with the old contrast of colors, the patent might be sustained; but there is no such combination here.

The demurrer to the bill, therefore, is sustained, and the bill dismissed for want of equity.

NATIONAL PUMP CYLINDER Co. v. SIMMONS HARDWARE Co.¹

(Circuit Court. E. D. Missouri. November 2, 1883.)

1. PATENTS-EVIDENCE.

Where, in a suit for the infringement of reissued letters patent, the defendant sets up as a defense that the reissued letters patent are broader than the original, and therefore invalid, and the plaintiff fails to introduce the original letters patent in evidence, the defendant may introduce them.

2. SAME-INQUIRY INTO VALIDITY OF REISSUED LETTERS PATENT.

Where the original letters patent are so introduced, the question as to the validity of the reissued letters patent may be passed upon.

3. SAME-REISSUED LETTERS PATENT NO. 7,006, FOR "IMPROVEMENT IN PUMPS," VALID-PATENT CONSTRUED.

Reissued letters patent No. 7,006, for an "improvement in pumps," are no broader than the original letters patent No. 90,143, issued for the same invention, and are valid. They are for a metallic tube with vitreous coating internally, and with both ends flared so as to admit within it, from above and below, the wooden tubing with which it is designed to be connected.

4. SAME-INFRINGEMENT.

The sale and use of enameled tubes with a single flare held no infringement.

In Equity.

Suit for an infringement of reissued letters patent No. 7,006, for an "improvement in pumps." The original letters patent are numbered 90,143. The "invention relates to certain novel improvements in wooden pumps, and consists—*First*, in constructing one of the sections or lengths of the pump-stock of metal, lined with a vitreous enamel, to present a smooth, durable surface to the pump-bucket or piston-packing, and adapted to receive within its ends the tapering ends of the wooden sections, and thus serve as a coupling for these sections, as will be hereinafter explained; *second*, in an annular-grooved ring-piston, which has confined within its groove a suitable packing, and which is constructed with an annular valve-seat on its upper side, adopted for a circular valve which moves freely upon a central valve stem."

The original letters patent contain two claims, viz.:

"(1) The metal-tube section, B, coated with a vitreous substance, and constructed with flaring ends, and receiving into said ends the lower terminus of the wooden section, A, and the upper terminus of the lower wooden section, B, all substantially as described. (2) An annular-grooved ring-piston, D, constructed with a raised valve-seat, v, and a forked stem, i, c, in combination with valve, g, substantially as described."

1 Reported by Benj. F. Rex, Esq., of the St. Louis bar.

The claims in the reissued letters patent are as follows.

"(1) The metal section, B, lined with a vitreous substance, and formed so as to connect the wooden sections, A and C, by frictional contact, without the use of bolts, screws, or other fastening device, substantially as set forth. (2) The metal tube section or working band, B, coated with a vitreous substance and constructed with flaring ends, and receiving into said ends the lower terminus of the section, A, and the upper terminus of the lower section, B, all substantially as described. (3) An annular-grooved ring-piston, D, constructed with a raised valve-seat, v, and a forked stem, i, c, in combination with valve, g, substantially as described."

The other material facts are sufficiently stated in the opinion of the court.

Taylor & Pollard, for complainant.

Herman & Reyburn and Parkinson & Parkinson, for defendant.

TREAT, J. As counsel stated that this was a test case, it is to be regretted that all the facts and circumstances were not presented free from constantly recurring exceptions on technical points as to the admissibility of evidence. It is, or should be, the purpose of the parties to have the merits of the controversy settled. The first question is as to the validity of the reissued patent, on the ground that the same was an undue expansion of the original. Plaintiff objected that the original had not been introduced on its part, so that the question presented could not technically be considered. The court permitted, under objections, the original to be introduced. The reasons therefor were many; without enumerating all of which, one must suffice, viz.: that it was essential for the court to be informed exactly as to the nature and extent of plaintiff's demand, in order to determine which the original of the reissue had to be before the court. An examination of the original and the reissue shows that the latter is not invalid; for it is for the same invention. Plaintiff rests his demand upon the second claim of the reissue, viz.: "The metal tube section or working barrel, B, coated with a vitreous substance and constructed with flaring ends, and receiving into said ends the lower terminus of the section, A, and the upper terminus of the lower section, B, all substantially as described." Strange to say, the same error is in the original and the reissue, to which the attention of the court was not directed by counsel, viz.: that "the upper terminus of the lower section" (there being three sections, A, B, C, respectively) should have been named B instead of C.

