NEW JERSEY COURT OF ERRORS AND APPEALS.

EVERETT S. SPARKS,
Defendant in Error,
vs.
THE RIVER HARBOR & IMPROVEMENT COMPANY,
Plaintiff in Error.
} On Error.

BRIEF FOR SPARKS.

It appeared at the trial that the engine at which Sparks worked was old (80, 81); did not work well (55, 56, 59, 60, 61, 62, 63, 64, 69, 72, 75, 76); got on centre frequently (55, 56, 59, 60, 61, 62, 63, 64, 69, 72, 75, 76); that a double cylinder engine should not get on centre (34, 35); that, if it did, it proved a defect in the engine (34, 35); and that, if the steam was shut off and the engine started suddenly when pried off centre, it necessarily implied a defective valve (34, 35). The steam was shut off (9, 29, 30, 56, 64). It was further shown that Sparks had no knowledge of the danger involved in working about such an engine and had received no instructions concerning the risks, hidden risks, he took in performing his work (7, 8, 16, 17, 24, 31, 32).

On this proof, with its various legitimate inferences, it was argued that, if the defendant subjected Sparks to unknown dangers and thereby caused his injury, liability would arise, no matter what the defects in the engine were. That is it would be negligence to put an ignorant and inexperienced servant in such danger, unless the hidden danger was disclosed to him by his master. The learned Trial Judge took a different view and told the jury that Sparks assumed every risk, except that arising from a defective valve. So that, if there was error in the instructions, the defendant was not injured.

But it was proven that the steam valve, under the circumstances proved and not denied, must have been leaky and defective; must have caused the engine to start when Sparks pried it off centre (34, 35, 39), and further that the style of steam valve used was not regarded as safe (82, 83). The evidence showed conclusively that steam leaked into the cylinder in sufficient quantity to cause the engine to start. Hence the inference is resistless that a defective steam valve caused the injury. At least it was a jury question and the learned Judge was justified in submitting it to the jury. The charge was quite favorable to the defendant.

Respectfully submitted,

JOHN W. WESCOTT,

Attorney for Defendant in Error.

NEW JERSEY COURT OF ERRORS AND APPEALS.

No. 16. March Term, 1907.

EVERETT S. SPARKS, Defendant in Error, vs. THE RIVER AND HARBOR IMPROVEMENT CO., Plaintiff in Error.	IN TORT. ON ERROR.

BRIEF OF PLAINTIFF IN ERROR.

The first assignment of error is that the Court below refused defendant's motion to nonsuit.

When the plaintiff below closed his case it was shown that he was employed by the defendant company in various capacities from the month of April, 1901, to the middle of September, 1902. His services with the defendant company were devoted to work around and upon dredges. For some weeks previous to the accident he had been fireman on the dredge Asia, and on and about the 19th day of September, 1902, the dredge engine

became stuck or centered, and in undertaking to pry it off the center the engine started; the crowbar with which he was prying was thrown out of his hands and he fell on some cogwheels and had his left hand and arm mashed.

He testified that his duty was to fire and oil the engine (p. 7, l. 21), and when the engine got centered the captain called down for Sparks to put the engine off. (P. 9, l. 11.)

We submit, therefore, that the act of Sparks was not within the scope of his employment, but was done at the instance of a fellow servant, the captain or engineer of the dredge, and, therefore, there should have been a nonsuit.

"For where it appears, when the plaintiff rests, that the act of the servant was a wilful one, and was not expressly or impliedly within the line of the servant's duty or employment, there should be a nonsuit."

Holler vs. Ross, 39 Vroom, 324.

It also appeared from the plaintiff's case that the engine was old and frequently became stuck or centered. But nowhere does it appear that the engine was unfit for use, and it does appear that the plaintiff, Sparks, was fully aware of all these facts from his own observation.

"The employee assumes all the risks of his employment, against which he may protect himself by ordinary observation and care."

Durand vs. N. Y. & L. B. R. R. Co., 36 Vroom, 656.
Loid vs. Rogers Co., 39 Vroom, 713.

It also appeared from the plaintiff's testimony that the steam was shut off at the throttle valve by the captain.

(P. 9, l. 33, etc.) And that just before the throttle valve was shut off live steam was let into the pipes and cylinder heads of the engine in order to start it (p. 29, l. 33, etc.), and that when the valve was shut off the plaintiff at once started to get the engine off center by putting his crowbar in between the two cogwheels. That these cogwheels, looking at them from above, ran in toward one another. That the plaintiff stood above these cogwheels and, using the smaller cogwheel as a fulcrum, pried the larger cogwheel in the reverse direction from that in which it usually went, with the result that the engine started forward and the plaintiff fell as before stated.

"When one enters upon a service he assumes to understand it, and takes all the ordinary risks that are incident to the employment, and where the employment presents special features of danger, such as are plain and obvious, he also assumes the risk of those."

Foley vs. Jersey City Electric Light Co., 25 Vroom, 411.

"A person who enters into the employment of another assumes all the risks and perils usually incident to the employment; and included in such risks and perils are those which it is a part of his duty to take knowledge of by observation."

Coyle vs. Griffing Iron Co., 34 Vroom, 609.

The only witnesses produced by the plaintiff beside himself were a doctor, who testified as to injuries, and an engineer.

The said engineer gave some testimony in regard to double cylinder engines not being able to get on center unless through some defect; but, as already stated, Sparks

was fully aware that the engine frequently became centered (p. 16, l. 8); the said engineer also testified that the reason for the engine starting when Sparks started to pry the cogs would be from steam pressure within the cylinder or a heavy weight, that the engine had been lifting, being suspended. And he further testified that if there was steam in the cylinder, it was due either to defects in the steam pipe or in the valve. (P. 35.) It was not shown by the plaintiff that there was a defect in the steam pipe or in the valve, nor was it shown by him that the weight which this dredge was lifting was not in the air (p. 28, l. 15) at the time of the accident, though it was shown that steam had been applied to the engine to lift this weight before the engine became centered. It was further testified by this expert that it was possible for the live steam, which was let into the pipes and cylinder in order to try to start the engine, after the throttle valve was shut off, to be compressed by the action of Sparks in prying against the correct direction of the engine, and so cause the engine to start without any defect in the engine. (Pp. 37-38.)

It was testified by the plaintiff that he and the engineer had put in a new throttle valve a few days before the accident (p. 27), and nowhere in the plaintiff's testimony does it appear that this was an improper valve. Nor does it appear that this valve leaked, and thereby allowed the steam to enter the cylinder and cause the engine to start; but, even if it did, the plaintiff must suffer the consequences by reason of his own negligence in putting the valve on improperly.

"Where the master furnishes the proper and sufficient materials, and the employee, as a part of his work, undertakes the construction of such appliances, but the em-

ployee, by negligence in putting the materials together or in selecting them constructs an unsafe appliance which results in injury to another, the master is not liable."

Euright vs. Oliver, 40 Vroom, 358.

We submit that by the facts shown by the plaintiff no negligence appeared that could be attributed to the defendant. The only defect shown was that the engine became centered, and, as has been stated, this was an obvious danger known to the plaintiff, of which he assumed the risk. The fact that the engine was old, and that it had been allowed to stand in the water, does not show defects. On the contrary, it was shown that the defendant endeavored to keep the engine in good repair (p. 16, l. 13) by sending parts away to be fixed.

"And in an action by the employee against his employer to recover damages by reason of injury resulting from the use of appliances and machinery furnished, it must appear by the affirmative proof on the part of the employee that the employer has failed in the exercise of reasonable care in providing safe and suitable appliances and machinery."

Fenderson vs. Atlantic City R. R. Co., 27 Vroom, 708.

"We also submit that the case did not show negligent conduct attributable to the defendant, any more than it showed mechanical errancy unknown to them."

Bien vs. Unger, 35 Vroom, 596.

For all these reasons, we ask this Court to find that the Court below was in error in refusing defendant's motion to nonsuit the plaintiff.

The second assignment of error is that the Court below refused to grant defendant's motion to direct a verdict in its favor.

When the whole case was closed it was even more strongly shown that the engine and mechanical devices supplied to the plaintiff by the defendant were suitable and not defective. It was shown that the engine had not been dug up out of the mud, as the plaintiff testified (p. 52); the brass parts and all the more delicate parts were taken out and cared for in the repair shop, and before they were used again in the dredge on which the plaintiff was hurt they were thoroughly overhauled (pp. 52, 43, 44), and it was also shown that the valve used on this engine was a proper valve, especially as an engine which works a dredge has need of a quick acting valve (p. 71); and this was not disputed by the plaintiff's testimony in rebuttal. (P. 83, l. 18.)

"The duty of the master to the servant is discharged by the providing for the use of the servant tools which are in common and ordinary use, and which are reasonably safe and fit for the purpose to which they are to be applied."

Tompkins vs. Marine Engine & Machine Co., 41 Vroom, 330.

The plaintiff had no testimony to show that the valve in question was not one in common or ordinary use, or not reasonably safe and fit for the purpose; on the contrary, he proved it was in use.

In reply to a leading question, Mr. Gilpin, at bottom of page 82, said a butterfly valve was not regarded nowadays as a safe valve to use.

In the answer to the next question, he says it is now

used in connection with better valves. He also said he had used quite a number of them in a special position.

He refused to say it was out of date; on the contrary, says that they are used, and then says he had no experience with dredging engines. (Pp. 82-83.)

We, therefore, submit that there were no facts in dispute for the jury to decide upon, and the Court below was in error in refusing to direct a verdict in the defendant's favor.

The third and fourth assignments of error have to do with the charge of the Court to the jury.

In substance, the charge of the Court was that the plaintiff could not recover because the engine was old or became frequently centered, because those facts were known to the plaintiff, and he elected to assume any risk resulting therefrom. (P. 87.) The Court also charged that the plaintiff could not recover because the defendant had not employed proper mechanics to put in the valve, for the plaintiff himself was one of the persons who assisted at this. (P. 88.)

The Court also charged that the defendant was not responsible for the orders given to the plaintiff by the engineer of the dredge. (P. 91.)

The Court also charged the jury that there was but one point for it to decide, as follows: "So that the only question for you to decide is whether or not this valve was such a valve as an ordinarily prudent man would have used to control the steam upon that engine and boiler" (p. 88); and further the Court charged as follows: "As the case stands the only negligence upon which a verdict in favor of the plaintiff can be based grows out of the character of the valve which was fur-

nished to control the supply of steam to the steam chest and cylinder; the valve was a butterfly valve, which you have heard the witnesses describe. It is stated that it was not a proper kind of a valve to furnish. There is testimony on the part of the plaintiff that it was not an ordinarily safe valve. There is testimony on the part of the defendant that it was a valve commonly used in engines upon dredges. There is a square conflict of testimony, a conflict of opinion only, gentlemen. You must settle between the two experienced gentlemen who have testified, or, perhaps, there are more—the experienced gentlemen who have testified on the one side or upon the other."

We submit that the Court erred in so charging the jury, because there was no testimony that this valve was such as an ordinarily prudent man would not have used. And we further submit that the testimony on the one side and on the other is not a conflict of opinion only. You will note (p. 71) that the defendant's witness testified that the butterfly valve was the one in common use on dredges, and must necessarily be used, as a quick action valve was required. The plaintiff's testimony on these points (p. 83) showed that this is a valve in use at the present time, and is especially used where quick work is required (l. 20).

It also appeared (p. 83) that the man who testified as to this valve on the part of the plaintiff had absolutely no experience with dredging engines, while the man who testified to the use of these valves on dredging engines on the part of defendant (p. 70) had twenty-two years' experience in dredging engines; therefore, we submit that this was not a conflict of opinion only; further, that

there was nothing from which the jury could say that this defendant had supplied an improper valve to its employee, FOR NOWHERE IN ANY OF THE TESTIMONY IS IT SHOWN THAT IT WAS AN IMPROPER VALVE TO USE ON A DREDGE ENGINE. The plaintiff's testimony on this point shows that his expert knows nothing of the requirements of a dredge engine. Therefore, the defendant's testimony is conclusive on this point—that it is a necessary and reasonable valve to use on a dredge engine. For these reasons we ask this Court to find that the Trial Court was in error in charging the jury as above set forth.

And we would further call the attention of this Court to the fact that there is nothing in the original case produced by the plaintiff as to proper or improper use of this valve, the only testimony given by the plaintiff bearing at all on this point was offered in rebuttal. And, therefore, from the very charge of the Court, which left to the jury only the question of the valve being such as a reasonably prudent employer would supply to his employee, in itself shows that there was no question to go to the jury at the close of the plaintiff's case, and, therefore, the defendant should have been granted its motion for a nonsuit.

For the foregoing errors we ask that the judgment be set aside.

WILLIAM T. READ,
Attorney for Plaintiff in Error.
THOMAS E. FRENCH,
Counsel for Plaintiff in Error.

NEW JERSEY COURT OF ERRORS AND APPEALS.

EVERETT S. SPARKS, Defendant in Error, vs. THE RIVER AND HARBOR IMPROVEMENT CO., Plaintiff in Error.	IN TORT. WRIT OF ERROR TO SALEM COUNTY CIRCUIT COURT.

JOHN W. WESCOTT, Attorney for Plaintiff.
WILLIAM T. READ, Attorney for Defendant.
THOMAS E. FRENCH, Counsel for Defendant.

NEW JERSEY, ss.

[L. S.] The State of New Jersey to our Judge of our Circuit Court in and for the county of Salem, Greeting:

Because in the record and proceedings, and also in the giving of judgment in a plaint which was in our said Circuit Court, holden at Salem, in and for the said county

of Salem, between Everett S. Sparks, plaintiff, and The River and Harbor Improvement Company, defendant, of an action in tort, manifest error hath intervened, to the great damage of the said defendant, as is said; we being willing that the error, if any there be, should in due manner be corrected and full and speedy justice done to the parties aforesaid in this behalf, do command you that you distinctly and openly send, under your seal, the record and proceedings aforesaid, with all things touching the same, to our Judges of our Court of Errors and Appeals in the last resort in all causes, at Trenton, on the eighteenth day of May next, together with this writ, that the record and proceedings aforesaid being inspected, we may cause to be further done thereupon for correcting that error what of right and according to the law and custom of the State of New Jersey ought to be done.

Witness our Chancellor and President Judge of our said Court of Errors and Appeals, at Trenton aforesaid, the thirtieth day of April, nineteen hundred and six.

S. D. DICKINSON,
Clerk.

WM. T. READ,
Attorney.

The answer of Francis J. Swayze, Esquire, Judge of the within named Circuit Court. The record and proceedings of the plaint whereof mention is made within, with all things touching the same, I certify to the Judges of our Court of Errors and Appeals of the State of New Jersey, at Trenton, at the day and year within contained, in a certain schedule to this writ annexed, as I am commanded.

FRANCIS J. SWAYZE,
Judge.

SALEM COUNTY CIRCUIT COURT,

Of the fourteenth day of November, nineteen hundred and two.

SALEM COUNTY, ss.

The River and Harbor Improvement Company, the defendant, was summoned to answer unto Everett S. Sparks, the plaintiff, in an action of tort, and thereupon the plaintiff, by his attorney, John W. Wescott, complains for that whereas heretofore, to wit, on or about the nineteenth day of September, nineteen hundred and two, he was employed by the defendant to work for it as a fireman on one of its dredging boats, named Asia, and was there and then doing the work of a fireman on said boat, at Darby creek, to wit, at Salem, in said county, and in the State of New Jersey; that the plaintiff had no knowledge of or experience with machinery and was entirely ignorant of the workings and dangers of the machinery in said boat; that the defendant and its authorized agents knew that the plaintiff had no knowledge of and experience with machinery and that he was entirely ignorant of the workings and dangers of the machinery in said boat; that the defendant and its agents in charge of said machinery carelessly and negligently had and maintained in said boat an old, worn out and defective engine and knew the same to be such, and especially knew that said engine frequently, because of its defectiveness, got on center and had to be pried off in order to have said machinery start; that defendant and its agents in charge of said machinery especially knew that the throttle and steam valve of said engine were defective and that, because thereof, steam escaped from said throttle and valve into the cylinders of said engine in sufficient quantities to start the same suddenly and with great force when the same was pried off center; that the defendant and its

agents in charge of said machinery and engine had the duty to apprise the plaintiff of the fact that, when said engine was pried off center, because of said defect and said escaping steam through said valve and throttle, it would start suddenly with great force and speed, yet the defendant and its said agents, notwithstanding said danger and the ignorance of the plaintiff, not only negligently and carelessly failed to apprise him of said danger, but negligently and carelessly required him to pry said machine off center by means of a crowbar, whereby, because of the dangers and defects aforesaid, said engine started with great speed and force and caused said crowbar to strike plaintiff and knock him upon said machinery, whereby his arm was crushed and whereby he was otherwise permanently injured, crippled, shocked and incapacitated and caused to suffer great pain of body and mind and to lay out large sums of money in his efforts to be cured of said injuries.

