shown itself again, because he says that it was not serious with him. He could have gone up on it as it was; He didn't need to go to the fireman for help; it only broke up occasionally, and the rest of the time it ran all right. Now, that led to his mind that there was an obstruction in that tank. I don't care how your Honor holds that testimony—whether they removed it or didn't remove it does not make any difference. This is the point that has to go to the jury. If there was an obstruction in that tank, and Mr. Evans' testimony that he told them to clean out the tank is evidence enough of that, if there was an obstruction in that hose in that tank, certain logical results would come from that. The first result is that the six days' inspection would have removed the simplest things that ought to have at once been tested out. That is the first thing that counts—a lack of proper inspection. Mr. Collins can testify glibly that she was in a perfect condition, but she wouldn't run to Rutherford without trouble, which shows she was in imperfect condition, and Mr. Evans did not go back on the same engine.

Now, that carries you to the further philosophy of this. If, during the six days that they had her in there they didn't discover that this was clogged up, then what about the other days before she was brought in? Of course, it is not to be presumed that they

plugged it up in there. All that appears perfectly clear now is that they didn't remove this obstruction when they inspected it, and they clearly ought to have done it. Now, consequences flow from that, to wit; that when she came in there she was plugged up. What did that mean? That means that on the road at different times therefore, that engine was liable to have its water supply interrupted. And then we come to the point, what is the effect of the interruption of the flow of water, and upon that the witnesses for the defendant are very much at sea. Our witness says that the interruption of the flow of water at any time, in his judgment would weaken—might make a crack, might make a loose bolt; and that would be one effect. These experts come here and they differ among themselves. Two or three of them testify to this round depression. One makes it round, another eliptical, and they say, here is this blue line all around it. Along comes Mr. Smith, another one of theirs, and he says, No; the blue line was not all round; the blue line was on three sides and did not go over the top; and that is exactly the place where the blue line would be, because the top is the first thing that comes out of the water. He testifies he inspected that at the request of these people, and there were two parallel lines and no circle at all, and the others testified there was a circle. Who decides upon that? Obviously the jury is to weigh these things up and determine who is probably telling the truth. Your Honor cannot tell. But then, they differ further as to the defects; some of them say that there

could not be a weakening process that would show leaking, because that would be immediately apparent to any engineer, and Mr. Smith, their witness, contradicts that. I asked him "Cannot this weakening take place by the water going on the top plate without blowing out? And he says, "Yes, but that sheet, you know, just as soon as it commenced to weaken, just as soon as it commences to get overheated, the bolts will get loose. The sheet will be hotter than the bolts and will move away from them, and as the pressure gets on it it tends to pull on the bolts. But there is no water coming out there"—that is directly contrary to the other witness, "An engineer wouldn't notice the leak, because the dry steam comes out and burns off, ustil the sheet gets so overheated that it collapses. * * * *"

"An engineer wouldn't notice the leak because the dry steam comes out and burns off."

Now, those are questions for the jury, not for your Honor. Take the reasonableness of that. Here one fellow says that will pull away slightly from the bolt. He does not say how much. Now, suppose that is drawn off just instantaneously; supposing it is drawn off until the water is very thin and the process is not sufficient to destroy it, but to weaken it and pull it slightly from the bolts, so that little wetting beads of water slowly go over; that would not make a leak over a hot burning coal fire that would be apparent to anybody. That leak would dry that up in an instant. It would only be a steam like your finger that would

be obvious to anybody looking up in there; but if there is a nice hot fire, as there has been when everybody has testified here—everybody who has looked into that box has looked in there when there was a hot fire—that hot fire would dry up any slight leak, so that upon that facts as they stand now, they are contradictory. Their men contradict one another. It is for the jury to say which is the most probable theory there. Our witness testified positively that he ran that engine and kept the water on. All they try to do is to show a situation that proved that he was mistaken. Now, in order to show that they had to account for that engine prior to the time it went in there for repairs and came out of there with a big defect undiscovered, because the going out of there with that defect undiscovered carried the physically necessary argument—in consequence that interruption of the flow had taken place many times in the days and weeks prior to the time it came in there. Of course, with that substance, whatever it is, interrupting the flow with Mr. Evans, it is reasonable to assume that it interrupted the flow with Mr. Jones, and Mr. Smith and Robinson, who handled the engine for thirty days previous. It is up to them to show, if they did not remove that trouble by inspection, what was the danger from it. Nobody comes here and says he took off that thing, and looked at the upper inside of it to see if it was affected. Mr. Evans' testimony as to what was on the inside of that situation and what was the effect of it, does not cover the case, because nobody saw it, nobody knows any-

thing about it, and it was not stripped so that anybody could see it. That is my argument. Not that that testimony does not tend to this, that or the other thing, but the one thing that has not been taken away from us is that we have put mud or some foreign substance in that tank or in that hose, and that they have not removed it.

All they have done is to show that somebody tried the injector and that Mr. Evans used the thing on the way down, and that it did not show any bad effects that day; but they have not shown anything to prove that it had not been in weeks before weakened by that flow of the water while that foreign substance was in the hose or in the bottom of the tank.

THE COURT: May I interrupt you for a minute? Mr. Morgan, the engineer,—doesn't he testify that there was no interruption in the working of these injectors on the 21st?

MR. RECORD: No, he doesn't testify that. He testifies that they worked all right on the way up.

THE COURT: Mr. Evans' testimony is that they worked all right on the way down on the 19th.

MR. HOBART: On the 20th.

MR. RECORD: Mr. Evans' testimony is that they might work all right indefinitely. They broke up occasionally. Might—that is the testimony in here—that the effect of an interruption depends on the character of the substance. If a sudden mass of stuff suddenly got in there, like a foreign substance, and stopped the whole flow of the

water, that is one thing, but your Honor must remember that we have got here is a substance that does not stop a flow of the water; that it interrupts it, sometimes not for ten or fifteen minutes together, not a half an hour together. Mind you, our witnesses' testimony is only a little ways beyond Rutherford, not a long distance.

THE COURT: Now, you are referring to whom? Mr. Morgan?

MR. RECORD: Yes. Where this thing broke up is only just about as far from Rutherford as Rutherford is from Jersey City.

THE COURT: Is that the testimony of Mr. Evans or of Mr. Morgan?

MR. RECORD: No; I am talking about what we know. Mr. Morgan testified where this accident was—this side of Suffern.

THE COURT: Yes, but he doesn't testify, as I remember his testimony, as to any interruption.

MR. RECORD: Your Honor does not get my point. My point is that Mr. Morgan says it ran free pretty near up to Suffern when the interruption occurred. I mean when the accident occurred. Mr. Morgan said he had no trouble with the injector or water supply at all.

THE COURT: If he had said that he had had, I would be able to follow your argument much more closely; but as I remember the testimony of Mr. Morgan—if I am not correct I want to be corrected—there is nothing to show that he found any interruption in the perfect working of the injector.