Treating that false description as an obvious error, the court construes plaintiff's patent to be for a metallic tube, with vitreous coating internally, each end of which is flared, so as to admit within it, from above and below, the wooden tubing with which it was to be connected. Three sections are contemplated, the upper and lower of which are wooden, and the intermediate (the one in question) metallic. To avoid "the use of bolts, screws, or other fastening devices," and make the connections by "frictional contact" merely, as the patent claims, the flaring of the metallic tube at both ends became the controlling factor. There had been various contrivances before the date of this patent, more or less complicated, some by screws and some by drums or otherwise, to make the desired extensions and connections in sectional pumps. The merit of this patent, if any, was in having the metallic tube described inserted with flaring ends between the upper and lower sections of wood tubing, whereby, without bolts, screws, etc., the different sections would be connected by "frictional contact" solely, and the metal tube become a water chamber, in which the valved plunger could operate with attendant advantages. Inasmuch as the patent for this tube in question is all that is claimed it is evident that its construction is essential. The patent in question is not for a combination, and what is specified as to its use is merely to indicate its adaptability to pumps, and to state its special advantages therefor. It must, therefore, be considered as designated: its peculiar feature being its two flaring ends, whereby the advantages named will be secured. It is not purposed to go into details as to the state of the art or prior patents, because it seems, in this as in many other inventions, that persons previously groped their way along the needed path, making and abandoning experiments, and falling short of the hoped-for result, while, in the light of what a subsequent inventor disclosed, it appears strange that they should not have seen what now is so clear and simple.

The patent is held to be valid, and to be for the indicated tube with flaring ends; that is, at each end. Has defendant infringed? The difficulty in the case arises under this head. The evidence on the main point is meager, viz.: Did he sell tubes with the two-fold flares. or only with one flare? It seems that, following old contrivances. metal tubes with a flare at one end only are now in use, the upper end of which is thrust into the wooden pump-stock instead of the reverse: the other end flaring to receive the lower section of the pump where needed. Before the date of the original patent metal tubes or sections were used with converging flares, so as to pass within wooden stocks reamed out for the purpose, thus forming a continuous pump or tubing where length was required. The difficulties and disadvantages appearing, plaintiff's invention of a double and divergent flaring, whereby, through frictional contact, a firm connection of the parts can be made, and a proper water chamber had, is simple in its terms. Must it rest, then, on its precise terms, the double flare, or be held to exclude all enameled tubes which have a flare at one end alone, designed for either interior or exterior connection with wooden The special water chamber which results from plaintiff's pipes? invention is a separate chamber between the upper and lower pipes, necessarily larger than either of said pipes. It may be that some disadvantages would result if the plunger were to be repaired, because the upper or pump stock would have to be detached therefor. Under the prior arrangements in metal-lined pumps, when no such enlarged chamber was provided, the plunger worked freely, and could be easily

removed and repaired without detaching the upper from the second part. It seems that most of the cylinders sold by defendant followed the old and well-known plan, viz., the thrusting into a pump-stock of a metallic tube in which the plunger worked freely; said tube being the water chamber.

As to said tubes with the single flare, it is held there was no infringement, and that the sale and use of the indicated metallic tubes with the double flare, or flare at both ends, did infringe plaintiff's rights.