And the plaintiff further complains for that, at the time and place aforesaid, the defendant and its authorized agents had on said boat an old, worn out, dangerous and defective engine; that the defendant and the said agents knew that said engine was defective and dangerous in all its parts and movements unless the servants sent to work in and about the same were familiar with said defects and dangers and knew how to guard against the same, and that it then and there became the duty of defendant and its said agents to inform any and all servants directed to work in and about said engine of its dangers and defects, yet the defendant and its said agents carelessly and negligently directed the plaintiff to work in and about said engine and negligently and carelessly omitted to inform him of the defectiveness and dangers of said engine, so that, while plaintiff was doing work about and in said engine, without his fault, and because of said defectiveness and danger, he was struck by and

caught in said engine and injured as aforesaid, to his damage twenty thousand dollars; wherefore, etc.

JOHN W. WESCOTT,
Attorney for Plaintiff.

And the said defendant, by David J. Pancoast, its attorney, comes and defends the wrong and injury, when, etc., and says that it is not guilty of the supposed grievances 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 it, the said defendant, put itself upon the country, etc.

D. J. PANCOAST,
Attorney for Defendant.

Therefore, to try the issue above joined let a jury come before the said Circuit Court, at Salem aforesaid, on the 17th day of April, 1906, of the term of April, in the year of our Lord one thousand nine hundred and six, who neither, &c., by whom, &c., to recognize, &c., because as well, &c., the same day is given to the parties aforesaid, at which day before the said Circuit Court come the said parties, by their attorneys aforesaid, and the jurors of the jury above mentioned also come, who to speak the truth of the matters aforesaid, being chosen, tried and sworn, say, upon their oath, that the said defendant, The River and Harbor Improvement Company, is guilty as the said plaintiff hath thereof above complained against it, and that they find in favor of the plaintiff and against the defendant, the said The River and Harbor Improvement Company, and they assess the damages of the plaintiff on occasion of the premises at five thousand dollars, and above his costs and charges by the said plaintiff about his suit in this behalf expended.

Therefore it is considered that the said plaintiff do recover against the said defendant his damages aforesaid, in manner aforesaid found, and also seventy-six dollars and thirty-one cents for his said costs and charges by the said Court now here adjudged, and which said damages, costs and charges in the whole amount to five thousand seventy-six dollars and thirty-one cents.

And the said defendant in mercy, &c.

Judgment entered and signed this twenty-first day of April, A. D. 1906, at 9 A. M.

FRANCIS J. SWAYZE,
Judge.

SALEM COUNTY CIRCUIT COURT.

EVERETT S. SPARKS, vs. THE RIVER AND HARBOR IMPROVEMENT CO.	IN TORT. TESTIMONY AND BILLS OF EXCEPTION.

Appearances:

For Plaintiff, HON. JOHN W. WESCOTT and J. W. ACTON, ESQS.

For Defendant, THOMAS E. FRENCH, ESQ., WM. T. READ, ESQ.

Transcript of shorthand notes of the evidence given in the above cause at the trial before his Honor, Francis

J. Swayze, Judge of the Salem County Circuit Court, at the Court House, in Salem, on Tuesday, the seventeenth day of April, nineteen hundred and six.

EVERETT S. SPARKS, sworn.

Direct examination.

By Mr. Wescott:

Ques. Mr. Sparks, where do you live?
Ans. Pennsgrove.
Ques. How old are you?
Ans. Twenty-six.
Ques. Did you work in September, 1902, for the River and Harbor Improvement Company?
Ans. Yes.
Ques. How long had you been working for them?
Ans. Eighteen months.
Ques. What were you doing on the eighth of September? What was your job? What was your work?
Ans. I were firing and oiling the engines.
Ques. Firing and oiling the engine?
Ans. Yes.
Ques. Now, at that time had you any knowledge of mechanical principles?
Ans. No, sir.
Ques. Did you know how to put engines together or operate them?
Ans. No, sir.
Ques. Did you ever have any instructions about engines at all up to that time?
Ans. I had had some.
Ques. What?
Ans. Well, just been around machines, deck-hand is all.
Ques. Had you before that run a machine any?
Ans. Yes.
Ques. Where?

New Jersey State Library

Ans. Sixty-third and Market streets.

Ques. What did you do?

Ans. Well, I was taking mud out there with a machine.

Ques. No; you didn't take the mud out; pardon me for saying so.

Ans. I worked two levers and the steam throttle back and forth.

Ques. Pulled a steam throttle back and forth?

Ans. Yes.

Ques. Who showed you how to do that?

Ans. Rickerts, superintendent, Mr. Rickerts.

Ques. How long did you do that?

Ans. Five days.

Ques. Was that the limit of your experience with engines?

Ans. Yes.

Ques. What kind of engine was that, Mr. Sparks?

Ans. Double cylindered engine.

Ques. Now, what did you do? Let me understand exactly; where did you stand and what physical thing did you do?

Ans. I just had a lever on each side of me and the steam throttle and I worked these levers, these two; that it what I done.

Ques. What did that consist of; pulling a handle back and forth?

Ans. Yes, sir.

Ques. Did you know anything about steam valves?

Ans. No, sir.

Ques. Well, what was the name of this boat you were working on, on the 18th of September?

Ans. Asia.

Ques. Where did the engine in that boat come from?

Ans. Come out of the river.

Ques. Was this a mud scow, this thing you call the Asia?

Ans. Yes, sir.

Ques. How long had it been on the scow before you got hurt?

Ans. It has been there about three or four months.

Ques. Do you know whether it was an engine with two cylinders, what is called a double cylindered engine?

Ans. Yes, sir.

Ques. It was?

Ans. Yes, sir.

Ques. Did this engine ever get on center?

Ans. Yes, sir.

Ques. Well, when it got on center, what was done to start it off?

Ans. Well, the captain holloed down for me to pry her off.

Ques. Did you ever see anybody pry it off?

Ans. Yes, sir.

Ques. Who?

Ans. The captain.

Ques. Anybody else?

Ans. Yes, sir.

Ques. Well, on the eighteenth day of September, 1902, were you told to pry this engine off center?

Ans. Yes, sir.

Ques. About what time of the day was it?

Ans. It was somewheres between eight and nine o'clock.

Ques. In the morning?

Ans. Yes, sir.

Ques. What did you do to pry it off center? What physical things did you do?

Ans. I got a bar in the cog-wheel.

Ques. A crowbar?

Ans. Yes, sir.

Ques. Before you undertook to pry this engine off center, what was done with the steam valve?

Ans. It was shut off.

Ques. Who shut it off?

Ans. The captain.

Ques. Did you see him do it?

Ans. I saw the valve shut off.

Ques. How long, about, as nearly as you can judge, after this valve was shut off did you undertake to pry it off center?

Ans. Well, I suppose somewheres about two minutes.

Ques. Where did you stand when you undertook to pry it off?

Ans. I stood up on a bar that run across there.

Ques. One foot on one bar, and where was the other?

Ans. Well, I couldn't just tell where the other was now.

Ques. Well, did you stand in the same place that you always had stood before?

Ans. Yes, sir.

Ques. And was it always the same place that you had seen the captain and others stand before?

Ans. Yes, sir.

Ques. How did you apply this crowbar? The same as you had applied it before?

Ans. Yes, sir.

Ques. The same as you had seen the captain and others apply it?

Ans. Yes, sir.

Ques. Exactly the same way?

Ans. Yes, sir.

Ques. When you applied the bar, what happened?

Ans. The engine started up and throwed me into the cog-wheels.

Ques. How did it start up, slowly?

Ans. No, sir; fast.

Ques. How big were these wheels that started, about? Give us some idea of the size of the thing.

Ans. Well, I suppose they were six inches across them.

Ques. How much in diameter?

Ans. Well, I don't know; three or four inches, I suppose; more than that.

Ques. The wheels only three or four inches in diameter?

Ans. I don't know just how big they were in diameter.

Ques. Give us an idea from the floor with your hand, how high.

Ans. I suppose they were about that high. (Indicating.)

Ques. The cog-wheels?

Ans. Yes, sir.

Ques. And were there any other wheels there? Were you caught in the cog-wheels?

Ans. I was caught in the cog-wheels.

Ques. Were there any other wheels connected with these cog-wheels?

Ans. Yes, sir.

Ques. Were they big or little?

Ans. There was some bigger wheels on back; there wasn't any right there beside these two.

Ques. Do you know how rapidly these wheels went when you started to put the power on with your crowbar?

Ans. They went as fast as they could go.

Ques. Have you any idea of what number of revolutions they made?

Ans. Well, I suppose they made fifteen or twenty revolutions, or more than that, before they stopped; I don't know just how many.

Ques. When they started, what happened to you?

Ans. The bar hit me and when I woke up I was in the cog-wheels.

Ques. Where did the bar hit you?

Ans. In the mouth.

Ques. Well, now, what damage did that do to you, Mr. Sparks, what injuries?

Ans. Well, knocked five teeth out, cut me around the face in three places very hard, where those scars are.

Ques. Speak a little louder.

Ans. And one arm off and injured me up and down my side.

Ques. These cuts in your face, what sort of cuts were they?

Ans. Well, they were deep cuts.

Ques. Have to be sewed up?

Ans. Yes.

Ques. How many teeth did you say were knocked out?

Ans. Five.

Ques. Where was your arm torn off, whereabouts?

Ans. Just a little below my elbow.

Ques. Up to that time had you good health?

Ans. Yes, sir.

Ques. Well, after the injury what happened; where were you taken?

Ans. University Hospital.

Ques. In Philadelphia?

Ans. Yes.

Ques. How long did you stay there?

Ans. I were there over two months. I wasn't there at that time two months, but I have been back there since several times.

Ques. How many times?

Ans. I have been there four times.

Ques. What for; what was done to you during those four times?

Ans. Well, I had different operations different times—nerves taken out.

Ques. Four different operations besides the first one?

Ans. No; with the first one.

Ques. Three besides the first one?

Ans. Yes, sir.

Ques. Did you have to take ether when these operations were performed?

Ans. Yes, sir.

Ques. Well, Mr. Sparks, did you suffer any?

Ans. Yes, sir; been suffering ever since.

Ques. Have been sueffring ever since?

Ans. Yes.

Ques. Where do you suffer? Where do you have pain?

Ans. In this arm.

Ques. What part of your arm pains you most?

Ans. Oh, right down here, where it was taken off.

Ques. Where it was taken off?
Ans. Yes, sir.
Ques. Are you ever free from pain at all?
Ans. No, sir.
Ques. Does it disturb your sleep any?
Ans. Yes, sir; some nights I don't sleep at all.
Ques. How severe is this pain at the end of your arm?
Ans. Well, it is so severe that I don't sleep some at nights any with it.
Ques. What is it like?
Ans. It is an aching there all the time.
Ques. Does the weather have anything to do with it?
Ans. Yes, sir.
Ques. Tell us about that.
Ans. Well, when it is damp weather, it is worse.
Ques. Are you able to use that arm at all?
Ans. No, sir.
Ques. Have you a trade?
Ans. No, sir.
Ques. Well, how about your face and jaw, did that hurt you any?
Ans. Not now they don't.
Ques. Did they?
Ans. Yes, sir.
Ques. Have you noticed any change in your general health and strength since this accident?
Ans. Yes, sir.
Ques. What is that like? How will you explain it?
Ans. I don't have as good health; I have the rheumatism a good bit of the time.
Ques. Where do you have this rheumatism?
Ans. Down that side. (Indicating left side.)
Ques. Did you ever have it before?
Ans. No, sir.
Ques. How much money did you make at the time you were hurt?
Ans. Thirty dollars a month.
Ques. Does that include or exclude your board?

Ans. Includes.

By the Court:

Ques. That is, you get thirty dollars a month and board?

Ans. Yes, sir.

By Mr. Wescott:

Ques. What have you done since you got hurt?

Ans. I haven't done much of anything. I have run a boat a little in the summer.

Ques. How often have you done that?

Ans. Well, I done it two years, two summers, about two months in the summer.

Ques. For two months?

Ans. Yes, sir.

Ques. For two years?

Ans. Yes, sir.

Ques. That is, four months, all told; how much did you get for that?

Ans. Well, I used to get what I make; it wouldn't be much any time. I wouldn't have got anything if I had to pay the man for my boat. My brother loaned me his boat.

Ques. It was your brother's boat?

Ans. Yes, sir.

Ques. What did you do when you say you ran the boat?

Ans. Well, I just ran around Pennsgrove there and did whatever I could get with it.

Ques. What kind of a boat was it?

Ans. A gasoline boat, a skiff.

Ques. You mean you carried people and carried stuff?

Ans. Yes.

Ques. Have you any idea how much you made?

Ans. Oh, I made five dollars a week, maybe; some weeks nothing.

Ques. Did you get up any month to as high as you made before you were hurt?

Ans. No; I don't know that I did. I might have made as much as twenty-five dollars some months.

Ques. Twenty-five dollars?

Ans. Yes, sir.

Ques. When the two months were up, then what became of the boat?

Ans. My brother taken the boat then.

Ques. Have you earned any money by being hired by anybody since you were hurt?

Ans. I have earned some little money; maybe a day here and a day here somewhere.

Ques. Doing what?

Ans. Well, I don't know what; go out and work for my brother a little maybe on the farm; something like that.

Ques. Have you been able to maintain yourself since you were hurt?

Ans. No, sir; I haven't.

Ques. Who takes care of you?

Ans. Father.

Ques. When you work have you noticed what effect that labor has upon your arm?

Ans. Yes, sir.

Ques. What?

Ans. It makes it pain worse.

Ques. Makes it pain worse?

Ans. Yes, sir.

Ques. Does work ever make it pain so much that you have to stop?

Ans. Yes, sir.

Ques. Do you have what you call nervousness?

Ans. Yes, sir.

Ques. How would you describe that to the jury? What do you mean by being nervous?

Ans. Well, I get nervous sitting around or anything like that; I have to get up, and pains so much I can't sit still sometimes, hardly.

Ques. Walk around?

Ans. Yes, sir.

Ques. Ever have any trouble before you got injured?

Ans. No, sir.

Ques. Did you notice whether anything happened to this engine before you got hurt?

Ans. Happened to it; in what way?

Ques. In any way.

Ans. No, sir; only catching on center before I got hurt, several times.

Ques. Well, outside of this getting on center, do you know whether or not anything gave way or broke about it?

Ans. Well, it was at the shop several times, pieces of it; I don't know what was broke; some pieces were sent there.

Ques. Did you learn anything about the steam valve before you got hurt?

Ans. No, sir. I helped to put one on.

Ques. How long before you got hurt?

Ans. Well, I couldn't just say how long it was; might have been a week or it might have been two or three days; I don't just remember what it was.

Ques. Why was one put on?

Ans. The old one was broken.

Ques. Do you know who put that steam valve on besides yourself?

Ans. Yes.

Ques. Who?

Ans. Captain.

Ques. Do you know anything about such things?

Ans. No, sir.

Ques. Did the captain know anything about the steam valves?

(Objected to.)

The Court: How can he tell?

Mr. Wescott: Perhaps he couldn't.

Ques. What kind of a steam valve was it that was put on?

Ans. Butterfly valve.

Ques. Did it differ from the other valve; the one that was broken?

Ans. No, sir; same kind of valve, because—I ain't sure; I don't know what kind of valve it was.

Ques. It just was called a butterfly valve?

Ans. Yes.

Ques. How did you learn that?

Ans. I learned that by going to the machine shop and finding out since.

Ques. You have been studying machinery since?

Ans. Yes, sir.

Ques. And you found that this was a butterfly valve that was put in there?

Ans. Yes, sir.

Ques. What river did this engine come out of?

Ans. Delaware river.

Ques. Whereabouts?