MR. RECORD: That is absolutely right. Now, listen to this argument: that was

working at that time how many miles? What time, and how many miles? About twice as far and twice as long as it takes it to run to Rutherford. Now, I am saying that demonstrates, if his story is true—Mr. Evans' testimony is that, whatever that interruption to the flow was, it was of such a nature that it did not manifest itself after he got to this point where it collapsed, in half of the time. That is my point. Now, I am saying that if there is an interruption to the flow which is of a character that does not show itself for twenty minutes, and for twenty miles, that it is reasonable to argue that that same interruption might not show itself for forty minutes or forty miles. That is my point. In other words—

THE COURT: Let me stop you once again and see if I get your thought. I don't think I do. You are not arguing, are you, Mr. Record, that an injector could stop working and Mr. Morgan and Mr. Evans would not know that it had stopped working for this period of twenty minutes?

MR. RECORD: Oh, no.

THE COURT: I didn't think so.

MR. RECORD: When I started to argue, I said a fellow ran this thing to the roundhouse and tried the injector. Your Honor asked me if that was evidence that the trouble whatever it was, had been removed. I am answering that by saying no. Obviously that is no evidence that it was removed. It may be some evidence, but it is not conclusive evidence, because all they say is that they got on the cab, put it together again and tried it, obviously that means for a minute or so. It does not mean hours. They

did not say hours. It was the impression it made on my mind that they were just testing it out. It is not work. Now, Mr. Evans testified that two days before it not only showed fine when it left the station, but showed so for twenty or twenty-five minutes. Therefore I am arguing that when a man says "I tested this for one day," that that is no proof that they removed the substance, because of that being so, then Mr. Evan's twenty minutes run when he had no trouble would prove there was nothing in there. There is no pretense in there; that is not the way Mr. Evans mind works. When he had gone twenty miles he found his injector breaking up, and then it ran clear. He didn't say to himself, "Now, that runs clear, there is no trouble;" but he watched a little longer; she broke up again; then he finally put this other injector on and takes his off. Now, he had only twenty minutes he ran seventeen or eighteen miles, whatever that distance is, about half way, when that accident occurred.

MR. HOBART: Ten miles to Rutherford, thirty-two to Suffern.

MR. RECORD: Well, whatever the proportion is. We all know that it takes so many minutes to run down. My argument is starting now to be directed to the point. They have that in their roundhouse and they try it out. They say, "Why, somebody mounted it and tried the injector." I say Evans tried the injector way out to Rutherford and it worked all right. That doesn't show that there was no obstruction there or that the obstruction was removed. If your Honor please, when a railroad kills

a man and you show that a few days before that the engine would not work, and was put in the roundhouse for repairs, haven't they got to show that they made the repairs? Can they show that by saying that the engine ran down the following day all right? Supposing it was weakened and the run is down grade, under very light pressure, and a very few cars; very little patronage—a lot of things may enter to that. We have put this engine upon the rails of this ocmpany's tracks and it would not run this distance to Rutherford. Then we have pu. it in the hands of a competent engineer, who turned it in with a lot of written demands for repairs, some of which they produce the men to say they have done, and others of which they do not show any evidence of having done, excepting that the isjector was tested up for a minute or two by somebody, and that Mr. Evans came down with it and found no trouble with in on the way down. Those are all questions of fact. Nothing is conclusive about that; nothing at all is conclusive about that, because the jury is entitled to decide upon that. Mr. Evans says he found the thing all right going out. Mr. Morgan says he found the thing all right going out, and the witnesses—isn't the jury entitled to pass upon that testimosy—figure upon which is right? Hasn't the jury got the right to reason that when that injector broke up, Mr. Evans, with the best faith in the world, attributing no disposition to lie to him, was mistaken; that when that injector broke up there was a temporary interruption in the flow of the water sufficient to weaken it

but not to close it up? And hasn't the jury the right to argue from the presence of foreign matter in that tank, that prior to that in the hands of other engineers, perhaps some engineer that had been sixteen hours a day on the road and was wearied to death—that that might have interrupted slightly so as to cut that water down within, perhaps to draw it off for a second before it came back? Hasn't the jury got the right to argue that that is probable from these facts?

THE COURT: Is there any witness, though Mr. Record, that testified that that might have happened?

MR. RECORD: Yes, surely.

THE COURT: I don't remember.

MR. RECORD: They have not testified in that way, but this man says it can weaken without blowing out. This is my question, he says "Yes sir." Then he goes on to show how that could weaken by the temporary withdrawal of the water, so this would just weaken a little around the bolts, and that would not leave a leak big enough to show, but if there had been anything in there like that that is that you reason from. There is nobody produced here that is a past master in this business, all that we have here is a lot of men telling you what they have observed; but there has not been anybody here who has said that you could not lower that water and not have an explosion. Mr. Evans says—your Honor will remember his graphic description to you—"Why, I will make them white hot and put cold water on, and they will not break." Entirely con-

trary to the notions of these other fellows.

Now, this is not a case where you turn somewhere to a law and find that this is a fact. They have produced witnesses who have testified to different things, and I reverse your Honor's question—there is not a soul here who has said that the withdrawal of that water is necessarily followed by an explosion like this. They only say that the withdrawal of that water and putting it back under conditions where the iron was of sufficient heat, would account for it. That is true. That is one solution of it. One solution of it is that Mr. Morgan deliberately let that water go off there, and that then he put it back on, and the thing went to pieces. That is one solution, but nobody says that is the only one.

THE COURT: He does not say so.

MR. RECORD: No, nor is there any evidence to that effect.

THE COURT: Because, as I remember, he said he didn't know anything about it.

MR. RECORD: Now, will your Honor allow me to put a point which has been suggested by my assistant, which I think supplements a point I tried to make. Let me read what this went into the shop for according to their own testimony: "Glass out is front of window." There is no testimony to show that that was broken on the way up; apparently that came out of the inspection branch below. "Front truck wheel gone and the wheel very hot. The tank wheel"—and something that I can't make out—all this, mind you after it had been thoroughly overhauled.

"Pack"—something "in the truck—couplers; tank cleaned out, and round tank valve and a strainer put in." Those things had to be done, your Honor understands,—not done, but to be done: "Clean out hose strainers, pack blower valve, also left steam valve of injector."

Now, all that was turned in to be done Now, just take that point of the strainer. He says, "Put a new strainer in." What for? Obviously the object of a strainer is to prevent foreign substances from getting into the water. Isn't that so? Do we need to have experts to prove that? What is a strainer for? A strainer is to prevent foreign substances from getting into the water. Now, there was no strainer in the thing after it came out of this week's inspection, and that is a defect, showing that the strainer had been absent a long while. But let us hang right to the one point now. We got that in a shop with a demand for a strainer to be put in. There is no testimony here by anybody here that that strainer went in. The testimony is that one man took down and reassembled the injector and another man tested it. Now, if they had put clean water is there or if there had been no permanent substance they could test that injector and the whole thing might be all right. Let us assume that that came out of there with no foreign substance in at all as shown by the injector, but that the strainer had not been put in. Then Mr. Evans could easily go down the road and Mr. Morgan could easily go up the road, and might last for days; but the absence of a strainer means a liability of foreign sub-