It will thus be seen that the plaintiff's patent is held to be solely for a metallic cylinder with vitreous lining, and diverging or outward flaring at both ends; and that, as there is evidence showing that some —a few, it may be—of such cylinders were bought and sold by the defendant, a decree against him must be entered, framed according to this opinion, with an accounting accordingly, to be referred to the master, unless an agreement with respect thereto is made by the parties.

THE LILLIE HAMILTON.

(District Court, N. D. Illinois. November 5, 1883.)

1. CONTRACT OF AFFREIGHTMENT-VESSEL UNSEAWORTHY-EVIDENCE. Upon examination of the evidence in this case it appears that the vessel was not seaworthy at the time of the disaster, and that libelants were entitled to recover.

2. SAME-IMPLIED WARRANTY AS TO SEAWORTHINESS OF VESSEL.

There is an implied varianty in a contract for affreightment that the ship is sufficient for the voyage, and the owner, like a common carrier, is an insurer against everything but excepted perils.

3. SAME-SEAWORTHINESS OF HULL.

To constitute seaworthiness of the hull of a vessel in respect to cargo, the hull must be so tight, stanch, and strong as to be competent to resist all ordinary action of the sea, and to prosecute and complete the voyage without damage to the cargo.

4. SAME-DAMAGES.

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The object of the law in actions of this character is to make the parties to the contract as nearly whole as possible for the damages sustained by reason of the breach of the contract.

In Admiralty.

Robert Rae, for libelants.

Schuyler & Kremer, for respondents.

BLODGETT, J. This is a libel upon a contract of affreightment, and the facts as they appear in the proof, so far as I deem it necessary to state them for the purposes of this decision, are that, on the twenty-second of June, 1880, the libelants shipped at the port of Chicago, on Lake Michigan, on board the schooner Lillie Hamilton, 19,557 bushels of No. 2 corn, to be transported in said schooner from said port of Chicago to the port of Kingston, on Lake Ontario. While

pursuing her voyage, and in the Welland canal, near the town of Thorold, the schooner sprang aleak, and sank in the canal, whereby 11,432 bushels of the cargo became wet and damaged, and about 8.050 bushels were recovered in a dry condition. The dry corn was afterwards, on the order of libelant, delivered to the underwriters, who had insured the cargo on payment of a pro rata amount of the freight on said dry corn. Libelants had policies of insurance upon the cargo for the voyage, and on notice of the disaster the cargo was abandoned to the underwriters, who paid the amount of the insurance; and this suit is now prosecuted in the name of the libelants for the benefit of the underwriters, to recover the amount lost on the cargo, on the ground that the schooner was unseaworthy at the time the voyage was commenced, and that the loss was occasioned by reason of such unseaworthiness, and not by a peril of the sea. The proof shows that the schooner was what is known as a canal vessel,---that is, a vessel adapted to pass through the Welland canal; that the injury to the cargo was in consequence of a hole being stove through the bilge streak near the bluff of the bow.