Ans. Foot of Cooper street, Camden.

Ques. Was it taken out of the mud and water?

Ans. Yes.

Ques. Was it on a boat?

Ans. Yes, sir.

Ques. A boat that had sunk?

Ans. Yes, sir.

Ques. Do you know how long it had been there in the water?

Ans. Well, it was there all the time I were working there and I don't know how much longer than that.

Ques. You were working there eighteen months?

Ans. Yes, sir. We had taken it out before I came away, but it was there a year while I were there. It was there when I came there.

Ques. And that was the engine, was it, that was put in this mud scow, Asia?

Ans. Yes, sir.

Ques. On which you were hurt?

Ans. Yes, sir.

Ques. That was the engine that hurt you?

Ans. Yes, sir.

Cross-examination.

By Mr. French:

Ques. Did you see this engine in the scow at the foot of Cooper street in the river?

Ans. Yes, sir.

Ques. What time?

Ans. Well, I saw it in April when I first started.

Ques. April of what year?

Ans. 1901.

Ques. What part of the wharf was it lying at?

Ans. It was laying on the upper side of the wharf.

Ques. It was the old dredge Asia that was there?

Ans. Yes, sir.

Ques. And wasn't this engine taken out of the old dredge in 1898 and stored at Derby & Weatherby's machine shop?

Ans. I couldn't say. I wasn't there in 1898.

Ques. When did you first enter the employment of the River & Harbor Improvement Company?

Ans. Well, I came there in April, in 1901.

Ques. What was your first employment?

Ans. Deckhand.

Ques. On what?

Ans. On the Arizona.

Ques. What is the Arizona?

Ans. A dredge.

Ques. The same as the Asia was, the dredge on which you got hurt?

Ans. Something like the Asia.

Ques. You testified that you pulled some levers at Sixty-third and Market streets for five days. Sixty-third and Market streets, Philadelphia, was that?

Ans. Yes, sir.

Ques. What were those levers connected with?

Ans. Well, one was connected with a friction wheel and the other was the steam.

Ques. What was the result of your pulling the lever that was connected with the steam?

Ans. I opened the throttle.

Ques. What did that do?

Ans. It put on the steam.

Ques. What was the result of turning on the steam?

Ans. It started the engines.

Ques. When you say started the engines, what do you mean?

Ans. Well, the engines start going.

Ques. Does it wind up a drum?

Ans. Yes, sir.

Ques. What did the winding up of the drum do?

Ans. Brought up a bucket.

Ques. That was used to scoop, or something of that kind?

Ans. Yes, sir.

Ques. Then what was this engine doing there, excavating material for something?

Ans. Yes, sir.

Ques. And when you pulled the lever that worked the clutches, what did that do?

Ans. What, these here friction wheels?

Ques. Yes.

Ans. That hoisted up the bucket when the steam was on.

Ques. Then was that similar mechanism to the dredge engine on the Asia?

Ans. Well, I don't know. Yes; it is like that; I suppose it is something like that.

Ques. Now, you said that, as I recollect, when you started to pry these engines off center, the bar struck you?

Ans. Yes, sir.

Ques. Knocked out some of your teeth?

Ans. Yes, sir.

Ques. And that when you came to you were in the pilot house?

Ans. In the pilot house?

Ques. Where were you?

Ans. I said I were in the cog-wheels.

Ques. Pardon me, I thought you said the pilot house. What was the first thing you knew after the bar slipped, the fact that you were lying in the cog-wheels?

Ans. The first thing I knew, I was in the cog-wheels.

Ques. Then how did you know how many revolutions the engine made after it started?

Ans. I don't know just how many it made; I didn't say. It made several.

Ques. The only way you know it made any revolutions was the fact that it caught your arm in the cog-wheels?

Ans. I know it made revolutions when the bar hit me.

Ques. Now, the motor boat, or, rather, the boat that you operated for your brother in the summer time; what kind of a boat was that?

Ans. I said it was a skiff with a little gasoline engine in it.

Ques. And the movement of the boat was controlled by an engine?

Ans. Yes, sir.

Ques. Who operated the engine?

Ans. I did.

Ques. How long did you work as a deck-hand on the Arizona?

Ans. Oh, I don't know just how long I worked on her; I were on some other machines around there.

Ques. For the same company?

Ans. Yes, sir.

Ques. What kind of work did you do on the other machines?

Ans. Deck-hand.

Ques. Where had you worked before you came to work for the River & Harbor Improvement Company?

Ans. I had worked in Wilmington some.

Ques. While you were at Wilmington what did you do there?

Ans. I was deck-hand on a dredge.

Ques. How long had you worked at Wilmington?

Ans. Three months.

Ques. For what company?

Ans. The Atlas Dredging Company.

Ques. And before that where did you work?

Ans. I worked home on a farm.

Ques. Did you leave the farm to go to work for the Atlas Dredging Company?

Ans. I was to the powder works some before that.

Ques. What did you do at the powder works?

Ans. Well, I was a laborer there in the yard, and several things that I done.

Ques. And did you go from the powder works to the Atlas Dredging Company?

Ans. No; I went back on the farm with my father.

Ques. Then from the farm to the Atlas Dredging Company?

Ans. Yes, sir.

Ques. What you call a dredge is an engine for raising mud or something out of the river that you worked on for the Atlas Dredging Company and the River & Harbor Improvement Company, on a flat boat, isn't it?

Ans. Yes, sir.

Ques. And it is a long bar with a scoop at the end of it, with what they call clam shells to gather the soil or mud or stones or whatever is in the bottom of the river and lift it up and dump it?

Ans. Yes, sir.

Ques. What sort of a crew is on that scow or dredge?

Ans. Well, I couldn't explain to you just what kind of crew. They have different crews,

Ques. What was on the Arizona?

Ans. What kind of crew?

Ques. Yes; how many were on there?

Ans. Well, six or seven men; sometimes eight men, sometimes not so many.

Ques. What were their positions?

Ans. Well, deck-hands, firemen, captain.

Ques. What did the captain do?

Ans. He operated the machine.

Ques. And where was his place to operate the machine?

Ans. Pilot house.

Ques. What did the fireman do?

Ans. The fireman, he attended to the firing of the engines.

Ques. What did the deck-hand do?

Ans. He attended to the lines besides other work there were to do.

Ques. Did he have anything to do with the engines or machinery at all?

Ans. The deck-hand?

Ques. Yes.

Ans. Well, no; not without there was something to be moved or something like that.

Ques. Never helped the fireman or captain about it?

Ans. Well, he might help the captain some, to do some things, but he had nothing to do with the machinery at all.

Ques. How long did you continue to be a deck-hand on the Arizona?

Ans. Well, I don't know just how long I was on there deck-hand; I was deck-hand all the time I was there except a month, on different machines. I don't know just how long I was on there.

Ques. What other machines were you on?

Ans. I was on the Arizona, America—I don't know what the other name of the machine is; some other one

Ques. The Asia?

Ans. Yes; I was on the Asia.

Ques. Any others? The Atlanta?

Ans. Yes, sir.

Ques. That was all the machines they had?

Ans. I guess it was.

Ques. When did you go to work on the Asia, the boat on which you were hurt?

Ans. Some time in September, I think; I don't know just what time it was. I had been there somewhere near about two weeks.

Ques. What boat had you been working on before you went on the Asia?

Ans. Well, I was on the Arizona just before I was on the Asia.

Ques. So that summer this engine had been installed in the Asia, had it, or in the spring and summer of that year, 1902?

Ans. Installed?

Ques. Put in.

Ans. Yes.

Ques. And when had that been done?

Ans. Well, I wasn't there while it was put in; I was away.

Ques. You didn't see any part of the putting in of the engine. When did you first see the new engine on the Asia?

Ans. Well, I was there when they first started to put it in.

Ques. When was that?

Ans. It was some time in April or May, I think.

Ques. Of 1902?

Ans. 1902.

Ques. Where was the engine when they started to put it in, as to locality? Where was it?

Ans. It was at the foot of Jackson street, Camden.

Ques. Had you seen it moved from Cooper street to Jackson street?

Ans. Yes, sir.

Ques. When was it moved from Cooper street to Jackson street?

Ans. I don't know just what time it was moved, but I was on it when it was moved. I was there when it was moved, helped move it.

Ques. When it was moved, it was taken out of Derby & Weatherby's shop, wasn't it, the engine?

Ans. No, sir; it wasn't.

Ques. Sure of that?

Ans. Yes, sir.

Ques. When did you commence your duties as fireman of the Asia? About two weeks, I think you said, before you were hurt?

Ans. Yes, sir.

Ques. What did you do as fireman?

Ans. Well, I fired and oiled the engines.

Ques. By firing you mean you put coal under the boilers and kept the fires going?

Ans. Yes, sir.

Ques. What parts of the engine did you oil; all of them?

Ans. Yes, sir.

Ques. That was to be oiled?

Ans. Yes.

Ques. When you came there in the morning, what was the first thing you did to your engine?

Ans. The first thing I did was to oil it.

Ques. When you left at night, what was the last thing you did?

Ans. Well, I don't remember about what I would do with the engines; I would fix my fires; that was the last thing I did.

Ques. Didn't bother with the engine?

Ans. No, sir.

Ques. Who did that?

Ans. Well, I don't know as there was any bothering with it to be done.

Ques. The steam to this engine or engines came through a large overhead pipe, didn't it; about four-inch pipe?

Ans. Three to four inches; somewheres near there.

Ques. From the boilers toward the cylinders?

Ans. Yes, sir.

Ques. That was up high above your head?

Ans. Yes, sir.

Ques. And close to the boilers there was a valve, wasn't there, a steam valve?

Ans. I don't remember now whether there was a valve or whether there wasn't one.

Ques. You don't remember whether there was any valve? Did you have a throttle valve on your boiler, or not?

Ans. No, sir.

Ques. The throttle valve was just at the head of this pipe that came overhead, this four-inch pipe, the three or four-inch pipe that you spoke of?

Ans. Yes; it just cleared your head.

Ques. At the end of the valve the pipe branched and came down on two sides, didn't it?

Ans. Yes, sir.

Ques. To the cylinders or steam-chest?

Ans. Yes, sir.

Ques. And those pipes on each side were about three inches in diameter?

Ans. Well, they were from two to three inches.

Ques. And those led into the steam-chests that were abreast of the cylinders, didn't they?

Ans. Yes.

Ques. Carried the steam into the cylinders?

Ans. Yes.

Ques. In the cylinders there was a cylinder head that worked up and down with the steam, wasn't there, turned the crank?

Ans. I don't know how that works.

Ques. You never saw inside of the cylinder?

Ans. I saw inside of them, but I didn't just understand how they worked in there.

Ques. What happened when you opened the throttle valve?

Ans. I suppose the engine started.

Ques. Well, what made the engine start by opening the valve?

Ans. All I know steam got in there.

Ques. How did it get in there?

Ans. It got in by the valve being open.

Ques. And into these pipes?

Ans. Yes, sir.

Ques. And those pipes ran in the steam-chest and the steam-chest opened in the cylinder, so that there was steam in the cylinder and that made the engine turn when the steam got in there, didn't it?

Ans. Yes; I suppose so.

Ques. Now, this valve that you put in two days before was contained in a sort of iron pipe with flanges, wasn't it?

Ans. Yes, sir.

Ques. And the four-inch pipe that came from the boiler, three or four as you might call it, to the throttle valve, at the other side, also had flanges to it, didn't it?

Ans. How is that?

Ques. The pipe that came from the boiler toward the throttle valve and the pipe at the other side of the throttle valve coming out had flanges on the ends, hadn't it, with holes through it?

Ans. Yes, sir.

Ques. When you set your throttle valve, you could do nothing with the mechanism of the valve. To do this the whole piece of pipe, that containing the valve, had those flanges with the holes?

Ans. Yes; I suppose that is all there was to do.

Ques. In other words, the valve was contained in a large iron covering, wasn't it, with flanges on the outside, and these flanges were bolted to the flanges on the pipes?

Ans. The pipes screwed in on them. I don't know whether it screwed in or was put in flanges.

Ques. How long did it take to put this valve in?

Ans. I couldn't say that, how long.

Ques. Did it take more than a week?

Ans. No.

Ques. More than a day?

Ans. No.

Ques. Took only a matter of an hour or so, didn't it?

Ans. Well, it may have been two hours, or three or four hours, I don't remember.

Ques. It was either screwed or bolted in?

Ans. I suppose it was.

Ques. You know it was, don't you?

Ans. Yes; I know it was screwed or bolted.

Ques. Now, the old valve that was there broke, you say, some time before the accident?

Ans. Yes.

Ques. How was that taken out—the same way, by unscrewing all these bolts or unscrewing the pipe and taking it out?

Ans. I suppose it was.

Ques. Did you help take it out?

Ans. I don't remember whether I helped take it out or not. I think I did. Yes; I am sure I helped take it out.

Ques. You helped take the old one out?

Ans. Yes, sir.

Ques. That was taken out the same way the other one was put in, by unscrewing or unbolting it?

Ans. Yes, sir.

Ques. And the new valve was put in by you and Captain Rickerts, wasn't it?

Ans. By me and Captain Hudson.

Ques. Aren't you mistaken? Was it Captain Rickerts that helped you with the new valve?

Ans. I think not.

Ques. Did you ever relieve the engineer when he was going away or wanted to be relieved?

Ans. No, sir.

Ques. Take his post?

Ans. No, sir.

Ques. One of your duties as fireman was to report any defects that you found in the engines, wasn't it?

Ans. Well, I don't know whether it was my place to report it; the captain attended to all that kind of business.

Ques. Did you call the captain's attention to any of these defects that you saw?

Ans. He knew about the engine catching on center.

Ques. Is that the only defect that you knew of?

Ans. Well, it was leaking steam around. I don't know what other defects the engine had, what it was?

Ques. You say this accident happened between eight and nine o'clock. As I understand you, the engine got on center. Was the scoop down at the bottom ready to lift?

Ans. I couldn't say where the scoop was; I didn't see the scoop at the time.

Ques. You could tell in the engine room, could you not?

Ans. I couldn't tell if I didn't see it.

Ques. You couldn't tell by your machinery?

Ans. No.

Ques. This engine was not fastened to the bottom of this scow, was it?

Ans. Yes, sir.

Ques. So that you went down three or four steps into the engine room and worked down in there, with doors on the side?

Ans. Yes, sir.

Ques. This model here, in a measure, represents the cogs, does it not?

Ans. Yes, sir.

Ques. Now, when the engine was running, how were these cogs turning, toward one another?

Ans. Yes, sir.

Ques. That is, turning that way, toward one another? (Illustrating.)

Ans. Yes, sir.

Ques. About where did you stand when you started to pry it off?

Ans. I stood back here somewhere; I couldn't tell you just where.

Ques. Somewhere on the bar, like that?

Ans. These bars go down from there. These bars were down here further, if I understand it correct, and I suppose I stood one foot on there and one foot on the floor. (Illustrating.)

Ques. And you put your bar in between the two cog-wheels?

Ans. Yes, sir.

Ques. And you tried to pry the cog-wheels open?

Ans. Yes, sir.

Ques. That was prying against the force of the steam, wasn't it? That is, if the engine when running was turning that way?

Ans. I pried the same as the captain or anybody else pried it, that way.

Ques. You pried it that way?

Ans. Yes, sir; I put it that way.

Ques. And when the engine ran, it ran that way, so that you were prying against the way the engine was running? That is right, isn't it?

Ans. That is the way I pried it.

Ques. Now, the captain had shut off the steam at this throttle valve, you say?

Ans. Yes, sir.

Ques. Did he first try and raise the bucket before he shut off the steam?

Ans. I couldn't say whether he did or not.

Ques. How did the engine get on center if he did not? He started to operate the engine, did he not?

Ans. I suppose he did.

Ques. That is, he opened the throttle valve?

Ans. Opened it to start it.

Ques. And the engine wouldn't start?

Ans. No.

Ques. Then he shut off the throttle valve?

Ans. Yes; shut the valve off.

Ques. That left all the live steam in this big pipe and the two pipes that came down on the steam-chests?

Ans. Well—

Ques. There must have been live steam if the throttle valve was opened to start the engine?

Ans. Yes, sir.

Ques. On each side of this engine was a cylinder?

Ans. Yes, sir.

Ques. Now, did you open the cylinder cocks on the cylinders before you started to pry it off?