stances getting in, and that takes you away back again to the time that that strainer was absent, and to the necessary effects of it. Now, if they kill a man, and two days before put that engine into the roundhouse with the demand of the engineer that a strainer be put in, does your Honor say that they have not got to say that the strainer was put in other than by some injector which works equally well whether the strainer is in or out at that particular minute, but has no guarantee as to perpetual or long days and nights of usage? A strainer is not to act continually; a strainer is a proposition to prevent foreign substances from getting in whenever they appear. Now, what kind of an engine is it that has not got a strainer? Does your Honor mean to say that as a matter of law the Erie Railroad can run engines without strainers and be free from negligence, and does your Honor mean to say that the presence or absence of a strainer is indicated by working a valve for a minute or half a minute, when Mr. Evans says that he ran twenty minutes with his injector all right, and minutes at a time afterwards? That is the point, and that is the trouble in this case for the other side. They have shown two bad inspections. They have shown that they had it in their shop for a week, repaired it perfectly, put it out on the road under guarantee of perfect repair, and it would not go to Rutherford—showing conclusively bad inspection. And then we take this other engineer, who is obviously a competent man, and the thing worked so badly that he

puts it in the roundhouse with those demands, and those demands have not been compiled with, and there is not a bit of proof of it. My argument is that because Mr. Morgan ran up to this point and Mr. Evans ran it, that does not prove that the strainers were back there, and if the strainers were not back there, that would account for the collapse of this thing there in- 10
thing by prior engineers, but it would accout for the collapse of this thig there instantaneously if something suddenly jammed into this thing by reason of the lack of a strainer, and shut off the water suddenly and completely. Why, I don't see how anything could be clearer than that. Even the tank is not cleaned out; even the cleaning out of the tank is not in evidence. No- 20
body pretends to have done that.

This book shows who did the work. It shows that Mr. Jost did it, and he has not gone on the stand.

THE COURT: Let me ask you this question. Is there any dispute, or is there any evidence which goes to dispute the fact that this particular engine, 957, came out of the Jersey City roundhouse after a test on October 18th; is there anything in the case 30
which goes to dispute or deny or make improbable, or in any way dispute or raise the question regarding the truthfulness of the fact that on the 18th of October she was subjected to this water test?

MR. RECORD: What water test.

MR. HOBART: Hydrostatic test.

MR. RECORD: Why, that is a test, if your Honor please, in which they cut off the en- 40

gine where the water is and bring up another supply of water.

THE COURT: I know that; I am only asking if there is any dispute that that engine received that test in the roundhouse on October 18th.

MR. RECORD: There is this dispute, and I would argue it with the jury mighty strong—that if they testify that they have done that thing, and they testify in the same breath that they have done another thing, and Mr. Evans shows that they have not done the other thing, I have a right to argue with the jury that they have not done any of their business right. That is my argument. I have a right to so argue.

THE COURT: I am not asking that, Mr. Record, I am only asking whether there is any dispute as far as the evidence shows that this engine, 957, was in the roundhouse preceding and up to October 18th, as has been testified, for the purpose of making repairs and tests. I do not recall that there is any testimony that goes in any way towards refuting that. Now, here is the testimony also that engineer Evans was the first engineer to take 957 out over the road. My notes show he testified he did so the 19th of October. Now, is there any dispute in the testimony as to that? Any doubt about it in the testimony, that engineer Evans was the first engineer who took out engine 957 after it had been in the roundhouse for these number of days?

MR. RECORD: There is no testimony that he did or did not. All he testifies—all anybody testifies is that on the morning of that day he goes and gets it. The previous day

is not accounted for, even in the shop or out of it.

THE COURT: My recollection is that—

MR. HOBART: Evans said it just came out of the shop and he found a number of personal inconveniences.

MR. RECORD: I am mistaken about it. On the 18th Mr. Collins testified that it was is the shop.

THE COURT: Yes, that is the deceased inspector.

MR. RECORD: Yes.

THE COURT: And another inspector on the stand this forenoon.

MR. ANDERSON: Mr. O'Malley.

THE COURT: Mr. O'Malley testified to that.

MR. RECORD: I haven't argued that it was out on the road.

THE COURT: Therefore it would appear that Evans was the first one to take the engine out on the road, which was on the 19th. He testified, of course, he did have some difficulty with the injectors, as does likewise his fireman, whose name I do not recall.

MR. HOBAR9: Rose.

THE COURT: Yes, but his testimony is left in this condition, it seems to me. That is the testimony of both of them—notwithstanding that they had that defect, yet they positively swore, as I understand, both of them, that at no time was the water low in the boiler, and they took their engine to Port Jervis.

MR. RECORD: Yes.

THE COURT: There it was left for cer-

tain repairs. Whether or not those repairs were made I won't attempt to argue at this time. But the fact remains that Mr.Evans,—

MR. RECORD: Your Honor, it is undisputed that they were not made.

THE COURT: Mr. Evans testified that it was on the 19th that he went out; and on the 20th, if I correct—yes, October 20th,— he brought the same engine back to Jersey City from Port Jervis; that he had no trouble or difficulty whatever with his injectors. As I remember, he said he had a very pleasant trip; in every way indicating that the trip was properly made. I do not know that he testified definitely as to that point—as to whether the water was low in the boiler or not; I will not be sure of it. Next we come to Mr. Morgan, who took up the engine the morning thereafter, as I remember it, somewhere along six o'clock in the morning, and he goes out on the road with it and proceeds to this point where the accident happens, and he does not say that his injectors were working improperly, nor does he say that the water was at any time low in the boiler, of course. Now, I say I could follow you perfectly, Mr. Record, if the complainant was on Mr. Morgan's part that his injectors were not working properly. He does not make the least bit of complaint about that.

MR. RECORD: If your Honor leaves out part of the evidence, I cannot help you. You leave out the fact that Mr. Evans turned this in, with the conclusion in his mind. which he testified to, that there was foreign

substance in that hose and in that tank. You leave that out. That is the big fact in the case. How can you leave that out? Then I say that the strainer—he puts in there that that needs a strainer. Who is he? Why, he is their man in charge of their engine the day before this accident happened—two days before, he says, that thing needs a strainer and they make no pretense of having put a strainer in.

THE COURT: All right. It needs a strainer. But now, have you shown anywhere that because of the want of that strainer, that is, from the time they took that engine out of the Port Jervis shops until this accident occurred, that negligence, you say, in not putting this in caused this accident?

MR. RECORD: Yes.

THE COURT: Where in the testimony does that show?

MR. RECORD: Let's see. It comes out as a necessary consequence of the fact, first, that there was no strainer there; that means that there was a liability of the interruption of that flow of water that would not have been there if the strainer had been there.

THE COURT: Right, but you have no positive testimony that that happened, either on the part of Mr. Evans or Mr. Morgan. Now, suppose it had been a broken or defective water gauge—

MR. RECORD: Well, now, if the court please—

THE COURT: Just one moment, if you please. Suppose Mr. Evans had found a defective water glass or water gauge, or what not, of that sort—he brought the engine to Port Jervis; he directed the atten-

tion of the proper authorities to the reparation or renewal of those defective parts; it was not attended to; he brought it back to Jersey City. Mr. Morgan took it up the next morning. He went on with his journey and something happened. Wouldn't it happen without the water gauge; wouldn't it be argued just as well that this accident happened not because of the want or for the want of a strainer, not because of the improper working of the injectors—because it does not appear that it did—but because of negligence on the part of the engineers driving it in not using the injectors when they should have used them? Now, mind, I have travelled with you side by side. If it had been shown by Mr. Morgan that the trouble arose because of the injectors not working I would not have any trouble.

