"Although there is the averment in the answer that the defendants have no knowledge or information, save from said bill of complaint, whether the packages were marked with the word 'Patented,' etc., and therefore deny the same, there is no denial of their knowledge that the Taylor device was patented; and in view of the fact that all letters patent are recorded, with their specifications, in the patent office,—a record which is notice to all the world,—it is not an unreasonable requirement that the defendant who relies upon the want of knowledge on his part of the actual existence of the patent should aver the same in his answer, that the plaintiff may be duly advised of the defense."

This objection of the defendants is therefore unfounded.

Some of the defendants further contend that, even if the defendant corporation should be enjoined in this case, no injunction should issue against the other defendants, its officers. Entirely apart from the question of the liability of an officer of a corporation for damages caused by infringements committed by him on behalf of the corporation, there can be no doubt that in a case like this the officers of the corporation may be enjoined from further infringement.

The decree of the circuit court is reversed, and the case is remanded to that court for further proceedings in conformity with this opinion, the appellant to recover its costs in this court.

## LOEWENBACH v. HAKE-STIRN CO. et al.

(Circuit Court of Appeals, Seventh Circuit. February 23, 1899.)

No. 527.

PATENTS-INVENTION-RECEIPT AND RECORD BOOKS.

The Loewenbach patent, No. 390,087, for a combination, in a carbon copying receipt and record book, of series of permanent and detachable leaves bound together, each of the former having a portion of its edge cut off so as to expose part of the leaf below, if not covering a mere aggregation, is void, in view of the prior state of the art, for want of patentable invention.

Appeal from the Circuit Court of the United States for the Eastern District of Wisconsin.

This was a suit in equity by Hugo Loewenbach against the Hake-Stirn Company and others for alleged infringement of a patent for improvement in receipt and record books. The circuit court dismissed the bill, and the complainant appealed.

## J. B. Erwin, for appellant.

Before WOODS, JENKINS, and GROSSCUP, Circuit Judges.

PER CURIAM. This appeal is from a decree dismissing a bill for an injunction against infringement of the fourth claim of letters patent No. 390,087, granted on September 25, 1888, to Hugo Loewenbach, for improvements in receipt and record books. The claim reads as follows:

"In a carbon-copying receipt and record book, the combination of series of permanent and detachable leaves bound together, each of the former having a portion of its edge cut off or out, so as to expose part of the leaf below, substantially as and for the purpose set forth."

While it is true that the exact counterpart of the patented device is not found in the prior art, every feature of it is to be found in earlier patented devices, combined in the same immediate relations and performing the same functions as in the present combination; and whatever of novelty there may be said to be in the combination, if it be not merely an aggregation, is a matter of selection and arrangement, which did not involve invention. For a further statement of the case, and for a presentation of the prior art, we quote from the opinion delivered below:

"The object in view, as stated in the brief of complainant, 'is to provide a book by which an original and one or more copies of a receipt or other record may be conveniently and quickly made by one writing,' and the advantages which are there asserted for the construction are: First, to facilitate opening it quickly at the place of the last entry; second, to make conveniently and quickly the original receipt and one or more copies by a single writing; third, to facilitate identifying and grasping the copy or copies to be writing; third, to facilitate identifying and grasping the copy or copies to be detached without moving or turning back the permanent leaf above; and, fourth, to facilitate tearing out the copy or copies without the aid of a straightedge or other instrument.' That each of the essential elements entering into this combination is old appears from the proofs, and is conceded; and analogous use of each is shown as follows: (1) That the use of carbon sheets for manifolding was long anterior to the date of the patent is shown in several prior patents and may be accepted as of common knowledge. (2) in several prior patents, and may be accepted as of common knowledge. (2) The 'combination of a series of permanent and detachable leaves bound together' was not only well known, but is fully set forth in S. Hano's patent, No. 224,529, granted in 1880, for copying books, in which the leaves are in sets of three,-two of nontransparent paper, made detachable by a 'line of punctures,' and an intermediate sheet of tissue paper to receive a copy and nondetachable; the pressure of the pen or pencil in writing on the upper sheet causing copies to be made on the under two sheets by means of a sheet of offset paper' coated upon both sides placed between the latter. The two sheets of writing paper were then detached for use, leaving the tissue copy to be retained in the book for a record. Patent No. 261,245, issued in 1882, to J. S. McDonald, for a manifold order book, shows like provision of a series of permanent and detachable leaves, of which the former is retained in the book for record. The binding of leaves to make them either permanent or detachable, and the various methods adapted to effect the latter purpose, were too well known to require mention, and are exemplified in several patents introduced by the defendants. (3) The permanent leaf, 'having a portion of its edge cut off or out, so as to expose part of the leaf below,' is designed to facilitate turning at once to the place for use. Of this feature the assertion is made on behalf of the patent that it covers any form of cutting the outer edge of the page; that it is immaterial 'which portion of the edge, or which edge of the leaf, is cut away, or what shape is given to the cut or removed portion of the leaf'; and such interpretation is reasonable. But, surely, it was not new at the date of the patent to provide similar devices for ready reference, as in digests, index books, etc. The Mott and Carroll patent of 1875, No. 169,828, for an 'Improvement in Account Books,' clearly described a construction in which one corner of the leaves is perforated for removal as the pages are filled, thus indicating the place of last entry. Earnshaw's patent of 1883, No. 283,872, shows provision in a sales book of alternate long and short leaves for the same object so that 'a salesman can at once get access to the proper sheet and fold thereof preparatory to making a record thereon'; and in Soesbe's patent of 1875, No. 169,491, and Burwell's patent of 1883, No. 285,794, the same feature clearly appears of alternate long and short leaves in series in which removal in the course of use left exposed the long leaf which is next to be used.

"From these references it is manifest that the several elements of the combination in question are not only old, but are found in prior combinations in which both employment and purpose are analogous. Each element works in the old way, and for its accustomed purpose. No new function is given

to either by the combined use. It is a mere aggregation of elements, which may produce better results, but not 'by their collocation a new result,'—the indispensable requirement for a patentable combination. Richards v. Elevator Co., 158 U. S. 299, 302, 15 Sup. Ct. 831; Id., 159 U. S. 477, 16 Sup. Ct. 53. In this view the patent must be held invalid under the numerous authorities in point. See Palmer v. Village of Corning, 156 U. S. 342, 15 Sup. Ct. 381, and cases reviewed; Olmsted v. A. H. Andrews & Co., 23 C. C. A. 488, 77 Fed. 835; Lumber Co. v. Perkins, 25 C. C. A. 613, 80 Fed. 528.

"Aside from the construction thus placed upon the patent, I am of opinion that this fourth claim is anticipated by the combination set forth in letters patent No. 285,794, issued to E. C. Burwell October 2, 1883, for a 'book' which is stated to be especially designed for use by railway conductors for 'checks given upon the payment of cash fare.' The book consists of a series of similar sets of three leaves each, one of ordinary writing paper, one carbonized, and the third of 'cardboard or thick, stiff paper (the latter being made longer), thus affording a tongue,' which both aids detachment and marks the place for use. It is true that the Burwell device differs from the complainant's in this: That the former shows each sheet perforated for ready detachment, a carbon sheet bound in, and the lower leaf of thick paper. But each of these performs a function in that device, and both element and function are omitted by the complainant without any substitute device. This does not constitute patentable invention. Richards v. Elevator Co., 150 U. S. 477, 16 Sup. Ct. 53."

The decree below is affirmed.

## THE SANDFIELD.

(Circuit Court of Appeals, Second Circuit. November 3, 1898.)