Ans. No, sir; not that I know of.

Ques. You said you are twenty-six now?

Ans. Yes, sir.

Ques. And this accident happened in September, 1902?

Ans. Yes, sir.

Ques. When is your birthday, Mr. Sparks?

Ans. On the 18th day of September.

Ques. The Sunday after the accident happened, did you have any conversation with Mr. Rickerts about it?

Ans. No. Mr. Rickerts was there to see me some times; I don't know whether he was there on Sunday afterwards, or when he were there.

Ques. And after the accident happened the River & Harbor Improvement Company offered to employ you at your old job, didn't they?

Ans. No, sir. Offered to employ me as a night watchman.

Ques. You declined that offer?

Ans. Yes, sir.

Ques. And they offered to employ you as a night watchman at the same wages you had been employed?

Ans. No, sir.

Ques. What wages did they offer?

Ans. They paid twenty-five dollars a month.

Ques. And board?

Ans. And board.

Re-direct examination.

By Mr. Wescott:

Ques. Mr. Sparks, have you lost any weight since you were injured?

Ans. Yes, sir.

Ques. Do you know how much?

Ans. Well, I weighed as much as 151 pounds before I was injured. I weigh 138 now.

Ques. Now, you were asked a question, whether the captain helped you to put this valve in. Did the captain help you or did you help the captain?

Ans. I helped the captain.

Ques. What did you do? What kind of work did you do?

Ans. I don't just remember what kind of work it was.

Ques. Whatever he told you to do?

Ans. Yes, sir.

Ques. These cog-wheels that you spoke of as having put your crowbar in, where were they with relation to the floor? How high were they above the floor on deck?

Ans. I suppose they were that high (indicating) from the floor.

By the Court:

Ques. That is, three or four feet?

Ans. Yes, sir.

By Mr. Wescott:

Ques. How high were these cogs above the feet when you undertook to pry the engine off center?

Ans. Well, I suppose they were a foot and a half or two feet, something like that.

Ques. Above the platform that you stood on? The cogs were that far above the platform that you stood on?

Ans. Above where I stood. They were higher than where I stood, somewhere a foot and a half; I don't know just how high they were.

Ques. Then you did not stand on the floor; you stood on a bar?

Ans. No, sir.

Ques. An iron bar?

Ans. It was an iron bar run across; I stood with one foot on that.

Ques. Was there any other way to pry it off than the way you used, blocks or machinery of any sort?

Ans. There was no blocks there. It was the way it was always pried off, the way I pried it off, the way the captain pried it off and the rest of them.

Ques. You couldn't get any purchase from the floor?

Ans. No, sir; you couldn't.

Ques. Is this the way the captain told you to do it; the way you did it?

Ans. Yes, sir.

Re-cross examination.

By Mr. French:

Ques. You could have stood on the floor and used a block as a fulcrum and pried off the other way?

Ans. If there had been blocks to block up and something there, but there was nothing there to pry against.

Ques. You could use the brace that went right behind it.

Ans. No, sir; the brace didn't come up there so you could get your bar on to pry off there.

Ques. Wasn't there a block there for that purpose?

Ans. I didn't see any block there.

Ques. And if you pried off from underneath, you would turn the wheels towards one another, wouldn't you?

Ans. Yes, sir.

Ques. You had been sick just before you went on the dredge Asia for some time?

Ans. I had been sick a while.

Re-direct examination.

By Mr. Wescott:

Ques. What was the matter?
Ans. I had malarial fever.
Ques. Did you get over it all right.
Ans. Yes; I got over it as soon as I came home from down to Annapolis.

Recess until 1.30 P. M.

Afternoon session, 1.30 P. M.

By Mr. Wescott:

Ques. Mr. Sparks, is your doctor here?
Ans. No, sir.
Ques. Did you endeavor to get him to come here to-day and did he say he would come?
Ans. Yes; he said he would come; had two bad cases and told me he didn't know whether he could get here or not.
Ques. When you undertook to pry this engine off center, how far would you move it when you put your force on?
Ans. Well, about a quarter of an inch, or somewhere along there.

RICHARD GILPIN, sworn.

Direct examination.

By Mr. Wescott:

Ques. Where do you live, Mr. Gilpin?
Ans. Philadelphia.

Ques. What is your business?

Ans. Consulting engineer.

Ques. How long have you been an engineer?

Ans. Since 1883.

Ques. What experience have you had in the business?

Ans. Installation of electric railroads, power plants, water, hydraulic, electric installation, power transmission, electric light plants, and so forth.

Ques. Have you constructed engines and know about engines?

Ans. Not exactly engines themselves. I have erected them and taken them apart and assembled them and tested them and adjusted the valves.

Ques. You know all about engines, do you?

Ans. Oh, yes, yes; thoroughly up on all those lines; have to be.

Ques. Can a double cylindered engine that is in proper condition get on center?

Ans. A double cylinder engine with crank set at ninety degrees cannot get on center. It is built with a distinct purpose of not getting on center; one cylinder has got full pressure when the other one is at zero pressure, so that there is always full energy on one cylinder, at least on the crank.

Ques. Well, then, if a double cylinder engine gets on center, does that imply some defect in the engine?

Ans. Certainly it does. It becomes a single cylinder engine under those conditions, or might become.

Ques. If a double cylindered engine gets on center and a man is directed to pry it off, and before he undertakes to pry it off the throttle valve, steam valve, is closed, and then when he applies his power a minute or two afterwards the engine starts in violent rotation, would that be due—caused by some defect in the engine?

Ans. Well, the only reason he would pry it off would be because there would be some defect.

Ques. Well, when he starts to pry off the engine, if the steam is shut off, and the engine starts violently, what is the cause of that? What causes it?

Ans. It naturally is steam pressure within the cylinder, work being done.

Ques. Then how would the steam get into the cylinder if it was shut off?

Ans. Well, the only way it could get into the cylinder would be by admission through the steam pipes, naturally.

Ques. Would it imply a defective valve, a steam valve?

Ans. It certainly would. It would be a defective system by which the element of certainty would be absolutely eliminated, you might say. The engine could not go without steam in the cylinder.

Ques. The engine could not go without steam in the cylinder?

Ans. No; unless it was worked from the other end.

Ques. What do you mean by that; worked from the other end?

Ans. Worked from, say, a heavy weight that it had been lifting being held and then—

Ques. Up in the air?

Ans. Yes.

Ques. That is to say, if this heavy thing was up in the air?

Ans. And naturally if you take the pressure off, why, the weight would take the place in a reversed sense of the steam acting on the piston.

Ques. And start the machinery going?

Ans. Going in an opposite sense.

Ques. Suppose that weight is not there, but is in the bottom of the river, and yet when the steam is shut off, when the force is put to move the engine off center, she starts in a violent revolution—

Ans. Well, that is some radical defect, either in the steam pipe or in the valve which lets the steam into the cylinders.

Cross-examination.

By Mr. French:

Ques. What you call a double cylinder engine is practically two engines?

Ans. Practically, yes, sir; two cylinders and cranks and engines.

Ques. Each cylinder running an engine?

Ans. Yes, sir; an engine with a crank.

Ques. If one cylinder or one engine was on center and the load was too heavy for the other, it will be held, wouldn't it?

Ans. Well, that would be a case not of steam pressure altogether, but the element of whether the engine was fitted for the work it was to do.

Ques. Well, that is a single cylinder. If the load was too heavy for the single engine, it could not pull the other engine off the center and lift the load?

Ans. Well, an engine of that type is only supposed to do the work practically of one cylinder, one engine, practically; in other words, when that crank is at right angles or when the piston of that engine is half way down, it is doing maximum work at that point, and the other one is doing maximum work on the other side, but when it goes through another part revolution, the both of them only doing, we will say, quarter of the work, and then when one is doing no work, the other is doing maximum work. There is always a sort of balance between the efforts of the two cylinders, one to do maximum when the other is doing minimum, and the sum of the two being equivalent to, as it was, maximum work of any one cylinder; the engine is designed to just meet that requirement.

Ques. Now, in the cylinder there is a cylinder head that moves up and down with the steam?

Ans. Piston.

Ques. Piston head?

Ans. Yes.

Ques. It depends how that is fitted whether it moves freely as to whether or not the engine will work or not, doesn't it, largely?

Ans. An engine is supposed to have a smooth cylinder and the piston is supposed to fit snugly and the rings

around the piston are supposed to fit so that there is no leakage of the steam by that piston.

Ques. It depends whether those rings and the piston head are working properly and whether they are adjusted properly whether it works freely, doesn't it?

Ans. Well, the oiling devices on the throttle are the only means of oiling the cylinder. There is no other means of oiling it except by injecting the oil into the steam, as it were, and the oil is sprayed, as it were, over the surface.

Ques. Well, unless that is done the piston head may bind a little, mayn't it?

Ans. Yes; naturally.

Ques. That might be a cause tending to put it on center, mighn't it?

Ans. Not on center, no; it would simply overload the engine.

Ques. Well, if the engine was overloaded and could not get off of the center, it would be on center, wouldn't it?

Ans. The engine would not be responsible; that would be the boiler pressure would not be sufficient to carry an engine of that size and make it do its natural work.

Ques. It wouldn't do its full work.

Ans. No; it wouldn't do its full work, but the engine wouldn't be of capacity sufficient to overcome the resistance that was thrown upon it, as it were.

Ques. Now, with the throttle valve on an overhead pipe coming from the boilers and two or three inch pipes coming down to the cylinders, if the valve were shut off there would be considerable live steam in the pipes leading to the steam chest, in the steam chest and in the cylinders, wouldn't there?

Ans. Yes; for an interval of time.

Ques. How long a time?

Ans. Well, that is a pretty hard matter to say. With pipes that are exposed to a current of air that is blowing, those pipes and the cylinders become a radiator, and

if you put so many heat units of steam into those pipes and cylinders, why, in a given time that heat is transferred to the atmosphere and of course the steam is condensed in the form of water.

Ques. But before condensation takes place, that live steam that is there has a force, hasn't it?

Ans. Yes; for an interval of time, but it is decreasing. As soon as the heat units are taken away—the source of heat units is taken away—the curve is a falling one very rapidly.

Ques. When the engine is pried off center and pried against the steam, that tends to compress it, doesn't it?

Ans. Well, I suppose that theoretically if the engine was entirely protected against loss of heat, you might—in other words, if the steam was water and non-shrinkable, why, it would tend to compress it, but it would take quite a considerable long movement of the piston, and it would be very tight and there should be no condensation to compress that to any great extent. I am afraid that would hardly be possible to any great—

Ques. After the engine got off center it would turn with the force of the steam behind it, wouldn't it?

Ans. If there was sufficient volume, but it is a question altogether, as the time element comes into play there, and I assume that the time is limited, would have to be limited to a very short interval, a few seconds or so.

By Mr. Wescott:

Ques. How much did you say, a few seconds or so?

Ans. I couldn't say exactly. I suppose it is, off hand. It is rather a hard matter to figure it really, because it is a question of surface exposed and the outside temperature altogether. It can easily be worked out.

By Mr. French:

Ques. It would be different if it was in an engine room or outdoors?

Ans. Or if the engine was covered, or in hot weather there is no movement of air, or very cold weather with free air, or hot weather with movement of air—it would make quite considerable difference.

Ques. It would depend also upon the steam pressure, wouldn't it, the time it would take to cool off?

Ans. The steam pressure within the cylinder, yes, naturally; the higher the pressure the greater heat transferrence, but then the greater volume of steam, so that I suppose there would be an interval.

Ques. The higher the pressure the less time it would take?

Ans. The higher the initial pressure in the pipes and cylinder, naturally. the greater volume of steam for unit contained, as it were, and the consequence will be the longer the time it would be, condensation of the steam.

Re-direct examination.

By Mr. Wescott:

Ques. Suppose this case: That the engine steam is put on an ordinary two cylinder engine and the engine does not move; it is on a center, and a minute elapses after the shutting off of the steam before pressure is applied to get the engine off center, would that minute be sufficient in an open, uncovered engine, to condense what steam there might be in the pipes that would get into the steam chest?

Ans. I should think so, yes, sir; very rapidly.

Re-cross examination.

By Mr. French:

Ques. That depends somewhat on the length of the steam pipe?

Ans. Oh, it is altogether, of course, the question of surface; it is radiation; it is similar to one of those radiators there in the corner.

EVERETT S. SPARKS, recalled.

Further cross-examination.

By Mr. French:

Ques. Mr. Sparks, when you came to, was your arm through the cogs, or still in the cogs?
Ans. Still in the cogs.
Ques. And the wheels had stopped?
Ans. Yes, sir.
Ques. And your arm was in the cogs?
Ans. Yes, sir.

DR. C. P. LUMMIS, sworn.

Direct examination.

By Mr. Wescott:

Ques. Doctor, you are a medical man, are you?
Ans. Yes.
Ques. Practicing physician?
Ans. Yes.
Ques. Where do you practice?
Ans. Pennsgrove.
Ques. Do you know Mr. Sparks?
Ans. Yes.

Ques. Did you know him before he came home, in 1902?

Ans. No, sir.

Ques. Have you attended him professionally?

Ans. Yes, sir.

Ques. You knew the nature of his injuries, I suppose?

Ans. Yes, sir.

Ques. Were they such as to produce any permanent effect upon his health, general health and strength?

Ans. Yes, sir; they have. He has been under treatment ever since he has been hurt.

Ques. Have you examined his arm?

Ans. Yes; often.

Ques. Is his arm in a condition which will cause him permanent pain?

Ans. Yes. It seems as if the condition cannot be relieved by surgical operation. He has had three surgical operations. I sent him to the hospital three times.

Ques. Can't be relieved?

Ans. He has not been.

Ques. What is the trouble?

Ans. It seems that the nerves supplying the arms are in the scars and that the nerves have been injured and some bulbous nerves have been formed there. They have been removed, but they come back.

Ques. Bulbous nerves?

Ans. Yes; as the result of injury.

Ques. And that causes his pain?

Ans. Yes; that is said to have caused the pain by Dr. White, the surgeon.

Ques. What is your judgment?

Ans. That was my idea when I sent him there.

Ques. Is it your judgment now that that is the cause of his permanent pain?

Ans. That seems the only explanation of the pain.

Ques. But is it your judgment that that is the cause of it?

Ans. Yes, sir.

Cross-examination.

By Mr. French:

Ques. When was the last operation, doctor?
Ans. I don't recall the exact date.
Ques. This year?
Ans. No; it was somewhere about a year ago, as near as I recollect.

Plaintiff rests.

MOTION TO NON-SUIT.

Mr. French: We move for a non-suit. There is no negligence shown on the part of the defendant company. The machinery is not shown to be defective and the danger was obvious to the plaintiff.

The Court: I decline to non-suit.

(Whereupon the defendant, by its counsel, prays a bill of exceptions, which is hereby allowed and sealed accordingly.)

F. J. Swayze. J. (seal)

DEFENDANT'S TESTIMONY.

PERCY H. WILSON, sworn.

Direct examination.

By Mr. French:

Ques. Where do you live, Mr. Wilson?
Ans. I live in Devon, Pennsylvania.
Ques. What is your profession, or business?
Ans. Civil engineer.
Ques. Were you at any time connected with the River & Harbor Improvement Company?
Ans. I was connected with the River & Harbor Improvement Company for about twelve years.
Ques. In what capacity?
Ans. Partly as superintendent and partly as secretary and treasurer; partly as an engineer.
Ques. When did you first know the engines that were on the dredge Asia, at the time the accident happened to the plaintiff?
Ans. When did I?
Ques. Yes; when did you first know them?
Ans. When I first went with the company, in about 1894.
Ques. Where were they then?
Ans. They were on another dredge by the name of Asia.
Ques. What happened to them?
Ans. The engines were worked on that dredge for two years, then the dredge was laid up at the yard and the engines were taken out and put up in Derby's shop.
Ques. When were they taken out and placed in Derby & Weatherby's shop?
Ans. About August, 1898.
Ques. How long did they remain there?

Ans. They remained in Derby's shop a little over two years.

Ques. What was done while they were there?

Ans. They were thoroughly cleaned and all parts entirely overhauled one winter, and the next winter they were put together and erected in Derby's shop.

Ques. When were the engines installed in the new dredge?

Ans. Early in the year 1902.

Ques. Under whose superintendence?