The testimony shows that the vessel was tight, and had taken in no such amount of water as to indicate a dangerous leak, until after she had passed O'Neill's bridge in the Welland canal, and was between said bridge and Thorold, when she struck upon something like a stone or rock near the bottom or side of the canal, the shock of the blow being such as to be plainly noticeable on board of the vessel. Some of the witnesses say that it produced a momentary stoppage, others that she was heeled or canted over by the blow, but did not stop. Immediately after this shock or blow was felt, the schooner began to take in water very rapidly, and sank to the bottom of the canal in about 15 minutes. At the time of the accident the schooner was drawing about 10 feet of water, and the depth of the canal was about 11 feet, thus leaving only about a foot of water between the bottom of the schooner and the bottom of the canal. An investigation of the planking at the point where the leak occurred showed that the planking along the bilge, near the bow, was worn away from a thickness of four or five inches, so that its thickness did not exceed an inch and a half. and that the hole in question was occasioned by breaking through this thin-worn planking, making a clear opening of about eight by nine inches. The proof also shows that this schooner came out in 1874, and had not been replanked along bilge streaks where this hole was broken through; that canal vessels wear away very rapidly, especially at or near the bilge, by chafing and colliding against the sides and bottom of the canal; and that from four to five years is as long as plank in the bilge streak is expected to last on a vessel in this service, and that the planking, when new, is from three to five inches thick. This schooner, like all canal vessels, was nearly flat-bottomed, and the canal is so narrow, and the sides and bottom of a vessel loaded as the Lillie Hamilton was come so nearly in contact with the sides and bottom of the canal, that the least sheer and deflection, or even roll of the vessel, is liable to bring the bilge in collision with the sides and bottom of the canal, and therefore as soon as the planking is worn as thin as it appears without dispute it had become on this vessel, there is not sufficient strength to resist the blows and shocks incident to a canal passage. A hull might withstand the strain of the winds and waves, but not be adequate to the peril of the canal; that is, her frame might be so stanch and strong as that her seams would not be opened by any pitching or rolling which she might encounter upon the open lake, and yet be in peril from collision on the canal, when her planking was worn so nearly away.

I conclude, therefore, from the proof, that the planking along the bilge streaks of this vessel had become worn so thin and unsubstantial as to make her unseaworthy for this service; that there was not sufficient substance to enable her to resist the shocks and collisions to which she was ordinarily and almost necessarily exposed in passing through this canal. It is true that apparently credible witnesses have testified that, in their opinion, a hole would have been broken in this schooner's bottom from the collision in question even if the plank had been three inches thick. The reply to this testimony, which seems to me sufficient, is, if this plank had been new and strong, and of such thickness as is usually deemed necessary to secure safety, then the carrier might, perhaps, be exonerated on the ground that the vessel was seaworthy in that regard, but none of the respondent's witnesses have given it as their opinion that one and one-half inches of six-year old plank is sufficient to raise the presumption of seaworthiness, or to show that this vessel was strong enough to withstand the dangers of canal navigation. No one has said that a prudent ship-owner would consider a ship seaworthy if he knew the bilge planking had been worn away from the thickness of four or five inches, at the time the vessel was built, to a thickness not to exceed one and one-half inches. It is clear that to resist the abrasions and blows to which a vessel is liable in this canal, much more than one inch and a half of plank is necessary. A fair test, as it seems to me, is, would a prudent man build a vessel for such service with planking only one and one-half inches thick? The law upon the subject of the implied warranty of seaworthiness is too well settled to admit of discussion.

Chancellor KENT (3 Kent, Comm. 205) says:

"By the contract the owner is bound to see that the ship is seaworthy, which means that she must be tight, stanch, and strong, well furnished, manned, victualed, and in all respects equipped in the usual manner for the merchant service in such a trade. The ship must be fit and competent for the sort of cargo, and the particular service for which she is engaged. If there should be a latent defect in the vessel unknown to the owner, and undiscoverable upon examination, yet the better opinion is that the owner must answer for the damage occasioned by the defect. It is an implied warranty in the contract that the ship be sufficient for the voyage, and the owner, like a common carrier, is an insurer against everything but the excepted peril."

FEDERAL REPORTER.

In Putnam v. Wood, 3 Mass. 481, the court said:

"It is the duty of the owner of the ship, when he charters her, or puts her up for freight, to see that she is in a suitable condition, and to keep her in that condition, unless prevented by perils of the sea or unavoidable accidents. If the goods are lost by any defects in the vessel, whether latent or visible, known or unknown, the owner is answerable to the freightor upon the principle that he tacitly contracts that his vessel shall be fit for the use for which he employs her."

In Dupont v. Vance, 19 How. 162, the supreme court of the United States said:

"To constitute seaworthiness of the hull of a vessel in respect to cargo, the hull must be so tight, stanch, and strong as to be competent to resist all ordinary action of the sea, and to prosecute and complete the voyage without damage to the cargo."