MR. RECORD: Of course, but if the injectors had not worked for some previous time, there is in the case the consequences of the failure to have strainers in there.

THE COURT: Yes, Mr. Record, but it does not appear affirmatively even by Mr. Morgan, your own witness, that that did happen. If Mr. Morgan had even suggested it was—

MR. RECORD: Now, if your Honor please, what really happened nobody knows. All we know is that something gave way. Now, that may have given way for two or three weeks. Mr. Morgan may not have attended to his business, and he may have allowed that water to go off, and that has weakened the crown sheet to the point of disaster. That is one hypothesis. That is their hypothesis.

THE COURT: That that may have happened when?

MR. RECORD: When it happened; it may have happened from two or three hypotheses. Let us take one of them—that Mr. Morgan didn't put on the water, and is either lying or mistaken about it. That is one theory of the case. That is their theory. Now, he swears, however, to the contrary. That is positive evidence, isn't it, uncontradicted, and that stands unless there is something in the case that contradicts it, but the difficulty is that that something in the case that contradicts him is that nothing to the effect that puts it up to him, because they have given him a defective machine, that might have been weakened prior to that time. In other words, if your Honor's point were good, it would have to be asserted here that that could not have happened by a previous weakening of this crown sheet, and nobody swears that. There is not an expert here who has said that you cannot weaken that thing without blowing it up. On the contrary, on cross examination every one of them admitted that the degree of weakening effect would be according to the degree of heat and the length of time that the water was off; every one of them said that. Nowhere is there any evidence to the effect that it has got to happen that way or at that time, and this testimony that I have read you of their man, who said that it might weaken, that it might even leak a little and the engineer wouldn't notice that—that is positive testimony here. Now, if that is a fact, that it might have been weakened some other time, then you have a case for the jury to decide whether

or not Mr. Morgan is telling the truth, or whether or not it was weakened at some other time. Now, supposing they had come in here and had accounted for that a year, every day by time slips and engineers, in perfect order, carried every point, no interruption to the water, nothing ever happened at all, it would make a different proposition; but two days before it appears that the fellow who tried to run the thing had trouble with his water supply, from which we can infer reasonably that that slightly weakened this process, because one of their engineers says that is just what will happen. An interruption of the water for a moment has an effect. What is interruption? Interruption is from some water headed for where it was needed, would be kept from going where it was needed? How much? Does anybody else say? No. But for the time of that interruption, however short, some water that was needed was not there. Now, the effect of that would be necessarily something. But our point—big point, is that this man Evans discovered that this was due to a foreign substance that ought to have been removed—that ought to have been removed. Now, just hang to that point. We put a foreign substance into that thing two days before, the direct tendency of which is to weaken that thing, not in Mr. Morgan's hands, but in other men's hands, while it was in there for weeks previous. That is the logic of it. That is the reasoning of it. And he says, "Clean that out and put a strainer in so it won't get in again." That leads to another suggestion that might not be entirely reasonable, and

Mr. Morgan still be truthful. Here is a thing happens suddenly. Supposing that strainer being absent, and just as Mr. Morgan takes the thing up at Ramsay it is all right, and a mile or two beyond suppose his attention is diverted by something down the road—an automobile near a crossing—and for a second or two that is interrupted while his mind is on something, and that has been weakened by a previous lowering of this water and the obstruction of it. Just in an instant there might come the force that finally breaks, because when a dam gives way it does not give way in a minute, it gives way months after. The thing finally gets to the point where it cannot stand this strain any longer. Suppose this had been weakened before, and just the instantaneous stopping of this water was the whisp that breaks the camel's back. Now, if we had merely that as a hypothesis I would not mind that point of use. But here we put a foreign substance right into the engine after it has had a six days' inspection and overhauling, which proves that that inspection and overhauling were defective. That proves that they took that engine in there for repairs and did not make them. Why, what can you prove about negligence if that is not negligence? If it is not negligence not to properly repair an engine, the day before you send it out on the road, what is negligence? And if that negligence directly leads to the process of weakening, why, then we have set up a probable weakening which is the only thing you can do here. There was nobody inside of that engine—inside of the crown sheet. You have got to decide

from the facts that happened, otherwise you cannot make any headway in any accident case of this kind. Now, we have set up physical laws, reasonable things, within the knowledge of your Honor, and me and everybody else, that a foreign substance that interrupts the flow of water, makes a defective instrument. It has no business to be out on the road, and when you go further and find that the ordinary precaution of a strainer is absent, why, you have got a proximate cause not only of this immediate accident, but of a weakening effect that might have gone on for months with different engineers.

THE COURT: Then, applying that theory, that may go back to any time beyond the 18th of October?

MR. RECORD: Oh, sure, I do. If the tank was not cleaned on the 18th of October when was it cleaned out? Evans says it was not cleaned on the 19th when he took it up. When was it cleaned before? They said they had it in there for six days and that it was in for its yearly inspection. It was either the yearly inspection or at least thirty days or it might have been several times thirty days, with no strainer in there and the tank dirty. If that is not sheer negligence what is negligence—specific negligence?

THE COURT: Negligence which is the proximate cause of the injury?

MR. RECORD: Negligence which is the proximate cause of the injury.

THE COURT: But, anyway, say that in the present shape of the case, as the testimony is, that all that you say was so as to

the foreign substance, not putting the strainer in and all that, is there in the case anything that shows that was the proximate cause of this accident?

MR. RECORD: Sure, it is in the case itself. If your Honor please, is not the presence of sand, or cotton, or foreign substance in a hose, and dirt in a tank, the probable cause of an interruption of the flow of water? Isn't that so? Just answer; isn't that so?

THE COURT: Yes. And I would follow you, as I said, perfectly, if this witness—either Mr. Morgan or Mr. Evans had said that the interruption of the use of the injector put them in a position where they had less water in the boiler than they should have had.

MR. RECORD: I am trying to work on the evidence.

THE COURT: Isn't that the evidence?

MR. RECORD: Does not the presence of cotton waste, or dirt or sand waste in this tank tend to the interruption of that stream?

THE COURT: I should answer yes.

MR. RECORD: As long as it was there it would have that tendency.

THE COURT: Yes.

MR. RECORD: It would have raised a liability, wouldn't it?

THE COURT: Yes.