Ans. They were installed under my supervision.

Ques. Was there anything else done to the engines?

Ans. They were thoroughly overhauled at that time.

Ques. Any repairs put on them?

Ans. Yes.

Ques. What?

Ans. I don't exactly remember just the definite repairs that were put on. As I remember, the connections were all made, new pins put in so that there would not be any loss of motion in the engines. I think that the valves were re-surfaced, and, as a matter of fact, they were given a thorough overhauling.

Ques. Did you ever see the valve that was on the engine, the throttle valve, at the time Mr. Sparks was hurt?

Ans. Yes, sir.

Ques. How long was it used after he was hurt?

Ans. It was used until fall the following year.

Ques. Describe that valve and how it was put on.

Ans. The valve was put on by the means of flanges, which were bolted to flanges on the ends of the pipe.

Ques. Require any expert knowledge to put on those valves?

Ans. All that had to be done was a little packing put between the flanges, and enough knowledge to insert a bolt in there through a couple of holes.

Ques. Did you ever run an engine?

Ans. No.

Ques. Ever have anything to do with them?

Ans. In what way?

Ques. Any way.

Ans. I had given instructions as to how to put them together.

Ques. That is part of your professional knowledge, the building and construction of engines?

Ans. Well, I know very little about the building of them; I know more about the putting together and the arrangement of the engines than I do of the building.

Ques. What positions were occupied by Sparks, the plaintiff, while in the employ of the River & Harbor Improvement Company?

Ans. He was deck-hand on the dredge Arizona and also on the America, also on the Atlanta, also on the Asia and also on a little land dredge which we had at Sixty-third street, and would run a hoister at odd times, which was a double cylinder engine of practically the same kind as the Asia, and he had also run this little land dredge out at Sixty-third street, where the operation was practically the same as on the dredge Asia; he had been dipper tender on the America part of the time; he had fired, previous to going on the Asia, the Arizona, also on the America.

Ques. What were his duties as fireman?

Ans. As fireman he had charge of the engines, also keeping up steam, keeping water in the boiler. The captain, or really the engineer of the dredge, who operatss the throttle, is usually placed so that he cannot see the dredge engines and he has to depend on the man who is the fireman to keep the engines in shape, to advise him when anything is wrong.

Ques. What was the captain's position on the Asia?

Ans. He was on the roof of the engine house in a little pilot house.

Ques. Could he or could he not see the engines?

Ans. He could not, I think, see the engines. He had a little hole down in through the roof that he could watch his drums, but unless he got down on his hands and

knees and looked through it, he could not, I think, see the engines.

Ques. What did the engineer do there? What did he do to work the engine?

Ans. He opened and shut off the steam and operated two levers which operated the clutches on the drums of the engines.

Ques. Now, will you tell these gentlemen what you mean by that, how the engine worked and what it did, the clutches and the steam?

Ans. The dredge engine is very much the same as an ordinary hoisting engine, consisting of two drums in this particular kind of engine, which operated the bucket or grab of the dredge, one wire going to one drum and coming down and opening and closing the bucket, and the other wire simply lifting the bucket. The two drums are controlled by a clutch, which alternately fastens them to the shaft which is operated by the engine and alternately lets them run loose on the shafting. The third lever just merely opens and shuts the throttle valve, which permits the steam to go into the pipes which lead down to the steam-chest, and in that way in through the engine.

Ques. When the throttle valve is opened, steam goes into these pipes, and what happens then when the steam gets there if the valve is open?

Ans. The engine turns.

Ques. And when the engine turns, if these clutches were on, what does it do?

Ans. Raises the bucket.

Ques. If the clutches are off?

Ans. It simply turns the shaft inside of the drums.

Ques. The dredge Asia, the engine at which Mr. Sparks was hurt, what sort of pipe led from the boiler to the throttle valve, the size of it?

Ans. Four-inch pipe.

Ques. About how long?

Ans. It was about twenty-two or twenty-three feet.

Ques. Now, from the throttle valve, what pipes led to the steam-chest?

Ans. A short pipe which led into the T, which was four inches, and then went on down to each one of the engine, a three-inch pipe, which divided.

Ques. How long were the three-inch pipes?

Ans. The three-inch pipes were each about eight to ten feet long.

Ques. When the throttle valve was shut off, what was there between the engine and the throttle valve in the pipes?

Ans. If the throttle valve had been open immediately before it was closed, the pipes between the throttle valve and the engine were full of steam.

Ques. In prying this engine off center and prying against the steam, what would be the effect after the engine got off center?

Ans. The engine would probably turn maybe one revolution, maybe half a revolution, maybe two revolutions.

Ques. If the engine turned a half, one or two revolutions, what effect would that have upon the cog-wheels; how many revolutions would they make?

Ans. One of the cog-wheels would make the same number of revolutions as the engine and the other cog-wheel would make less, because one was larger than the other.

Ques. Then the small cog-wheel would be geared to the engine and would make just as many revolutions as the engine made?

Ans. Yes.

Ques. And the larger wheel would go just as far as the small cog-wheel pulled it?

Ans. Yes.

Ques. Then what length of time would make three revolutions, the steam in these parts, after it was shut off?

Ans. I should think it would make a couple of revolutions after three or four or five minutes. That depends on the pressure of the steam in the boiler and also as to whether the pipes were protected or not.

Ques. Would it depend also on whether these clutches were loose or fastened?

Ans. Yes, sir.

Ques. Would the cylinder cocks on the cylinder have any effect, whether they were open or closed?

Ans. Yes.

Ques. What?

Ans. If the cylinder cocks were open the steam would leak through the cylinders and out of the cylinder cocks and would not turn the engine.

Ques. No matter how much was in the pipes?

Ans. If he opened his throttle wide he probably could get enough.

Ques. If the valve was closed?

Ans. If the valve was closed the steam in the pipe would expand and go out of the cylinder cocks without turning the engine.

Ques. What kind of valve was the valve that preceded the one that was put on just before Mr. Sparks was hurt?

Ans. It was a butterfly valve.

Ques. Same kind?

Ans. Same kind except it was not quite as good a valve as the second one.

Ques. What kind of valves are used on dredging or hoisting engines?

Ans. They use butterfly valves, sometimes what is called a balance valve.

Ques. Why are those valves used on hoisting or dredging engines?

Ans. The butterfly valve is used because on a dredging engine or hoisting engine when you turn your valve you want the full opening for your steam; you want all the power you can get and they are quick acting valves; that is, with a small amount of turn, of labor, they open a valve quite wide.

Ques. And is speed one of the reasons why they are used on these engines?

Ans. Yes; speed of opening and shutting.

Cross-examination.

By Mr. Acton:

Ques. Mr. Wilson, what is your present occupation?
Ans. I am with the Scofield Company.
Ques. Are you a stockholder in the River & Harbor Improvement Company?
Ans. Yes, sir.
Ques. Then you are still connected with that company in the capacity of stockholder?
Ans. Yes, sir.
Ques. Now, when you first knew of this engine you say it was in 1894?
Ans. Yes.
Ques. It was on what dredge then?
Ans. It was on the dredge Asia.
Ques. How long had that engine been in commission at that time?
Ans. I don't know.
Ques. It was a very old engine at that time, wasn't it?
Ans. I don't know.
Ques. You know nothing of the previous history of it?
Ans. I know nothing of the previous history.
Ques. Don't you know that it was taken from another boat previously?
Ans. I do not. I think not. I am not sure.
Ques. Now, the old boat Asia was sunk?
Ans. No.
Ques. Wasn't this engine in the bottom of the river at one time?
Ans. Not that I know of.
Ques. Wasn't it on a sunken boat?
Ans. Never when I had charge of the company.
Ques. Did you not, at the last trial of this case, say that that engine had been under water a month?
Ans. No. Continuously, no.
Ques. Eh?

Ans. No.

Ques. Did you say it had been under water?

Ans. I thought so; yes.

Ques. Where was it under water?

Ans. It was under water about a yard in Camden.

Ques. Was the dredge in which it was situated sunk?

Ans. No; I wouldn't say that the dredge was sunk. The facts of the case are these—

Ques. I don't care for the facts in this case. I want to know whether this engine had been submerged for some time. If you know, say so; if you don't know, that is all right.

Ans. Yes; I should say that the engine had been submerged.

Ques. Now, do you know how long it had been submerged?

Ans. No; I do not. It was submerged alternately at high and low tide, but just exactly the length of time I can't say.

Ques. Then it was in a boat that was subject to the rise and fall of the tide?

Ans. Yes.

Ques. High tide it was under water?

Ans. High tides it was partially under water.

Ques. Now, were you present at Darling's shipyard, or Darling's shop, to superintend the overhauling of that engine?

Ans. Darling's shop?

Ques. What was the name of that?

Mr. French: Derby & Weatherby.

Ques. Derby's shop, to superintend the reconstruction and overhauling of the engine?

Ans. The engine was not overhauled at Derby's shop.

Ques. Well, were you there to inspect the putting together of the engine?

Ans. Yes; part of the time.

Ques. Did you superintend the entire process of putting it together?

Ans. Practically so. I was not there all the time continuously.

Ques. Were you present when this new valve was put on about two days before the accident?

Ans. No.

Ques. Then you don't know the condition of that valve?

Ans. No.

Ques. You don't know. You said in your direct examination that it was a simple process and all that was required was a little packing under there. You don't know whether that packing was put there or not?

Ans. Yes; I know the packing was put there.

Ques. How do you know it?

Ans. Because I saw the valve after it came out and it had the packing on the edge of the flange, what was left of it.

Ques. Then you don't know, of your own knowledge, how thoroughly or completely that valve was packed?

Ans. No.

Ques. And how long after this accident was it that you saw this valve after it was taken out?

Ans. Why, I don't know exactly. I suppose probably two or three weeks; might have been a week.

Ques. After it was taken out?

Ans. After the accident.

Ques. Oh, after the accident. What was done with the valve after it was taken out at that time?

Ans. Well, I saw the packing after the valve was taken out.

Ques. What was done with the valve after it was taken out, two or three weeks after the accident?

Ans. I didn't say the valve was taken out. I said I saw the packing on the valve after it was taken out. It was longer than two or three weeks, but two or three weeks after the accident I saw the valve in position and saw the packing there in between the flanges.

Ques. Do you know whether or not it has been repacked since the accident?

Ans. I do not.

Ques. From the time you saw it?

Ans. I do not, and I imagine not.

Ques. Why do you imagine not?

Ans. Because I had no report of it.

Ques. That is the only reason?

Ans. Yes.

Ques. You are a civil engineer?

Ans. Yes, sir.

Ques. Not a marine engineer?

Ans. No.

Re-direct examination.

By Mr. French:

Ques. When you said the engine was submerged, you were about to explain why. Just explain now what you meant by that.

Ans. The dredge was old and sometimes we put them ashore in our yard at Camden, or we used to. In order to put them ashore so they won't float around the dock and get in the way we very often pulled out plugs in the bottom of the dredge, which allows the tide to rise to a certain extent in the hold and fall out also in the hold. That is the only submerging that the engine was subjucted to.

Ques. Were all the parts of the engine covered when it was submerged?

Ans. No.

Ques. What parts were not there?

Ans. Oh, as soon as the engine came in all the brass work was taken off of it.

Ques. What was done with it?

Ans. That was taken up in the shop, the Derby shop.

Ques. Then afterwards what was done with the balance?

Ans. Afterward the whole engine was taken out to the Derby shop.

Ques. In answer to Mr. Acton you said something about the valve being packed. Did you mean the valve or the flanges?

Ans. No; the flanges in between the valve and the steam pipe.

Ques. Or between the flanges of the pipe that contained the valve?

Ans. Between the steam pipe and the pipe that contained the valve.

Ques. Just describe what this valve is that is bolted in.

Ans. The valve is a great deal like a damper in a stove pipe.

Ques. Well, when it is bolted in is the stove pipe there with it?

Ans. It is entirely; in other words, the valve comes as a whole with the flanges on all in one piece, the outside and inside of it altogether, but the outside is one casting, and, of course, the stem that comse through on which the shutting off part of the valve is hung, that all comes intact.

Ques. This casting that contains the valve, how thick a casting is it?

Ans. I should judge it was about three-quarters of an inch.

Ques. Of iron pipe?

Ans. Yes.

GEORGE H. HUDSON, sworn.

Direct examination.

By Mr. French:

Ques. With whom were you employed in 1902, captain?

Ans. River & Harbor Improvement Company.

Ques. Are you still employed by them?

Ans. Yes, sir.

Ques. What was your employment in 1902?

Ans. I had charge of a dredge.

Ques. What dredge?

Ans. Dredge Asia.

Ques. When did you take charge of her?

Ans. April, 1902.

Ques. Know Mr. Sparks?

Ans. Yes.

Ques. When did he come on the dredge?

Ans. Somewhere about the 28th of August, 1902.

Ques. What were his duties?

Ans. Fireman.

Ques. What were his duties as fireman? What did he do as fireman?

Ans. He was supposed to keep up steam on the boilers and look after the engines, oil them, and generally oil them maybe every half hour or maybe every hour; oil the drums during the day, and if the engine needs any packing around the stuffing boxes, supposed to put that in.

Ques. What did he do in fact as fireman before he was hurt?

Ans. That is what he did; what I am telling you.

Ques. He did that? What other duties did he have with respect to the engine? What were his duties—or, first, do you know when he came there in the morning?

Ans. Generally gets steam first thing.

Ques. What next?

Ans. Well, it is very hard to tell what next.

Ques. What, before he went away at night, did he have anything to do with regard to this engine?

Ans. Supposed to.

Ques. Well, what was it?

Ans. Generally, after you are done, open the cylinder cocks so as to bleed the cylinders and shut the steam off the boiler.

Ques. How do you shut the steam off the boiler?

Ans. By a stop valve between the throttle and the boiler.

Ques. Then there is a valve between the throttle valve and the boiler, is there?

Ans. Yes, sir.

Ques. How had the engines been working on the Asia before Mr. Sparks came there?

Ans. Well, they had been fairly good. Some days they were worse than others. Generally managed to keep them going.

Ques. What was the trouble?

Ans. Well, I couldn't tell you about that. Some say one thing and some another. We had had machinists down there from the American Dredging Company once or twice that summer working on them.

Ques. Where was your position with respect to these engines? Were you in the engine room or outside?

Ans. I was on the house somewheres about eight feet above.

Ques. Could you see the engines?

Ans. No, sir.

Ques. At the time of the accident what time of the day was it?

Ans. Oh, somewheres around, I should judge, nine o'clock; between eight and nine.

Ques. In the morning?

Ans. Yes.

Ques. What was the first thing that you knew?

Ans. What do you mean, when the accident happened?

Ques. Yes; I mean just before the accident happened.

Ans. I don't hardly understand that.

Ques. Well, did the engines stop, or were they going all right?

Ans. Well, they had been going all right all the morning.

Ques. When was the first time they stopped?

Ans. Well, as far as I remember we were going to load a scow to cart down the river where we needed some material. The material down the river was hard; it didn't dig well, and we were going to load a scow to take down to put on it, and I think I had put maybe two or three buckets in the scow and set the bucket overboard and we were going to close the bucket and it didn't start.

Ques. What happened?

Ans. And then, as far as I remember, Mr. Sparks said that I told him to—I might, I don't remember, but he was, I think, scrubbing the engine room floor right alongside of the engine on the port side; that would be the left hand side, and he stood right over the engine—

Ques. What happened? Did your engines stop?

Ans. Oh, yes.

Ques. Well, did you try to start it?

Ans. Yes, sir.

Ques. How did you try to start it? What did you do to start it?

Ans. By pulling the lever to disconnect the pressure.

Ques. What did that do?

Ans. It left steam in the pipe.

Ques. Let steam into all of the cylinders? Now, did the engine move?

Ans. No, sir.

Ques. What did you do next?

Ans. Well, when I pulled the lever and it didn't start, then I shut it off again.

Ques. Then what happened?

Ans. Then is when Mr. Sparks went to pinch it off.

Ques. You don't remember whether you told him to or not?

Ans. I don't think I did.

Ques. What did you do with your clutches; did you leave them on or take them off?

Ans. I think the levers was down, but the chains were slack.

Ques. Then what happened?

Ans. Well, then, the next thing I heard him and the other fellow hollo.

Ques. How long was that after you had shut off the steam?