1. Shipping-Damage to Cargo-Seaworthiness.

A stipulation in a contract of affreightment exempting the vessel from liability for loss and damage to the cargo occasioned by any latent defects in the hull of the vessel does not extend to such as were in existence at the commencement of the voyage; nor does the provision of section 3 of the Harter act, by which, if the owner has exercised due diligence to make the vessel in all respects seaworthy, neither he nor the vessel is liable for losses arising from the dangers of the sea, relieve the owner or vessel from the consequences of unseaworthiness at the inception of the voyage, though due diligence be shown.

Same.

A vessel is not required to be impregnable to the assaults of the elements, to be seaworthy, but the test is whether or not she is reasonably fit for the contemplated voyage. The fact that a single rivet, among many thousands used in the construction of her hull, was not as strong as the average, and parted under the stress of extraordinarily stormy weather, does not raise a presumption of unseaworthiness, rendering the owner liable for a resulting damage to the cargo.

3. Same—Presumption of Seaworthiness.

A steel steamship was of first-class construction and rating. She was new, and had been thoroughly surveyed by the Lloyds within a year preceding the voyage in question. She had thereafter made a number of voyages without injury, and two weeks after she entered upon that voyage she was uninjured. After that, the testimony of the crew showed, she encountered the worst weather they ever experienced, and she received much injury. During such time one of the rivets fastening the steel plates to the frame of the hull broke, and sea water entered through the space, and injured the cargo. It was shown that the holes through the plate and the frame were not exactly true, and that, in driving the rivet when hot, it had received a cant which perhaps weakened it somewhat, but not to any substantial extent. Held, that such facts were in-

sufficient to raise a presumption of unseaworthiness at the inception of the voyage.

4. SAME-MANAGEMENT OF SHIP-NEGLECT TO OPEN SLUICES.

The opening of a sluice gate designed to empty the bilges was neglected for 20 days, during heavy weather. The accumulating water overflowed the bilges, and damaged the cargo properly stowed in the hold. *Held*, that the neglect to open the sluices, if a fault, was one pertaining to the "management of the ship," within section 3 of the Harter act, and that the ship and owners were exempted thereby from liability for the resulting damage.

Appeal from the District Court of the United States for the Southern District of New York.

This was a libel by the American Sugar-Refining Company against the steamship Sandfield to recover damages for injury to a cargo of sugar. From a decree dismissing the libel (79 Fed. 371), the libelant appeals.

Harrington Putnam, for appellant.

J. Parker Kirlin, for appellee.

Before WALLACE, LACOMBE, and SHIPMAN, Circuit Judges.

WALLACE, Circuit Judge. Since the argument of this appeal, the case of The Carib Prince has been determined by the supreme court (170 U. S. 655, 18 Sup. Ct. 753), and that adjudication narrows the consideration of the cause to the question whether the steamship was seaworthy at the inception of the voyage. If she was, as it is not open to dispute that the injuries which caused the libelant's loss were caused by the perils of the sea, and could not be repaired during the voyage, the exception in the bill of lading against liability for losses caused by such perils protects the vessel from responsibility. According to the doctrine of The Carib Prince, a stipulation in the contract of affreightment exempting the vessel from liability for loss and damage occasioned by any "latent defects in the hull of the vessel" does not extend to such as were in existence at the time of the commencement of the voyage; and the provisions of the statute known as the "Harter Act" (section 3), by which, if the owner "has exercised due diligence to make the said vessel in all respects seaworthy -neither the vessel, her owners, agent or charterer-shall be held liable for losses arising from dangers of the sea" (27 Stat. 445), does not relieve the vessel, notwithstanding it is satisfactorily proved that due diligence was thus exercised by the owner. The case illustrates the inadequacy of language, whether used in a contract or statute, to modify the rigorous common-law obligation of the carrier by water, importing an absolute warranty that the vessel is seaworthy at the outset of her voyage. That decision is, of course, controlling upon this court.