MR. RECORD: Now, how long was it there? Certainly for six days, because the man testifies he had charge of it for six days. He testifies in effect that he took that out. The facts show he did not. That he is mistaken about it. He does not testify specifically that he did it, but he testifies

it had a general overhauling and every part was in perfect condition. Obviously that is beat, that pretense is knocked in the head by the facts in this case. Now, that carries you back to the point that that interruption was in there when the engine came in. It is inconceivable that some engineer employed to clean out the tank put mud in the tank. Heavens! That cannot be the point. If your Honor please, how long before it came in was it in there—how long before? At least thirty days, perhaps a year; no strainer in there when it goes down to Port Jervis. Was the strainer taken out on the way up? Obviously not. Was the strainer in there for three days? Obviously not. The strainer was not in there, or the strainer was not in it when it came in for repairs on the 12th. How long was that strainer out? Does the absence of that strainer tend to create a condition that interrupts the flow of water? Is there any answer to that except that it does so tend? How long had it so tended? Weeks and weeks. Is it then a violent and fanciful presumption that during those weeks the absence of the strainer and the presence of the foreign matter would have led to its normal consequence, namely, the temporary interruption of this flow? Isn't that just as plain as can be?

Now, Mr. Evans testified, too—and your Honor must remember that—when they put him on the stand, that he never would have put that in up there—he got along with that, and he put it in partially for that reason and partially for the other reasons; but the normal tendency in his mind was to

raise the presumption of the foreign matter. And then here is the strainer to be renewed—a strainer to be put in. Now, you carry that back; it does not matter what Engineer Morgan says. All they testify to is that the water was not interrupted except as they found it. But I read you the testimony of their man who says that this crown sheet could have been weakened without breaking down. I challenge a scintilla of evidence to the contrary, that that could not have been weakened without breaking down. There is the positive evidence that it could have been weakened. Here are the conditions that could have led to the weakening for weeks and weeks before that time. Here is clear negligence for six days, that this company refused and neglected to take out a foreign substance that would lead to just this kind of disaster. Why, if your Honor please, I do not see how that could be put any clearer than that. You must remember that he ordered the tank cleaned out at Port Jervis. Why? A man leaving his own engine, getting in such trouble that it ought to be cleaned out, and not a scintilla of evidence here that it had been cleaned out, and not a scintilla of evidence that the strainer was put in there! With the absence of the strainer you have a defective instrument brought in the hands of Mr. Morgan. Remember that—in the absence of the strainer you have got a defective instrument brought upon the tracks of the Erie Railroad, one that is liable to do just this thing.

THE COURT: Have you anything further to say, Mr. Hobart?

MR. HOBART: If there had been any weakening or any difficulty in the crown sheet, the evidence is clear and undisputed from witnesses on both sides, that that could have been discovered by the ordinary observation of experienced men. Some call it crack, some blister, some waving—all of those conditions would have existed if there had been any weakening of the crown sheet. That is suggested in this wonderful theory of Mr. Record's, but the evidence is absolutely clear that there was no such condition.

MR. RECORD: There is no such evidence. The only evidence is that if there was any dropping down so as to allow the steam to come out, they would see that.

THE COURT: You say you have proved lack of inspection?

MR. RECORD: Sure; we have proved lack of inspection. Mr. Collins goes on the stand, and another man—this Italian who told about the popping business. They say that this was inspection. Mr. Collins says it was there six days and had a complete overhauling, this yearly overhauling in every part. Now, that is testimony, isn't it? Mr. Evans goes along and shows that the thing behaved in such a way as to prove that there is a foreign substance in there, and that there is no strainer in there. That shows that the inspection had been defective and imperfect in that yard. Of course, it shows that. Mr. Collins is cross-examined. He was the boss. He had fifty things to do. He tried to get several things done; he did not. He thought he did, but he did not. The

strainer was not there, and the mud or the waste was not gotten out, or whatever had gotten in there. That is put in their hands at that place to do, and there is no evidence that they did it.

MR. HOBART: I only want to call attention in that connection to Mr. Collins' testimony. Mr. Collins said he had the boiler cleaned thoroughly so as to leave no scale on it. He describes it in great detail.

MR. RECORD: We have put a defective instrument with a strainer involved in their hands, two days before this accident.

THE COURT: Well, gentlemen, my inclination is to leave the decision of this motion to to-morrow morning. If I should decide adversely I would scarcely have time to sum up to-night before five o'clock, and certainly you could not expect to sum up and charge the jury inside of an hour, which we have less than now. I am inclined to withhold my decision upon the motion, gentlemen, until to-morrow morning.

January 13, 1915, trial of the cause resumed at 10 A. M.

THE COURT: I deny the motion of counsel for the defendant for the direction of verdict.

MR. HOBART: I ask an exception.

THE COURT: Yes.

Counsel for the defendant summed up to the jury.

Counsel for the plaintiff summed up to the jury.

Charge to the Jury.

GENTLEMEN OF THE JURY:

This is an action brought by Martin Ruane, as administrator of Patrick Ruane, against the Erie Railroad Company, seeking a recovery under what we commonly know as the Death Act. Of that act I will speak to you later on in my charge. In an action of this character a recovery can legally be had only when the evidence warrants a finding of negligence on the part of the defendant in the performance of a duty which the law has cast upon it, and a performance of that duty in the manner in which the law has said it must be performed. Keep that in mind during your entire deliberations.

Now, the mere happening of this accident raises no presumption of negligence as against the defendant company. Again, the burden of establishing the negligence is upon the plaintiff. The law casts that burden upon the plaintiff and the plantiff must satisfy you of that negligence by a fair preponderance of the evidence; and again, gentlemen, that negligence upon which the plaintiff may make a recovery legally must be a negligence not only as I have already indicated to you, but that negligence must have been—must appear—and the burden is upon the plaintiff to so show by a fair preponderance of the evidence, that the negligence was a proximate cause of the happening of the accident, and the death of Patrick Ruane in this case.

Naturally the next thing that you should know is what the plaintiff alleges to have been the negligence of the defendant company, for which it asks a recovery at your hands. The best answer to that, it seems to me, will be the reading to you of a paragraph of the complaint or declaration of the plaintiff, and that is this:

"And the plaintiff avers that the said defendant neglected its duty in this behalf, and that the said locomotive was so carelessly and negligently constructed and so carelessly and negligently inspected and kept in repair, and that the defendant employed such negligent and careless persons in the performance of the duty of keeping said locomotive in repair and in safe condition, that as a consequence of such neglect of duty on the part of said defendant, the boiler on the said locomotive at the time and place aforesaid exploded and inflicted such injuries on the said Patrick Ruane that he died shortly thereafter from the effects of the same."

Now, next in turn it naturally becomes important that you should know what duty the law imposes upon a company such as the defendant company in this case, as to matters which are in issue in this action. I cannot do any better, gentlemen, in giving you that duty, than to read to you from what our courts have said, in the exact language of the distinguished jurists, and that language is this—and it is so simple, in my mind it is so simple that you can readily understand. Listen attentively to it, because it is the rule which you must have before you in your deliberations and in a proper determination of this action. The court has said:

"The duty of the employer is to exercise reasonable care and skill in making an inspection and tests at proper intervals. This duty is satisfied if the master uses such precautions as a man of ordinary prudence would use for the safety of himself and workmen under the circumstances. We think the duty is satisfied if the master exercises the same care that is ordinarily exercised, and that one engaged in practical operations is not bound to make either the inspection or the tests which may be possible in a laboratory or upon a small scale and outside of the practical conduct of affairs."