Ans. Well, about as long as I could strike a match and light my pipe. That is what I was doing when I heard them hollo.

Ques. And you started to strike a match as you pulled the lever, did you?

Ans. No; just after I shut the throttle off, while he was getting over there to pinch the engines over I struck a match to light my pipe and I had not finished when he hollered.

Ques. Then what did you do?

Ans. I run down and released him.

Ques. What did you find when you got there?

Ans. I found him. He was lying over that little pinion with his face—

Ques. This small wheel?

Ans. Yes; that is what cut his face. He was lying with his face right into that little wheel.

Ques. Where was his arm?

Ans. His arm was like that way across it and nearly through.

Ques. When the engines were going, which way did the wheels revolve, towards one another?

Ans. Yes, sir.

Ques. And he had fallen in and the wheels had taken his arm nearly through?

Ans. Yes; about two teeth.

Ques. Two teeth been through or gone in two teeth?

Ans. From being through.

Ques. Then what did you do?

Ans. Well, first thing I began to see how I was going to get him out. You see, that block on that side is pretty close to that little wheel and there wasn't room

for his arm to come out there, and the first thing I had to do was to get an axe and cut that out.

Ques. Did you look at your cylinder cocks before you did that?

Ans. No, sir; I didn't, but I told the deck-hand to shut the steam off the boiler while I was getting the axe.

Ques. That is, shut the other valve?

Ans. Yes; the stop valve, and then I opened the cylinder cocks.

Ques. Who opened the cylinder cocks?

Ans. I think I did.

Ques. And you found them closed, did you?

Ans. Yes, sir.

Ques. What did you do after you opened the cylinder cocks?

Ans. Found we had to go on deck and get another bar to pinch her on around so he could get his arm out.

Ques. So you, with a bar, worked the wheels around until his arm fell through?

Ans. Yes; we had to pinch the other way. If I had pinched the same way he did that would have brought his arm through, and I pinched from this side.

Ques. You pinched the other way, from the bottom around?

Ans. Yes.

Ques. Have you ever pried this engine off center?

Ans. Yes, sir.

Ques. Which way did you pry it off when you pried it off?

Ans. When I had to set it, don't you see, we didn't work the chain, when we would be doing something to the engines. I had one or two times. We had a machinist there and we had to pry over for him to set the valves.

Ques. What valve?

Ans. In the steam chest. Then we had to pry her the way she ran. That would be from the bottom.

Ques. That is underneath?

Ans. Yes, sir.

Ques. Did you give Mr. Sparks any instructions how to pry it off?

Ans. I don't think I had.

Ques. Had you given anybody else any instructions?

Ans. No, sir; not that I know of.

Ques. What would have been the effect if he had opened the cylinder cocks before he started to pry the engines off center?

Ans. I think they would have stood still.

Ques. If the cylinder cocks were closed, how much of a revolution would be made by the engine with the steam that was between the throttle valve and the piston head?

Ans. I don't think it would turn more than two or three times.

Ques. Do you think they would turn that much within that time?

Ans. Well, from the way the big wheel turned, I should think they would, maybe a couple of times.

Ques. Who had put the valve on?

Ans. I did.

Ques. When?

Ans. I think the 17th of September.

Ques. When was he hurt?

Ans. The 19th.

Ques. What sort of valve was it? That is, was it in good condition or fair condition?

Ans. It was a new valve, supposed to be as good as any new valve of that kind.

Ques. Did it work right before that time?

Ans. Worked very good; yes.

Ques. After that did you do anything to it?

Ans. No, sir.

Ques. How long did you use it after the accident?

Ans. Well, we finished work in Darby creek in December, just before Christmas, and it stayed on there yet until February.

Ques. And was it working all the time from the time of the accident until February?

Ans. No, sir; we didn't work from December until February.

Ques. That is to say, it worked all the time from September, when he was hurt, until December?

Ans. Yes.

Ques. What time in December?

Ans. I couldn't just say exactly without I had my memorandum book, but just before Christmas we finished work, somewheres about the 20th or 22d.

Ques. Did it leak any?

Ans. No, sir; not enough to hurt anything.

Ques. Did you make any repairs to the engine immediately after the accident?

Ans. No, sir.

Ques. How about this getting on center after the accident?

Ans. Well, it used to do it sometimes.

Ques. About the same as it did before, or less or more?

Ans. No; not any more. Of course, we kept working on it every chance we could get. We may have renewed the bolt in the boiler head to help the springs out. I think the springs was out to the shop getting new bolts the day Captain Rickerts brought the rings down.

Ques. Who helped in putting rings in the piston head?

Ans. We had a machinist from the American Dredging Company to do it.

Ques. Did Sparks have anything to do with it?

Ans. He wasn't there.

Ques. This was after?

Ans. No; before he came.

Ques. This valve, how was it put on? How was it fastened?

Ans. The one we had was about eight or nine inches long.

Ques. Do you mean the valve itself or the pipe?

Ans. The whole casting with a thread on each end screwed right on the pipe.

Ques. Screwed on the pipe, was it? Then it was not bolted on?

Ans. Some of them are, but this particular one was screwed on.

Ques. Did that valve leak any that you know of?

Ans. Don't think it did.

Ques. Did it leak before the accident?

Ans. No, sir; I never noticed it.

Ques. Did it leak after the accident?

Ans. Not enough for you to notice it. It might have leaked a little bit. It is very hard to keep a throttle valve perfectly tight.

Cross-examination.

By Mr. Acton:

Ques. I understand from you that this was a butterfly valve that was put in to replace the old one. Is that so?

Ans. Yes, sir.

Ques. Now, that sort of valve is something in the nature of a damper in a stove pipe, isn't it?

Ans. Yes.

Ques. When you shut it off, turn it one way, it prevents the steam from coming from the boiler into the engine, into the cylinder that works the engine?

Ans. Yes, sir.

Ques. And if that valve is in proper shape and is properly shut off, it is impossible for the steam to get in there, isn't it?

Ans. Yes; it is not supposed to get in if the valve is shut off.

Ques. Wasn't that valve bent a little, captain?

Ans. No, sir; not that one.

Ques. What one was bent?

Ans. I didn't hear anybody say about any one being bent.

Ques. You are certain that that valve was not bent?

(No answer.)

Ques. Now, you put this valve in two days before the accident?

Ans. About two days; yes.

Ques. Had you run it in the interval?

Ans. Yes, sir.

Ques. How much had you used it?

Ans. We worked about, when the tide would allow, about ten or twelve hours a day. Some days worked more hours than we did others.

Ques. Did this engine get on center very often?

Ans. I don't remember just how often, but sometimes, maybe a couple or three times a day, we would be bothered with it, sometimes not so much.

Ques. Did you pry this engine off center at any times when it got on center?

Ans. Yes, sir.

Ques. How did you pry it off?

Ans. Well, sometimes one way and sometimes another. Generally whichever I could do it the quickest or the handiest.

Ques. Didn't you almost invariably pry it off the same way that Sparks did?

Ans. I can't say I did.

Ques. Did you ever open the cylinder cocks before you pried it off?

Ans. Well, if steam was on I generally did.

Ques. Did you?

Ans. I wouldn't say about that. I might be mistaken.

Ques. Then you won't—

Ans. Oh, I don't generally work on it with the steam turned on.

Ques. Did you open it when the steam was not on?

Ans. They are generally always supposed to be open all the time when you are not working.

Ques. I ask you if you took the precaution to examine the cylinder cocks before you pried the engine off center?

Ans. If I knew there wasn't any steam in the pipe, it didn't make no difference.

Ques. How would you know that?

Ans. I would know whether the steam was in the pipe or not.

Ques. By having previously shut it off yourself?

Ans. Or anybody else.

Ques. By having previously shut it off?

Ans. I say or if anybody else would shut it off. If I was in the engine room and saw the engine working, I could tell whether steam was in the pipe or not.

Ques. Did you ever show Mr. Sparks how to pry this engine off?

Ans. Not to my knowledge. He had been around dredges for a couple of years, perhaps a year, or perhaps—

Ques. Was it a part of his duty to pry this engine off?

Ans. Well, he was there to do whatever work there was to do; the same as I was.

Ques. Was that a part of his duty?

Ans. I should think, if it was required.

Ques. Is an engine of that character supposed to get on center?

Ans. No, sir; not supposed to, but they often do. Get some little thing the matter that you don't just see on the instant.

Ques. Then if they get on center it is because there is something the matter that you don't see?

Ans. I should think so.

Ques. Then there is a defect of some kind in the engine gets it to get in that situation, don't it?

Ans. It might be in the cylinder, or it might be—

Ques. But there is a defect somewhere?

Ans. Yes; it might be keyed up too tight.

Ques. Now, it is not supposed to be a part of a fireman's duty to pry the engine off center, because an engine is not supposed to get on center.

Ans. There is lots of things that you have to do that we are not supposed to do, a man that works. I do lots of things that people tells me that they wouldn't do, but if they were in my place likely they would do it.

Ques. Now, captain, are you a machinist?

Ans. No, sir.

Ques. Are you an engineer?

Ans. No, sir; not a licensed engineer. I have been working around dredges for about eighteen years in different capacities.

Ques. Captain, when you found that Sparks was caught you sent another helper off quickly to shut off the steam?

Ans. Yes, sir.

Ques. Why did you do that?

Ans. I wanted to make sure things wouldn't turn any more.

Ques. If you were certain that you had shut off the steam was it necessary to do that?

Ans. Well, it might not have been. It might have stood just where it was, but I wanted to make sure of it.

Ques. You wasn't certain at all but that there was a leak in the valve, were you, at that time?

Ans. I didn't think there was.

Ques. Did you think anything about it at that time?

Ans. Why, all I thought was to get him out of there the quickest I could and the safest. I saw he was hurt.

Ques. Did you subsequently examine, right away after this accident, examine that new butterfly valve to ascertain if it had been closed?

Ans. No, sir; went right on working the next day.

Ques. You know that you had attempted to shut the steam off before he went to pry the engine off center, didn't you?

Ans. Yes; I know I did it.

Ques. But, as a matter of fact, you don't know whether you succeeded in that or not?

Ans. I do. I not only intended to do it, but I did it.

Ques. Now, you say that frequently you had engineers there to work on this engine during that summer; is that right?

Ans. I said twice to my knowledge. Well, the first time the machinist was there he was working on the

drums, I believe, and I think the next time he came down to set the rings out in the cylinders.

Ques. How about this engine leaking steam; what do you know about that, captain?

Ans. Well, I would like for Mr. Sparks to tell me where the steam leaked out.

Ques. Well, is it a fact or isn't it a fact?

Ans. Perhaps it was his duty to stop it. The only place that there could any steam leak would be around the cylinder heads or around the stuffing boxes, and that is a very small matter to stop. Just turn a nut like and you can stop that.

Ques. What do you know about the history of this engine, captain? How long had you known this engine?

Ans. I know nothing about the history of it. The first time I ever saw it was when I went out to take charge of the dredge.

Ques. When was that?

Ans. That was in April, 1902.

Ques. It had then been installed in the new Asia?

Ans. Well, I don't think it was all in at that time, but Mr. Lambert had a machinist there working on it; that is, fitting it up and putting it together.

Ques. You have worked on other dredges?

Ans. Yes, sir.

Re-direct examination.

By Mr. French:

Ques. Did you see or know of any leaks in this engine or throttle valve either immediately before or immediately after the accident?

Ans. No, sir.

Ques. You said you could see whether steam was on or not in the engine room. Could anybody else?

Ans. I should think so, if they had been around engines. They could tell whether steam was in the pipe or not.

Ques. You said that getting on the center was due to defects? Could that also be due to improper adjustment?

Ans. Well, it might be caused by an engine being keyed up too tight. It might make it start hard, but if she got hot—

Ques. What do you mean by keyed up too hard?

Ans. On the pin or on the cross head there is a set of little brasses made in two halves that goes on the crank pin or cross head.

Ques. Where are this crank pin and cross heads?

Ans. The crank pin is that little fellow outside, that would be the crank pin; there is a little brass goes on that on two sides of it with a taper key, and you can drive that down so hard it could not turn or if it would get warm it would stop it.

Ques. Who had charge of them?

Ans. All the dredges I was on the fireman attended to it.

ROBERT RICKERTS, sworn.

Direct examination.

By Mr. Wescott:

Ques. Captain, what is your business?

Ans. Now?

Ques. Yes.

Ans. Operating a dredge.

Ques. Connected with the River & Harbor Improvement Company any way now?

Ans No, sir.

Ques. Were you in 1902?

Ans. Yes.

Ques. How?

Ans. I was superintendent at that time.

Ques. Do you remember the dredge Asia, the one on which Mr. Sparks got hurt?

Ans. Yes, sir.

Ques. When did you first see the engine in that dredge —not the engnie in the dredge, but the engine that was in the dredge?

Ans. Why, I just couldn't say the year.

Ques. About when?

Ans. I think it was about 1807 or 1808.

Ques. Do you mean—

Ans. No; I just forget the date.

Ques. About what year did you first see it?

Ans. It was about 1887.

Ques. Where was it in 1887?

Ans. In the old dredge Asia.

Ques. What happened to the old dredge Asia?

Ans. Why, the hold played out and then they towed her up on the mud so as to have her up at the head of the dock to get the machinery out of her.

Ques. Did they or didn't they take the machinery out?

Ans. Yes; they took it out.

Ques. When did they take the machinery out?

Ans. 1898.

Ques. About 1898?

Ans. Somewheres about there.

Ques. Where did they take it when they took it out?

Ans. Took her up in the store room.

Ques. Whereabouts?

Ans. Up at Derby's shop, the machine shop.

Ques. The machine shop?

Ans. Near the machine shop, the store room.

Ques. How long did it stay there?

Ans. I couldn't say exactly the year. Remember of it being there two years.

Ques. Then what happened to it?

Ans. After that?

Ques. Yes.

Ans. Why, it was taken from there down to the new yard or the place they moved, at the foot of Jackson street.

Ques. Then what happened to it?

Ans. It was taken from there then and put in this new scow.

Ques. When was it put on the new scow?

Ans. Why, they had it on in March and April.

Ques. What year?

Ans. 1902.

Ques. The year Mr. Sparks got hurt?

Ans. Yes, sir.

Ques. How did it work after it was put on the new scow?

Ans. Why, it worked. It done the work with it.

Ques. You saw it work, did you?

Ans. Yes.

Ques. What about the throttle valve that was on it at the time Mr. Sparks was hurt; did you have anything to do with that valve?

Ans. Yes; I got it from the shop and took it down to the dredge.

Ques. Where did you get that valve.

Ans. I got it at Crane's, on South Fifth street.

Ques. Whereabouts?

Ans. Between Spruce—no; right near Walnut street.

Ques. What city?

Ans. Philadelphia.

Ques. What was the condition when you bought it, second hand or new?

Ans. No, sir; new.

Ques. Did you inspect it before you purchased it?

Ans. Yes, sir.

Ques. Who put it on?

Ans. The captain of the dredge and the fireman.

Ques. Did you see them put it on?

Ans. No, sir.

Ques. Did you take it to the dredge?

Ans. Yes, sir.

Ques. How long after the accident did that valve remain on?

Ans. Remained on the remainder of that year.

Ques. Do you know whether it worked or not?

Ans. Yes; it worked.

Ques. Did you see it work?

Ans. Yes.

Ques. What about the engine on the dredge Asia at the time Mr. Sparks was hurt and before; did you see it working about that time?

Ans. Yes, sir.

Ques. Was its condition poor or good or indifferent?

Ans. Well, it worked.

Ques. Well, was—

Ans. Yes, sir.

Ques. What as to its leaks? Did it leak?

Ans. Not to hurt.

Ques. What sort of valve was this?

Ans. Butterfly valve.

Ques. With relation to the engine, was it a steam valve or throttle valve, or what was it?

Ans. Throttle valve.

Ques. When you got it in what shape was it, put together or in parts?

Ans. Put together, all together.

Ques. What was required to do to put in on?

Ans. Just connect it up to the steam pipes.

Ques. How was that done?

Ans. Why, either screw them on or put them on with flanges, whichever way you choose.

Ques. How was this dredge fitted up?

Ans. This one screwed in.

Ques. And not put on with flanges?

Ans. Yes, sir.

Ques. Did you have at any time before the accident any conversation with Mr. Sparks about the way he pried the engine off the center?