In Work v. Leathers, 97 U.S. 379, it is said:

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"Where the owner of a vessel charters her, or offers her for trade, he is bound to see that she is seaworthy and suitable for the service in which she is to be employed, and if there be defects, known or not known, he is not excused."

I conclude, from the proof and these authorities, that this vessel was not seaworthy at the time of this disaster, and have no doubt that libelants are entitled to recover the damage sustained by reason of such unseaworthiness.

The object of the law, in actions of this character, is to make the parties to the contract as nearly whole as possible for the damages sustained by reason of the breach of the contract. As I have already said, this suit, it is admitted, is prosecuted for the benefit of the underwriters, who have paid the amount insured by them upon this cargo. It is admitted that there was delivered to the underwriters. upon the order of libelant, 8,050 bushels of this corn, and that the underwriters paid a pro rata amount of the freight upon the quantity so delivered, and that the wet corn was sold by the owner of the vessel and the proceeds received by him. In the absence of any proof showing that the corn was worth less to the underwriters at the point where they received it than it would have been at the port of destination, I am inclined to the conclusion that the acceptance of the corn by the underwriters at Thorold, and payment of freight thereon, so far as earned, was a settlement pro tanto; but as there is not, at present, proof sufficient in the record to determine the value of the wet corn, it is probable a reference must be had to ascertain the damages in the case, unless the parties agree.

MARSLAND and others v. THE YOSEMITE.

(District Court, S. D. New York. October 31, 1883

1. PLEASURE YACHTS-SHIPPING ARTICLES.

Seamen shipping on a pleasure yacht and signing shipping articles can only be discharged in conformity with the ordinary maritime law, which does not justify a discharge for single acts of negligent disobedience.

2. SAME-NOTICE.

Where shipping articles did not provide for any definite voyage, but for service not exceeding six months, payable monthly, *held*, while the vessel was in her home port and no voyage determined on, the service was terminable by either party at the end of the month on reasonable notice.

3. SAME-DISCHARGE-WAGES.

The chief engineer being discharged in the middle of the month, without sufficient cause under the maritime law, would be entitled to one month's wages.

4. SAME-DISOBEDIENCE.

Where the first engineer, immediately upon his discharge, drew the fires of the engine on a cold winter's day, thus imperiling the ship, contrary to the orders of the master and owner, and abetted all the rest of the engineer's department in leaving the ship contrary to orders, *held*, that by these acts he forfeited all claim to the residue of the month's wages which would otherwise have been awarded him.

5. SAME-CUSTOM.

An alleged custom for the rest of the men in the engineer's department to leave if the engineer is discharged, *held* illegal.

In Admiralty.

Beebe, Wilcox & Hobbs, for libelants.

Benedict, Taft & Benedict, for claimant.

BROWN, J. This action was brought by the chief engineer, and the first and second assistant engineers, of the steam-yacht Yosemite, to recover six months' pay. They signed shipping articles on February 1st, and entered upon their duties thereunder on that day, and were discharged on the 12th, by the owner, on the ground of disobedience of his orders. The Yosemite was a pleasure yacht, which was expected during the season ensuing to make a race across the Atlantic. She was at this time fitting out for the expected voyage. The owner's attention being directed to the soiled appearance of the ventilators, which projected some eight feet above the deck, about noon of the eleventh of February he directed the chief engineer to have them cleaned bright, which the engineer promised to do. About 4 P. M. of the following day, the owner, upon boarding the vessel and finding no one at work upon them, and very little having been done to them. called the first engineer, and being dissatisfied with his excuses and his manner, discharged him at once. He then sent for the first assistant engineer and directed him to take charge of the engine, which the assistant refused to do. He was thereupon discharged. The owner then sent for the second assistant, and asked him in like manner to take charge of the engine. He also refused, and was likewise at once discharged. The first engineer, on being discharged, went below and