I will re-read it to you, because that is of such importance, gentlemen, that you should have it in your minds:

> "The duty of the employer is to exercise reasonable care and skill in making inspection and tests at proper intervals. This duty is satisfied if the master uses such reasonable precautions as a man of ordinary prudence would use for the safety of himself and workmen under the circumstances.
>
> "We think this duty is satisfied if the master exercises the same care that is ordinarily exercised, and that one engaged in practical operations is not bound to make either the inspection or the tests which may be possible in a laboratory or upon a small scale and outside of the practical conduct of affairs."

And again, our courts have said this:

> "The master does not insure the safety of the machine, nor is he bound to extraordinary or the highest diligence respecting it, but only to such reasonable precautions as a man of ordinary prudence would use for the safety of himself and his workmen under the circumstances."

Therefore, gentlemen, the pertinent question before you is, after having determined what the facts are, what the evidence is, does it appear to you that the plaintiff has satisfied you by a fair preponderance of the evidence—of that evidence, that the defendant company has failed to perform any duty cast upon it by and under the rules which I have read you, and which failure is the proximate cause, or was the proximate cause of the happening in question, and the death of Patrick Ruane? If the plaintiff has not so satisfied you then your verdict must be for the defendant.

If it should appear in your deliberations, gentlemen of the jury, that the proximate cause of the happening and the death of Patrick Ruane was the negligence of Engineer Morgan, then En-

gineer Morgan, being a fellow servant of Patrick Ruane, your verdict must be for the defendant. Because if that does appear then the plaintiff cannot recover.

Now, my effort, gentlemen, at the outset was, and shall continue to be as brief and explicit as possible, to give you all that I can see that you may need in your deliberations, but not more, and, so as not to go to the point where you might be confused.

If, under the law and the rules which I have given you, and only then you have come to that point where the plaintiff in this action is entitled to a verdict at your hands, you will then want to know for what, and what he may recover. That makes it necessary for me to now take up with you what in my opening I designated the Death Act, and I will read that much of that act which would seem to me to be necessary for you to know. That act is this:

> "That whenever the death of a person shall be caused by wrongful act, neglect, default, and the act or default is such as would if death had not ensued, have entitled the party injured to maintain an action and recover damages in respect thereof, then and in every such case the person who, or corporation which would have been liable if death had not ensued shall be liable for an action for damages, notwithstanding the death of the person injured. * * * Every such action shall be brought by and in the names of the personal representatives of such person. The amount recovered—and this ought to have your attention, gentlemen, your perfect attention—the amount of recovery in every such action shall be for the exclusive benefit of the widow or next of kin of such deceased person, and shall be distributed to such widow or next of kin in the proportions provided by law in relation to the distribution of personal prop-

erty left by persons dying intestate. In every such action the jury may give such damages as they shall deem fair and just with reference to the pecuniary injury resulting from such death to the wife and next of kin of such deceased person."

Our courts have also pronounced a rule under that act, and what they have said is this:

"What the plaintiff is entitled to recover is a capital fund which should represent the present value of the pecuniary loss which falls upon the widow or next of kin by the premature taking off of the intestate. That fund is to be estimated by taking into account all the possibilities."

The intestate in this case, Patrick Ruane, might have died from the course of nature shortly after the accident; he might, had he lived, have suffered from financial reverses. The father, who in this case, is the next of kin, had he lived, might have died before he did; that is, before Patrick Ruane did. Nothing is to be added for loss of society or wounded feelings, or anything else which cannot be measured by money and satisfied by pecuniary recompense. The damages are to be determined by reference to the pecuniary injury resulting to the widow and next of kin of the deceased by his death. The injury to be thus recovered for has been defined to be the deprivation of a reasonable expectation of pecuniary advantages, which would have resulted by the continuance of the life of the deceased. Compensation for such deprivation, therefore, is the sole measure of damages.

The testimony in the case is that the father, who is the next of kin, was seventy-one or seventy-two years of age. Patrick Ruane, the deceased, as I recall the testimony, was thirty, or about thirty years of age at the time of his decease. He was a single man, and under the laws of this state

as applied to the death act which I have read to you his father being living and living at this time, is his next of kin.

What is known as the Sarlisle Table has been resorted to in this case for the purpose of assisting you in determining the probable duration of the life of the father. By the Carlisle Table it appears that a man seventy-one or seventy-two, as the testimony may be, would have a probable duration of 8.16 years. That testimony is for the purpose of assisting you, gentlemen, in your deliberations upon that point. The testimony is that contributions upon the part of the deceased, Patrick Ruane, were about three hundred dollars a year. There is some testimony upon the point that that was sent to the father; but it may have been sent to him for his benefit and that of his wife. There is also before you as an exhibit in the case, known as Exhibit P-1, and which you will have the use of during your deliberations, a table showing the earnings of Patrick Ruane from some time in 1906 to the time of his decease. The question for you to decide is, from those facts which you may find from the testimony, as to what would be in your judgment the probable contribution from Patrick Ruane to his father. When you have found that, then under the rule which I have read you you are to capitalize that; you are to bring it to its present value. In other words, you are to find the present worth of that sum; and that capital sum, that present worth, that present value, would be the amount of your verdict.

Now, gentlemen of the jury, I don't know of any other thing that I can say to you which can assist you, or which you will need to have before you in your deliberations and for a proper determination of the issue. I have, of course, to say to you this: That it is for you to determine, and

it is for you to determine, what, from the testimony is true and is the fact. That which you find to be the truth and the fact is the evidence in the case. It is also your duty to determine what weight is to be given to each and every part of the evidnce, and then, having done that, having weighed up the evidence, it is next your duty to apply to the evidence the rules of law which I have endeavored to give you and to make plain to you, and having done that, you will arrive at the point where you will have found your verdict. Any other means of arriving at a verdict than that, would be improper. You are not to be swayed in any manner by prejudice or favor or sympathy. Your plain duty is the same as that of the court. You are to be entirely impartial; you are to judge of the case and find your verdict in accordance with the facts as you find them proved and as you find they are entitled to weight, and as they are in turn applied to the rules of law applicable to them. Finding your verdict in that manner will be the only manner in which you can find a legal verdict.

With that, gentlemen, take the case.

The jury retired.

MR. HOBART: I ask an exception be noted, and that I move an objection to that part of his Honor's charge which left the jury the question whether or not the accident was caused by the negligence of engineer Morgan; that is to say, I do not object to the language of the court in that respect, but only to the fact that that question was left to the jury.

THE COURT: As a proposition of law that it ought not to be left to the jury?

MR. HOBART: Yes.

Exhibit P-1

PATRICK RUANE, Deceased.

Amounts earned—January 1st, 1906, October 21, 1910.