Ans. Yes, sir.

Ques. Where and when?

Ans. Why, some time before, in the engine room.

Ques. Of the dredge Asia?

Ans. Yes, sir.

Ques. What did you say to him?

Ans. Why, I told him about opening and shutting the cylinder cocks, opening them at night and closing them in the morning when they start working.

Ques. Well, what about prying the engine off center; what did you say to him about that?

Ans. I told him he would have to be careful which way he put his bar in in between the teeth.

Ques. Just state as near as you can recollect what you said to him.

Ans. Why, I cautioned him if he put the bar on top there and if the engine started it would poke the bar over and if he didn't leave go of it, it would pull him over too, and by putting the bar under the pinion when the engine started the bar would fall down the other way and there is no damage.

Ques. After the accident did you have any conversation with Sparks?

Ans. Yes, sir.

Ques. Where?

Ans. In the hospital.

Ques. What was said then?

Ans. Why, he said that it was his own fault that he was hurt.

Ques. What sort of valves are usually used on dredge engines?

(Objected to on the ground that this man is incompetent to testify on that subject.)

Ques. How long have you been engaged in dredging and in the use of dredging engines?

Ans. Twenty-two years.

Mr. French: Please repeat the question.

Mr. Wescott: I object on the ground that he is not an expert.

The Court: I think he has had sufficient experience to enable him to testify as to what kind of valves are used. I will permit the question.

(Question repeated as follows: "What sort of valves are usually used on dredge engines?")

Ans. There is two or three different kinds.
Ques. What kinds.
Ans. Of the butterfly valve.
Ques. What other kind are there?
Ans. What I would call a plug valve.
Ques. What other kind?
Ans. And then there is what I don't know just the name of the other one. It would be a four-way valve that I have had a good bit of practice with, four ports.
Ques. To what extent are butterfly valves used, little or to a great extent?
Ans. Well, we haven't used them very often only on this one dredge. We have different kinds on different dredges.
Ques. Well, aren't these other valves that you have been speaking about also known as butterfly valves?
Ans. What, the four-way valve?
Ques. Yes.
Ans. That is what I used to call a butterfly valve, but I don't know just the right name for it.
Ques. As a class, are the valves that are used as throttle valves on dredge engines quick acting or slow acting?
Ans. Supposed to be quick.
Ques. Why?
Ans. So as to get the steam into the engines quick to do the work quick.

Ques. Is it or isn't it common for dredge engines to get on center?

Ans. Well, some times they stick.

Ques. Does that mean get on center?

Ans. Yes; they hang that way.

Ques. Is that due to adjustment of the engine or defects in the engine?

Ans. To the adjustment partly.

Cross-examination.

By Mr. Acton:

Ques. Due to defects, too, isn't it?

Ans. Yes; it would if they were defective.

Ques. How many times were you aboard this dredge while Sparks was on it?

Ans. I couldn't say just how many; sometimes I would be there every day in the week once a day.

Ques. While Sparks was on it?

Ans. Yes; we will say four times a week.

Ques. When did you caution Sparks about prying this engine off center?

Ans. While I was on this dredge.

Ques. When, what particular time, and how did you happen to do it?

Ans. Why, I cautioned him.

Ques. Was he in the act of prying it off center any time when you were there?

Ans. Yes, sir.

Ques. When?

Ans. Why, I don't know just what time it was, but it was once or twice while I was over there.

Ques. Once or twice he was in the act of prying this engine off the center while you were there?

Ans. Yes; during the time that he was on it.

Ques. How close were you to him?

Ans. Oh, I would be, say, ten feet.

Ques. Did you open the valves before he did it?

Ans. No, sir.

Ques. Did you tell him to open the valves before he did it?

Ans. No, sir.

Ques. What did you say to him?

Ans. I told him to be careful where he put his bar.

Ques. Is that all you said?

Ans. Yes; cautioned him to be careful where he stood, to be sure and stand on the floor and put his bar under the pinion.

Ques. How would he do that from the floor, captain? Didn't that pinion stand up some four feet from the floor?

Ans. No, sir.

Ques. How high was it from the floor?

Ans. Eighteen inches.

Ques. Did you measure it?

Ans. I have measured it.

Ques. When?

Ans. When we were fitting the dredge up.

Ques. Did you ever start this engine from off center?

Ans. I have started her when she has been stuck.

Ques. When?

Ans. Well, it was on this work.

Ques. After Sparks was hurt?

Ans. Yes; and before it.

Ques. How did you start it?

Ans. Why, I went and put my bar under the pinion.

Ques. The same way that he did?

Ans. No, sir; he didn't do it that way.

Ques. Was he there when you started it?

Ans. I don't know whether he was working at the time or not.

Ques. Did you ever see the captain start it?

Ans. I have seen him pry her there.

Ques. How did he use his bars?

Ans. When the steam is off the engine it doesn't matter whether you put it on top or under it.

Ques. Did you ever see him start it when the steam was on the engine?

Ans. Not that I know of.

Ques. How many times did you see the captain start it?

Ans. How many was it? I have seen him start it, I don't know just how many times I have seen him pry it over.

Ques. Ever see anybody else pry her over?

Ans. I couldn't say that.

Ques. Did you caution the captain, too.

Ans. No, sir.

Ques. Didn't caution the captain, but cautioned Sparks?

Ans. Yes; Sparks and the deck-hand.

Ques. What reply did Sparks make to you when you cautioned him?

Ans. I don't know that he made any.

Ques. You don't know that he heard you, do you?

Ans. Yes; he heard me.

Ques. Do you know whether he was there or not?

Ans. Yes; he was there.

Ques. Are you a stockholder in this company?

Ans. No, sir.

Ques. Do you work for them?

Ans. Not now.

Ques. What company do you work for now?

Ans. I work for the Houston-Rickerts Dredging Company now.

Ques. Is that an independent company, independent of this company?

Ans. No, sir; independent from that company.

JOHN RICHARDSON, sworn.

Direct examination.

By Mr. French:

Ques. Mr. Richardson, who do you work for?
Ans. River & Harbor Improvement Company.
Ques. And did you work for them at the time Mr. Sparks got hurt?
Ans. Yes, sir.
Ques. What was your position?
Ans. I was deck-hand.
Ques. On the dredge Asia?
Ans. Yes, sir.
Ques. Where were you when the accident happened?
Ans. I was on deck.
Ques. Did you see it?
Ans. Yes; I saw it.
Ques. Just tell the jury what you saw, what Mr. Sparks did?
Ans. He took the crowbar and pried the engine off center and the engine started and he fell down in the cog-wheels.
Ques. Was the steam off or on when he did that?
Ans. The steam was off.
Ques. How long after the steam was off was it when he started to pry it off?
Ans. About two or three minutes somewheres.
Ques. Where did he put his bar?
Ans. On top of that wheel.
Ques. On top of the cog-wheels?
Ans. Yes, sir.
Ques. Where did he stand?
Ans. Stand on the braces between the engine.
Ques. When he pried what happened?
Ans. The engine turned over.
Ques. The engine turned part way and then ran the other way?

(Objected to as leading. Question overruled.)

Ques. State what did happen?

Ans. The engine turned over.

Ques. Which way? Which way did these cog-wheels go; towards one another, or away from one another?

Ans. Yes; towards one another.

Ques. How far did they turn?

Ans. I couldn't say how far they turned.

Ques. How many revolutions did they make?

Ans. I don't know.

Ques. Did they turn around many times or few?

Ans. No; didn't turn around many times.

Cross-examination.

By Mr. Acton:

Ques. Mr. Richardson, did you ever pry this engine off?

Ans. Yes, sir.

Ques. Pry it off the same way that Sparks did?

Ans. Sometimes I did it that way and sometimes the other way.

Ques. Anybody ever tell you how to pry it off?

Ans. No.

Ques. Did you ever hear anybody tell Sparks how to pry it off?

Ans. No.

Ques. Now, this engine got on center pretty often, didn't it?

Ans. Yes; sometimes three or four times a day; sometimes more and sometimes less.

Ques. Do you remember where the bucket was when the engine got on center this time?

Ans. No; I do not.

Ques. Don't know whether the bucket was up or down?

Ans. No; don't remember.

Ques. You saw the engine when it got on center, didn't you?

Ans. Yes; I was standing there.
Ques. And saw it stop?
Ans. Yes; I saw it stop.
Ques. And saw it refuse to go?
Ans. Yes, sir.
Ques. You heard somebody hollo "Shut her off," didn't you?
Ans. No.
Ques. You are the man that the captain told to go shut off the other throttle, are you?
Ans. Yes, sir.
Ques. Why did that have to be done?
Ans. So the engine wouldn't turn.

PERCY H. WILSON, recalled.

Direct examination.

By Mr. French:

Ques. Mr. Wilson, after this accident did you have any conversation with Mr. Sparks about employing him again?
Ans. Yes.
Ques. What did you say to him and what did he say to you?
Ans. I offered him a job at the same wages he was getting before the accident occurred.
Ques. What did he say?
Ans. He said he didn't want the job; he wanted money.

No cross examination.

EDWIN LAMBERT, sworn.

Direct examination.

By Mr. French:

Ques. Where do you live, Mr. Lambert?
Ans. In Camden.
Ques. What is your business?
Ans. Machine shop there.
Ques. How long have you been a machinist?
Ans. Forty-three years.
Ques. Do you remember the engine in the old dredge Asia?
Ans. I do.
Ques. When was it taken out of the old dredge?
Ans. I can't recollect exactly the year, but I think about 1898, or it might have been a year or two before that?
Ques. Wasn't any later than that?
Ans. No, sir.
Ques. Where was it taken when it was taken out?
Ans. Taken to Mr. Derby's shop, Derby & Weatherby's machine shop.
Ques. In Camden?
Ans. Yes, sir.
Ques. In the spring of 1902, did you have anything to do with that engine?
Ans. I did.
Ques. What did you have to do with it?
Ans. I had to put it in thorough order and overhaul it.
Ques. Did you?
Ans. I did; yes, sir.
Ques. When did you finish the work?
Ans. Why, in August, I guess, July or August, 1892.
Ques. 1902?
Ans. 1902; yes, sir.
Ques. After you left it, what condition was it?

Ans. In good condition; worked all right, they said.

Ques. What kind of throttle valve did it have?

Ans. Butterfly throttle.

Ques. Is that a usual valve for engines of this character?

Ans. Well, some use them and some don't. It is a valve calculated for hoisting engines.

Ques. Is it or isn't it dangerous to pry an engine off of the center?

Ans. Well, it is dangerous to pry an engine off of the center unless you open your cylinder cocks, anyhow, no matter what kind of throttle you use, unless it has been standing for some time.

Ques. Is it more or less dangerous to pry against the steam or with the steam?

Ans. Why, it is more dangerous to pry against the steam because you are more apt to get caught in case the engine should happen to start up.

Ques. What are the cylinder cocks?

Ans. Well, they are little cocks that come from under the cylinder, right at the end of the cylinder to let the water and steam out, the condensed steam and water.

Ques. Describe this particular engine from the boiler down to the cylinders, how it was conducted, its size, and so forth.

Ans. Well, there was a stop valve put right next to the boiler in case anything gets the matter with the steam pipe or anything of that kind; we generally put a valve close to the boiler to shut off that. That closes the steam out of the pipe altogether. It is usually left open while they are working, but that is through the day, but if it is shut down at night or raw cold weather, or anything of that kind, they shut it off to keep the steam from condensing in the pipe and filling the pipe with water, but during the day it is generally left open.

Ques. How long a pipe was there on this engine from that to the throttle valve?

Ans. Well, as near as I can recollect, I think it was about sixteen to eighteen feet.

Ques. What kind of pipe?

Ans. I think it was four-inch pipe up to the throttle valve and then it branched off with two-inch pipe down to the cylinders.

Ques. How much of the branch was there of the two-inch pipe?

Ans. I couldn't tell you exactly.

Ques. About how many feet? Was it long or short?

Ans. The distance between the two engines, I think, was about seven feet.

Ques. How high above the engines were they there?

Ans. They ran up about four feet, I should judge, above the cylinders.

Cross-examination.

By Mr. Acton:

Ques. How long have you known this particular engine, Mr. Lambert?

Ans. Well, I think I have known, let's see—this is 1906—I think I have known that engine about eleven years, as near as I recollect.

Ques. Wasn't it in the old dredge Asia at one time?

Ans. Yes; it was in the old dredge Asia.

Ques. Wasn't it the original engine that was in the old dredge Asia when she was built?

Ans. As far as I know.

Ques. That was thirty or forty years old?

Ans. I couldn't tell you about the old dredge Asia.

Ques. She goes back as far as you know?

Ans. I can remember these engines about ten or eleven years.

Ques. You do work for this company, do you not?

Ans. I have done work for them; yes, sir.

Ques. Are you a stockholder in it?

Ans. No, sir.

Ques. Now, did you do the work yourself on this engine, or did your men do it?

Ans. My men done it. I was there every day nearly looking after the things.

Ques. But your knowledge simply extends to the general knowledge of the manager of a factory? Didn't examine this engine minutely yourself, did you?

Ans. Yes; I gave it a pretty good examination.

Ques. Pretty good. Did you examine this butterfly valve that was in it when you turned it out from your shop?

Ans. I didn't turn that valve out. It didn't come from our shop.

Ques. Did you have any everhauling to do to that valve, the old butterfly valve?

Ans. Well, no. We generally—when we buy a new valve we don't overhaul them. We generally buy them in good condition.

Ques. When you get a new one?

Ans. Yes.

Ques. But you didn't overhaul the old valve that this new valve took the place of?

Ans. I don't know anything about it only the valve we put on in the first place, and that was the same kind of valve. I don't know whether that is the valve that cut this man's hand off. I don't know which was on at that time.

Ques. When did this machine leave your shops?

Ans. Why, we had parts of it there nearly all summer; some parts of it, you know.

Ques. And this machine that you turned out of your shop, you say, was in first rate working order. If you had turned it out in first rate working order, would it have been necessary for the dredging company to have sent an expert there two or three times during the summer to have ovrhauled it after it left your shop?

Ans. Well, I don't know that they did.

Ques. You don't know that they did?

Ans. No, sir.

Ques. But you turned it out of your shop in such condition that it ought not to have been necessary for that, didn't you?

Ans. That is what I think.

Re-direct examination.

By Mr. French:

Ques. Were you the man that sent the man down to look after it through the summer?

Ans. After the machine left the yard and went to work I had nothing more to do with it, and I have never been on the machine but once or twice since, and that was in six or eight months after the machine commenced running.

Ques. After this accident?

Ans. They told me the machine was running all right and gave satisfaction.

Defendant rests.

PLAINTIFF'S TESTIMONY IN REBUTTAL.

RICHARD GILPIN, recalled.

Direct examination.

By Mr. Wescott:

Ques. Mr. Gilpin, is a butterfly valve regarded nowadays as a safe valve to use?

Ans. No. It is usually used as an emergency stop valve in steam practice, to put in the main pipe to shut

off the valve in an emergency, when an accident occurs, or a break in the pipe, to give them time to close the regular valves as a rule.

Ques. It is used then in conjunction with a better valve?

Ans. Oh, yes, yes; it is very uncertain, for the simple reason that it depends on the bearing. It is a disc that sets right in the center of the line of direction of the flow of steam and there is a stem that runs through it from one side to the other.

Ques. Like a stove pipe?

Ans. Yes, sir; very similar; and if that gets warm slightly on the lower side, why, of course, naturally, it throws it out of center with the center of the opening of the pipe, so that naturally the top will not come up flush against the upper side of the steam pipe, so that there is always a possibility of a slight leakage there, so they usually jack it down and that sometimes tends to strain the stem, and so in that way—I have used quite a number of them in the special position where I had an engine that was likely to raise a sudden release of the load, and I used them in connection with the drop, and then as soon as they drop, I run and close off the throttle valve, because I was afraid they might not work.

Ques. Is this out of date now, this butterfly valve?

Ans. Well, they use it occasionally, they are used, but most hoisting engines that I have seen use what they call the quick opening—I suppose you call it the plug valve; it is similar to a gate valve; the only thing is that it comes right down solid into two supporting shoulders, as it were, so that you can raise it up and open up the steam pipe to the full area.

By Mr. French:

Ques. Had any experience with dredging engines?

Ans. Dredging? No.