	1906.	1907.	1908.	1909.	1910.	Totals.
January	$ 35.37	$ 96.43	$ 81.58	$ 79.96	$ 75.57	$ 368.91
February	89.97	56.13	76.12	63.99	75.02	361.23
March	80.15	56.82	20.56	89.95	83.05	330.53
April	39.20	65.56	65.46	93.35	19.80	283.37
May	60.05	89.99	70.04	55.96	68.84	344.88
June	72.72	69.96	68.51	55.61	98.95	365.75
July	49.49	72.93	79.50	31.25	74.93	308.10
August	86.29	49.24	61.75	47.94	21.71	266.93
September	58.37	39.36	57.33	56.74	51.38	263.18
October	63.07	45.60	65.05	73.41	28.71	275.84
November	74.97	76.85	68.67	76.41	....	296.90
December	78.65	23.10	73.83	74.79	....	250.37
Totals	$788.30	$741.97	$788.40	$799.36	$597.96	$3,715.99

Office of Superintendent,
New York Division,
Jersey City, N. J.
January 23d, 1912.
FISEK—W. J. M.

Exhibit D-3.

ENGINEERS.

ERIE RAILROAD COMPANY.

Chicago & Erie, N. Y. S. & W. and N. J. & N. Y. R. R. Companies.

CALLING CARD AND DAILY TIME REPORT.

N. Y. Division.

(Engineer)

..... Will report at .....M.,

To dep. from ..... at ..... M., ... 190

Train .....

..... (Title) .....

Del'd at ..... M., ... Caller.

(Calling Notice must be written in ink.)

Train No. 21.24 .....Conductor County .....

Kind of Service .....

(Freight, Pass's, Switching or Work.)

Dept. from J. C. at 7.30 A. M., Oct. 20, 1910.

Arrd. at J. C. at 6.45 P. M., Oct. 20, 1910.

Exhibit D-3.

Train No. ..... Conductor .....
Kind of Service .....
(Freight, Pass'r, Switching or Work.)
Depd. from ..... at ..... M., ... 190
Arrd. at ..... at..... M., ... 190

Eng. Placed on del'y track at .....M.,....190
Time on duty, Engineer ..... Hr., ...
Min. Fireman ..... Hr., ... min.

21
Engine No. 943. Fireman .....
24
Engine No. 957. Fireman, J. H. Rose.
ALLOWANCES CLAIMED (in miles)
Actual miles run: Frt. ..... Pass. 176 Switch ..... Work .....
Constructive Mileage .....
.....
.....
.....
.....
Total Claimed, Fireman: Frt. ..... Pass. 176. Switch ..... Work .....
Total Claimed, Engineer: Frt. ..... Pass. 176. Switch ..... Work .....
Correct: Samuel W. Evans, Engineer.

Time shown above for Engine delivery correct:
..... (Title) .....
Report on the back of this slip all delays and their cause.

Exhibit D-4.

ENGINEERS.

ERIE RAILROAD COMPANY.
Chicago & Erie, N. Y. S. & W. and N. J. & N. Y. R. R. Companies.

CALLING CARD AND DAILY TIME REPORT.
N. Y. Division.

(Engineer)
..... Will report at .....M.,
To dep. from ..... at ..... M., ... 190
Train .....
..... (Title) .....
Del'd at ..... M., ... Caller.
(Calling Notice must be written in ink.)

Train No. 21.24 ..... Conductor: Eggleson.
Kind of Service .....
(Freight, Pass's, Switching or Work.)
Dept. from J. C. at 7.30 A. M., Oct. 20, 1910.
Arrd. at J. C. at 6.45 P. M., Oct. 20, 1910.

Train No. ..... Conductor .....
Kind of Service .....
(Freight, Pass'r, Switching or Work.)
Depd. from ..... at ..... M., ... 190
Arrd. at ..... at..... M., ... 190

Eng. Placed on del'y track at 7.29 A. M., Oct. 19, 1910.
Time on duty, Engineer ..... Hr., ...
Min. Fireman ..... Hr., ... min.

21
Engine No. 957. Fireman .....
24
Engine No. 943. Fireman, J. H. Rose.
ALLOWANCES CLAIMED (in miles)
Actual miles run: Frt. ..... Pass. 176 Switch ..... Work .....

Constructive Mileage .....
.....
.....
.....
.....

Total Claimed, Fireman: Frt. ..... Pass. 176.
Switch ..... Work .....

Total Claimed, Engineer: Frt. ..... Pass. 176.
Switch ..... Work .....

Correct: Samuel W. Evans, Engineer.

Time shown above for Engine delivery correct:
..... (Title) .....

Report on the back of this slip all delays and their cause.

The following appears on the back of this exhibit:

Engine Failures.

Arriva lin J. C. at 6.46. Held in pass. House until 7.23. Left Eng. on pit 7.29.

Opinion of Supreme Court.

(Filed, Nov. 29, 1915.)

NEW JERSEY SUPREME COURT.

June Term, 1915.

MARTIN RUANE, Admr. of Patrick Ruane, deceased,

Respondent,

vs.

ERIE RAILROAD COMPANY,

Appellant.

Argued June 2, 1915. Decided Nov. 29, 1915.
On Appeal from the Hudson County Circuit Court.
Before Justices Parker, Minturn and Kalisch.
For the appellant Collins & Corbin.
For the respondent George L. Record.
Per Curiam:

A former judgment obtained by the respondent against the appellant in this case was reversed by this court for an error in the judge's charge. *Ruane, Admr. vs. Erie R. Co.*, 83 N. J. L., 423; affirmed by the Court of Errors and Appeals.

A second trial between the parties resulted in a verdict for the respondent for $4,000.00. The trial judge on application of appellant allowed a rule to show cause why the verdict should not be set aside as contrary to the weight of the evidence and excessive, and reserved to the appellant the benefit of an exception taken by it at the trial to the refusal of the court to direct a verdict for the respondent. The rule was subsequently discharged upon the respondent agreeing to accept, $2,500.00, and judgment was ordered and entered for that amount against appellant. On this appeal the appellant challenges respond-

ent's right to any recovery against it on the evidence in the cause. The grounds urged by counsel for appellant in the brief for a reversal of the judgment are firstly, "that the plaintiff failed to show that the cause of the accident was the negligence alleged in the complaint," and secondly, "that the evidence shows that the accident was due to negligence on the part of either the plaintiff's intestate or a fellow servant of the plaintiff's intestate."

It is obvious that if either ground is incontrovertibly supported by the evidence, then in the light of a proper application of legal principles the judgment under review must be reversed. The orderly way to a clear exposition of the questions raised and discussed will be to consider, first, what is the nature of the negligence that is made the gravamen of the respondent's action.

The complaint charged that the locomotive engine was carelessly and negligently constructed. There is no proof sustaining this allegation. The complaint further charged that the locomotive engine was so carelessly and negligently inspected and kept in repair and that the appellant employed such negligent and careless persons to perform the duty of keeping the locomotive engine in repair and in safe condition that in consequence of such neglect of duty on part of the appellant, the boiler of the locomotive engine exploded etc. There was a further allegation that the explosion was the result of appellant putting in use the locomotive engine without first having inspected it to ascertain whether or not it was in a safe condition for use.

The testimony discloses, that the case was tried out by the litigants herein on the issue that the appellant had carelessly put in use a locomo-

tive engine which was defective, out of repair and unfit and unsafe for use, and which condition the appellant might have discovered by a reasonably careful inspection. Morgan was the engineer who operated the locomotive at the time the boiler exploded. This was on the 21st day of October, 1910. Two days prior thereto one Evans ran the locomotive engine from Jersey City to Port Jervis, a distance of eighty-eight miles, and on the trip one of the injectors broke down. Evans says that it appeared to him that the locomotive engine had just come out of the repair shop and had been overhauled. Evans was recalled by the defense and on his direct examination testified that he reported to the appellant, among other things, that there was some obstruction between the tank and engine, and that the tank needed to be cleaned out and a new strainer to be put in. This report was made on the evening of the 19th of October and the boiler exploded on the morning of the 21st of the same month. What was done to the locomotive engine during the previous time that it was in the repair shop does not appear.

Evans testified that the breaking down of the injector indicated that there was trouble in the tank, some obstruction of the flow of water from the tank to the feed pipe.

It appears that the function of an injector is that of a pump. It pumps the water from the tank into the boiler. This is accomplished through various tubes which work in combination with the injector. If the tubes in any manner become clogged such a condition will interfere materially with the flow of water into the boiler. The function of a strainer appears to be to prevent foreign matter getting into the tubes and thus inter-

fere with the flow of water from the tank into the boiler in response to the action of the injector. It further appears that it is essential that the flow of water into the boiler be kept up so as not to let it get below the level of the crown sheet, for the reason that when the water gets below the level of the crown sheet, the crown sheet, being exposed to the heat of the fire, will become overheated and the bolts which keep it in place will loosen and drop out, and as a result it will collapse. In the present case an examination of the locomotive engine after the explosion showed that the crown sheet had been thus exposed and collapsed.

The appellant undertook to prove that it made a daily inspection of the locomotive engine, but it nowhere appears in the evidence that the tank was cleaned out and a new strainer put in. Nor does it appear that the obstruction between the tank and engine of which Evans complained was removed. The fact that the locomotive engine was sent into the repair shop on the evening of October 19th, and that when it was put into use on the morning of the 21st its boiler exploded, made it a jury question whether the appellant exercised reasonable care in making the repairs of the defects which the engineer Evans found to exist and reported to the appellant.

There was evidence, therefore, from which a jury might have reasonably inferred that no new strainer was supplied, and that the tank was not properly cleaned out and that such condition might have interfered with the injector and caused insufficient water in the boiler.

But it is said that Morgan who operated the locomotive engine on the morning that the explosion took place was negligent and that he

was at the time a fellow servant of the respondent's intestate, and therefore his negligence must defeat plaintiff's right of recovery.

It was permissible for the jury to have inferred from Morgan's testimony that he performed the duties devolved upon him as engineer with reasonable care. If it had incontrovertibly appeared that the duties which were incidental to Morgan's employment had been carelessly or negligently performed by him, and that that was the sole cause which led to the explosion and consequent injury and death of the respondent's intestate, then under the well settled legal rule enunciated in *Ingebregsten v. North German Lloyd S. Co.*, 57 N. J. L., 400 applicable to fellow servants, the respondent would have been barred of his right of recovery. But if the master's negligence cooperated with that of the servant in producing the injury and damage then under an equally well settled rule of law the respondent would not be debarred of his right to a recovery.

Now as there was evidence from which the jury might have legitimately inferred that the appellant failed to supply a new strainer and to clean out the tank, duties which rested upon the appellant in order to make the locomotive engine reasonably safe and fit for use, and that by reason of such failure the proper functions of the injector were interfered with and thereby caused insufficient water in the boiler which led to the exposure and overheating of the crown sheet, its consequent collapse and the explosion.

The motion to direct a verdict for the appellant was properly denied.

Judgment will be affirmed with costs.

Order of Affirmance.

(Filed Dec. 8th, 1915.)

This cause having been argued at the last June term of this Court on the errors assigned, and the Court having duly considered the same and being of opinion that there is no error in the judgment and proceedings of the Court below,

IT IS ORDERED that said judgment be in all things affirmed, with double costs to the appellee to be taxed; and it is further ordered that execution issue out of this Court therefore.

On motion of

GEORGE L. RECORD,
Attorney.

Entered December 8th, 1915.

Judgment Record (Supreme Court).

Pursuant to the statute in such case made and provided the said defendant, Erie Railroad Company, appeals to the Supreme Court from the judgment entered against it in favor of Martin Ruane, admr., etc. of Patrick Ruane, dec'd., the transcript of the judgment being in the words and figures following, to wit:

Then follows:

Copy of Declaration. (See page 3 hereinbefore).

Copy of Plea and Affidavit. (See page 6).

Copy of Rule to Show Cause. (See page 7).

Copy of Reasons. (See page 8).

Copy of Opinion of Circuit Judge. (See page 9).

Copy of Order for Judgment in Circuit Court. (See page 10).

Copy of Judgment in Circuit Court. (See page 11).

Copy of Notice and Grounds of Appeal from Circuit Court to Supreme Court. (See page 1).

This cause was heard before our Supreme Court at the June Term, 1915 and judgment of affirmance was rendered in favor of the plaintiff December 8th, 1915.

Whereupon it is adjudged that the said plaintiff Martin Ruane, Admr., etc., of Patrick Ruane, Dec'd, do recover against the said defendant, Erie Railroad Company, the sum of Two Thousand Five Hundred and Fifty Four Dollars and Ninety-seven cents damages and costs below; and also the sum of Ninety Two Dollars and Seventy-five cents, for his costs in the Supreme Court, making in the whole the sum of Two Thousand Six Hundred and Forty Seven Dollars and Seventy-two cents.

Costs in Supreme Court	92.75
Damages and Costs below	$2,554.97
	$2,647.72

Judgment entered Dec. 8th, 1915.

WM. S. GUMMERE,
C. J.

Notice and Grounds of Appeal.

(Filed Dec. 16, 1915).

To

GEORGE L. RECORD, Esq.,
Attorney of Plaintiff.

TAKE NOTICE that the defendant appeals to the Court of Errors and Appeals from the whole of the judgment entered in this cause in the Supreme Court of the State of New Jersey, on the following grounds, to wit:

1. The Trial Court erred in refusing to direct a verdict in favor of the defendant when thereunto moved, and in submitting to the jury the question of the defendant's liability to the plaintiff, whereas the trial court should have directed a

verdict in favor of the defendant and should have refused to submit to the jury the question of the defendant's liability to the plaintiff; the trial court should have directed such verdict for one or more of the following reasons urged in behalf thereof at the trial, to wit:

(a) Because no negligence was shown on the part of the defendant;

(b) Because the negligence alleged in the complaint or declaration was not proven;

(c) Because the cause of the accident was negligence on the part of a fellow-servant of the plaintiff's intestate;

(d) Because the negligence that caused the accident was that of the plaintiff's intestate;

(e) Because the defect in the boiler, if there was any, was latent and of such a character that it could not be ascertained by such inspection as the defendant was legally bound to make.

2. The Supreme Court affirmed the judgment entered in the Hudson County Circuit Court in favor of the plaintiff and against the defendant, whereas the Supreme Court should have reversed said judgment for one or more of the reasons stated in the Supreme Court.

Yours respectfully,

COLLINS & COLLINS,
Attorneys of Appellant.