EVERETT S. SPARKS, recalled.

Direct examination.

By Mr. Wescott:

Ques. Do you know Mr. Wilson?

Ans. Yes.

Ques. Did he offer to give you a job at the same wages that you were getting before you were injured, and did you say to him that you didn't want that job, but you wanted money?

Ans. I told him that I didn't want the job. I didn't tell him anything about money. He told me I could go back to work. He didn't see why I couldn't do the same work that I done before, and I told him I didn't care for any of his jobs.

Ques. Do you know Mr. Rickerts?

Ans. Yes, sir.

Ques. Was he ever on this dredge when you were there?

Ans. He was there once, the time he brought the throttle down.

Ques. Did you ever see him there afterwards?

Ans. No, sir.

Ques. Did he ever tell you or caution you about how to pry this engine on or off center?

Ans. No, sir.

Ques. Ever show you anything about it?

Ans. No, sir.

Ques. Was he ever there when you were prying it off?

Ans. Not that I know of.

Ques. Did he ever tell you when you were prying it off to be careful where you put the bar?

Ans. No, sir.

Ques. He says he was there every day sometimes.

Ans. He was there only once while I were on there.

Ques. Did he ever tell you about opening the stop cocks night and morning?

Ans. No, sir.

Ques. Did you ever tell him that it was your own fault that you got hurt?

Ans. No, sir; I didn't.

No cross-examination.

Both sides rest.

MOTION TO DIRECT VERDICT.

Mr. French: I move for a direction on the same grounds as I moved to non-suit.

The Court: I think it is a jury question, and I decline to direct a verdict. Take your exception.

(Whereupon the defendant, by its counsel, prays a bill of exceptions, which is hereby allowed and sealed accordingly.)

F. J. Swayze J. (Seal.)

COURT'S CHARGE TO THE JURY.

Gentlemen of the Jury: The plaintiff in this case has proved that he was injured while in the employ of the defendant company working at a double cylinder engine which frequently became centered, as it is said, in a way that a double cylinder engine ought not to become centered. Those facts alone do not entitle the plaintiff to recover. However much you and I may think that the law under such circumstances ought to give the plaintiff compensation upon proof merely of such facts, that is not the law in New Jersey, and it is for the Legislature to make such changes as are necessary to entitle the plain-

tiff to recover under such circumstances. As the law now stands, the plaintiff cannot recover unless he has proved to your satisfaction by the weight of the evidence that the defendant company was negligent; that it had violated a duty which it legally owed to him, and that that negligence was the cause of his injury.

The duty which an employer owes to an employee is somewhat different from the duty which an ordinary man owes to his neighbor, very different from the duty which a railroad company owes to the travelling public; for when a man enters the employment of another he legally assumes the risk of accidents happening from the ordinary dangers of that employment. I suppose many of you gentlemen are farmers, and, if I am not mistaken, even the gentlest team may sometimes run away and the gentlest horse may sometimes kick. If you employ a man to drive your horses or to handle your horses he takes the ordinary risk that the horses may run away or that they may kick and injure him, and if he is injured in such a way he cannot recover compensation from you. So a man employed to work about a steam engine takes the ordinary risk of an explosion, for I suppose an explosion of a steam engine may happen without negligence on the part of the owner of the engine or the boiler. And the employee takes a further risk; he takes not only the ordinary risks that attend that business, but he takes the risks which are not ordinary, but which become known to him in the course of his employment. To use the same illustration which I gave a moment ago, if a man is employed by you to look after horses he has the right, in the first place, to assume that that team is an ordinarily gentle team, and the only risk that he takes at the start is such risk as may come from an ordinarily gentle team, but if, in the course of his employment, he finds out that the team is a vicious team and nevertheless continues to work with that vicious team with that knowledge, he takes the risk arising from his handling of a team like that.

To apply that to the present case, the plaintiff, upon his own testimony, knew that this engine was not working proeprly as a double cylinder engine should; he knew that it was becoming centered several times a day and, as I understand him, substantially every day, at any rate very frequently. With that knowledge he nevertheless continued to work with that engine. In law that deprives him of the right to recover compensation for injuries due to the fact that the engine became centered or that the engine was an old engine, or that the engine was out of condition, so far as the proof shows in this case, in any respect except a single one, about which I will speak hereafter. And there is another reason why in law he is deprived of the right of recovery because the engine may have been old or because it may have become centered frequently, and that is that the fact that the engine was old and the fact that it became centered frequently was not the cause of the accident, for you will see that notwithstanding the age of the engine, notwithstanding the fact that it frequently became centered, this accident would not have happened if the plaintiff himself had not undertaken to pry the cog-wheels and released the engine. When he undertook to do that, with the experience or intelligence which he had had, being a man of full age, with the knowledge he had of that particular engine, when he undertook to do that he assumed the risk himself. A verdict, therefore, cannot be based upon the theory that the engine was old or that it became frequently centered.

The duty of an employer to an employee is to take reasonable care to have safe appliances and apparatus with which the employee may work. He is not bound to have the latest and most approved machinery; he is only bound to take reasonable care, the care which an ordinary man placed in his situation would take. An ordinary man doesn't always have the latest and most approved machinery. If an employer, however, fails to take that care which an ordinary man would take to furnish safe

appliances for his employes to work with, he is guilty of what the law calls negligence, and if an injury happens from that negligence the employer must make compensation to the employee who is injured, in damages. That is the ground upon which the plaintiff seeks to recover in this case, and as the case stands the only negligence upon which a verdict in favor of the plaintiff can be based grows out of the character of the valve which was furnished to control the supply of steam to the steam-chest and cylinder. The valve was a butterfly valve, which you have heard the witnesses describe. It is said that it was not a proper kind of a valve to furnish. There is testimony on the part of the plaintiff that it was not an ordinarily safe valve. There is testimony on the part of the defendant that it was a valve commonly used in engines upon dredges. There is a square conflict of testimony—a conflict of opinion only, gentlemen. You must settle between the two experienced gentlemen who have testified, or perhaps there are more—the experienced gentlemen who have testified on the one side or upon the other.

It is said, on the part of the plaintiff, that there was negligence also on the part of the defendant in not employing proper mechanics to put this valve in. But you will see that the plaintiff himself was one of the persons who put that valve in its place. He knew the character of the man who was working with him; he knew he was the captain of a dredge and not a professional mechanic; he knew his own want of experience, if he was inexperienced, and so far as that charge against the defendant is concerned, the plaintiff assumed the risk of any negligence growing out of the failure to employ proper mechanics.

So that the only question for you to decide is whether or not this valve was such a valve as an ordinarily prudent man would have used to control the steam upon that engine and boiler. If you say that it was such a valve as an ordinarily prudent man would have

used, your verdict should be for the defendant. If you say it was not such a valve as an ordinarily prudent man would have used, then your verdict will be for the plaintiff, unless the defendant has satisfied you, has proved to your satisfaction by the weight of the evidence, that the plaintiff himself was negligent; for, just as the law obliges the employer to take reasonable care to furnish safe appliances for the employee to work with, so it obliges the employee to take reasonable care for his own safety; and it is said that the plaintiff failed in that respect, that he failed because he pried these cog-wheels in a direction against the steam; that he failed because he did not open the cylinder cocks and let the steam out of the steam-chest just before undertaking to pry the cog-wheels, and that he failed to take that reasonable care because he pried from a position, as I recollect it, somewhat above the cog-wheels instead of prying from the deck or below.

Now, gentlemen, it is a question for you to decide. There is no dispute about the facts in that respect. The only question is, did the plaintiff take such care as a reasonably prudent man would have taken under the circumstances of that case. Reasonably prudent men, gentlemen, sometimes do things which turn out very badly, and in deciding whether or not the plaintiff himself was negligent, it is not enough to say now what he ought to have done when the consequences of his conduct are known to us; you must decide what, with the light he had or ought to have had at the time he acted in prying those cog-wheels, what a reasonably prudent man would have done. Would he have taken the chances of prying against the steam, and would he have taken the chances of prying without opening the cocks in the cylinders or prying from the position in which the plaintiff stood? You will recollect that there is some testimony that that was done on other occasions, I think, by other men employed about this dredge. If you think that the plaintiff failed to take proper care of himself in the way I have already stated,

then no matter if the defendant was negligent, the plaintiff cannot recover, for in that case both would be to blame, and the plaintiff can only recover if the defendant alone was to blame.

If you think that the plaintiff, upon these principles, is entitled to recover, then the question is, how much money will fairly compensate him for the loss to which he has been subjected. He has lost wages for a considerable length of time, thirty dollars a month, and the board in addition, less a deduction for something that he earned during one or two summers, I think it was. He is permanently disabled; he has lost an arm, a very serious loss for a young man of twenty-six years of age, which diminishes his earning capacity so that however willing he may be to work he is hardly likely, I think, to be able to earn as much as man with two arms could earn. Of course, you must consider the probability that he will secure some employment and be able to earn something in the future, as he did during one or two summers that I have mentioned. You cannot assume that he will sit down in idleness and live upon the income of such a sum as you may award him, if you award him anything.

You must determine what sum of money will fairly make up to him the probable loss in his earning capacity. It is said that he was earning something like five hundred dollars a year, and that that is the interest on ten thousand dollars, so, gentlemen, I must warn you, as I often have occasion to warn juries, that it would not be fair to the defendant to capitalize the annual earnings of the plaintiff in that way, for this reason: The earnings of the plaintiff are the earnings of his brawn and muscle, of a piece of machinery which is wearing out every day, and which, in ordinary cases, will not last longer than three score years and ten, while the sum of money which you award him, you must assume, will be invested and be productive, and, therefore, it will be the power to command labor from now on forever. The sum of money which would fairly compensate him for the annual loss

in his earning capacity is such a sum as would give him the difference between what he has earned and what he can earn each year and use up the principal at the end of his ordinary expectancy of life. You will have to get out of that as best you can if you come to that question at all.

In addition to these elements of damage he is also entitled to fair compensation for the pain and suffering to which he has been subjected. It is quite impossible, I suppose, to accurately gauge pain and suffering in dollars and cents. You must do the best you can, but in any event limit it to what is reasonable and do not attempt to mulct this company in damages merely out of sympathy for the plaintiff, for a verdict based upon that principle would be of no value, either to the plaintiff or the defendant. Of course, before you can consider the question of damages at all, you must first decide whether you are satisfied that the defendant was negligent.

I ought to add, gentlemen, one point I omitted. I am requested to charge that the defendants are not responsible for the result of the orders given the fireman by the captain or engineer of a dredge. That is so, gentlemen. The captain or engineer of the dredge is a fellow servant with the plaintiff, and if the injury happened by reason of their negligence, the plaintiff cannot recover of this company.

DEFENDANT'S EXCEPTION.

Mr. French: Defendant desires to except to the Court's referring to the jury the question of the throttle valve.

(Which exception is hereby allowed and sealed accordingly.)

F. J. Swayze. J. (Seal.)

DEFENDANT'S REQUESTS TO CHARGE.

1. That the defendant is not bound to adopt the latest improvements in machinery, neither is it liable for an accident which would not have occurred if such improvements had been adopted. It is only bound to have reasonably safe machinery and keep it so.

2. That the defendant was not bound to point out dangers that were readily discoverable by the plaintiff in the use of ordinary care, with such knowledge, experience and judgment as a fireman ordinarily possesses or as the defendant was justified in believing the plaintiff to possess.

3. If the plaintiff knew of the defects he now claims existed and he did not abandon his service on account of them, no negligence can be charged to the defendant for permitting the defects to continue. They were obvious dangers, and the plaintiff assumed the risk by continuing in the employment.

4. Steam in a large pipe leading to the steam-chests and cylinders and in the chests and cylinders known to the plaintiff, as fireman of the engine, is an obvious danger, and if plaintiff attempted to pry the engine off its center without opening the cylinder cocks he assumed the risks, and the verdict must be for the defendant.

5. That if the jury believe from the evidence that the plaintiff had run an engine, acted as fireman of an engine, and performed duties requiring knowledge of an engine and the power and use of steam for some weeks before the accident, the defendant was justified in believing the plaintiff to possess sufficient knowledge, experience and judgment to know that if he attempted to pry the engine off the center without opening the cylinder cocks, the shaft would turn and also to know in which direction it was safest to pry an engine off its center, and owed no duty to the defendant to warn him, and the verdict must be for the defendant.

6. If the jury believe from the evidence that the plaintiff pried the engine off the center without opening the cylinder cocks, he assumed the risk, and the verdict must be for the defendant.

7. If the jury believe from the evidence that the plaintiff pried the engine off the center by exerting his force against the steam he assumed the risk, and the verdict must be for the defendant.

8. If the jury believe from the evidence that the plaintiff could have pried the engine off the center without danger by opening the cylinder cocks and prying with the steam and he adopted another and more dangerous way, he assumed the risk, and the verdict must be for the defendant.

9. If the jury believe from the evidence that any engine may get on its center and when pried off turn its shaft the engine in question was not defective in these particulars, and if the plaintiff was hurt in prying it off the center it was a risk of his employment which he assumed, and the verdict must be for the defendant.

10. If the jury believe from the evidence that the plaintiff could have pried the engine off its center without danger by prying with the steam and without opening the cylinder cocks and he adopted another and more dangerous way, he assumed the risk, and the verdict must be for the defendant.

11. If the jury believe from the evidence that the plaintiff was instructed to pry the engine off its center from beneath and with the steam, standing on the floor, and the plaintiff voluntarily adopted a more dangerous way, he cannot recover; the verdict must be for the defendant.

12. That the owners are not responsible for the result of orders given the fireman by a captain or engineer of a dredge. The captain of the dredge is a fellow workman.

COURT OF ERRORS AND APPEALS OF NEW JERSEY.

EVERETT S. SPARKS, Defendant in Error, vs. THE RIVER AND HARBOR IMPROVEMENT CO., Plaintiff in Error.	}	IN ERROR. ASSIGNMENT OF ERRORS.

And now, on this day, plaintiff in error assigns the following causes of error:

First. Because the said Court before whom, etc., at and upon the aforesaid trial of the said issue so joined between the parties aforesaid, upon motion by the defendant for a non-suit, declined to non-suit.

Second. That the said Court before whom, etc., at and upon the aforesaid trial of the said issue so joined between parties aforesaid, upon motion by the defendant that the said Court direct a verdict for the defendant, declined to direct a verdict.

Third. There is manifest error in this, that the said Court before whom, etc., at and upon the aforesaid trial of the said issue joined between the parties aforesaid, and after the evidence was closed, charged and instructed the said jury, among other things, as follows: "As the case stands the only negligence upon which a verdict in favor of the plaintiff can be based grows out of the character of the valve which was furnished to control the supply of steam to the steam-chest and cylinder. The valve was a butterfly valve, which you have heard the witnesses describe. It is said that it was not a proper

kind of a valve to furnish. There is testimony on the part of the plaintiff that it was not an ordinarily safe valve. There is testimony on the part of the defendant that it was a valve commonly used in engines upon dredges. There is a square conflict of testimony—a conflict of opinion only, gentlemen. You must settle between the two experienced gentlemen who have testified, or perhaps there are more—the experienced gentlemen who have testified on the one side or upon the other," and therein erred.

Fourth. There is manifest error in this that the said Court before whom, etc., at and upon the aforesaid trial of the said issue so joined between the parties aforesaid, and after the evidence was closed, charged and instructed the jury, among other things, as follows: "So that the only question for you to decide is whether or not this valve was such a valve as an ordinarily prudent man would have used to control the steam upon that engine and boiler," and therein erred.

WM. T. READ,
Attorney for Plaintiff in Error.

NEW JERSEY COURT OF ERRORS AND APPEALS.

EVERETT S. SPARKS, Defendant in Error, vs. RIVER AND HARBOR IMPROVEMENT COMPANY, Plaintiff in Error.		IN ERROR TO SALEM CIRCUIT.

JOINDER IN ERROR.

And afterwards the said Everett S. Sparks, by John W. Wescott, his attorney, comes into Court and says that there is no error either in the record and proceedings aforesaid, or in giving the judgment aforesaid, and they pray here that the Court here may proceed to examine as well the record and proceedings aforesaid, as the matters aforesaid assigned for error, and that the judgment aforesaid, in manner aforesaid given, may in all things be affirmed, &c.

JOHN W. WESCOTT,
Attorney for Defendant in Error.