The libelant's sugar, shipped upon the Sandfield at Alexandria, Egypt, for transportation to New York, was damaged by sea water which entered the hold of the vessel by leakage around a rivet in one of the steel plates below the water line in the port bilge aft, and which became loosened on the voyage by the vibration of the vessel while straining and pounding in weather of extraordinary severity.

The Sandfield was a first-class steel steamship, built in England, 1890. She was entered in Lloyds' Register as of the highest class in 1890, had been surveyed periodically according to the rules of Lloyds, and retained her classification at the time of the voyage in question. She had been surveyed by Lloyds' surveyor in the preceding February, and was then thoroughly examined and overhauled. Between that time and the voyage in question she went on a voyage from Blyth to Alexandria with a cargo of coals; from Alexandria she went to Taganrog in ballast: from Taganrog she went to Rotterdam with a cargo of grain; from Rotterdam she went to Cardiff in ballast; from Cardiff she went to Port Said with a cargo of coals; from Port Said she went to Nicolaieff in ballast; from Nicolaieff she went to Hamburg with a cargo of grain; from Hamburg she went to Newport in ballast; from Newport she went to Las Palmas with a cargo of coals; from Las Palmas she went to Muramichi in ballast; from Muramichi she went to Glasgow with a cargo of deals; from Glasgow she went to Cardiff in ballast: from Cardiff she went to Barcelona with a cargo of coals; from Barcelona she went to Carthagena in ballast; from there she went to Baltimore with a cargo of iron ore; from there she went to Londonderry with a cargo of grain; from there she went to Newport in ballast; from there she went to Genoa with a cargo of coals; from there she went to Alexandria in ballast, where she loaded sugar on the voyage in question.

In constructing such a vessel, the plates are riveted to the frames by driving a hot rivet from the inside, and battering down the head so as to fill up the countersink in the outer surface of the plate. Apparently, in the case of this particular rivet, the hole in the plate was not perfectly fair with the hole in the frame when the rivet was driven, there being a deviation in the inside surfaces of one-eighth of an inch in diameters of seven-eighths of an inch; and, in consequence of the rivet following the irregular passageway, it was not long enough when battered down to completely fill the countersink. When the ship was docked in New York after the voyage, the countersunk part of the rivet was found broken off and gone, but the rivet, though loosened, had to be driven out with a hammer and punch.

The witnesses say that on the voyage in question the weather was the worst ever encountered in their experience. The steamship received much sea damage. Two lifeboats were damaged,—one washed away; the winches were damaged; pipes and ventilators on deck were carried away; bridge rails and stanchions were bent and broken; the after deck was started in two places on the port and starboard sides; the wheel chains were parted several times, and after shackles were put on the shackles parted; and the propeller shaft was fractured from racing. At times she fell into the trough of the sea, and quantities of water came through the skylight into the engine-room.

The theory upon which it is insisted that the steamship was unseaworthy is that the rivet in question was defective. Undoubtedly the rivet was not as perfect as the workman might have made it, and was less capable of resisting the effects of strain and vibration

than if it had been as absolutely strong and perfect as the best or average of the many thousand rivets in the vessel, but we agree with the district judge who decided the case in the court below that "any such mere inequality in the strength of the rivets does not amount to unseaworthiness." Whether the vessel was unseaworthy or not is to be determined by the test whether she was reasonably fit for the contemplated voyage. Dupont v. Vance, 19 How. 162; Carv. Carr. by Sea, § 18; The Silvia (Oct., 1898) 19 Sup. Ct. 7. If she was, it matters not that she was not impregnable to the assaults of the elements. If a vessel is reasonably sufficient for the voyage, and is lost by a peril of the sea, her owner is not responsible, as a carrier, for the cargo lost, upon proof that a stouter vessel would have outlived the storm. Ang. Carr. 173. It does not follow, because the rivet loosened in consequence of the extraordinary strain which the vessel encountered, that it was one which would have been pronounced insufficient by men of competent judgment, upon an examination and full appreciation of its condition at the beginning of the voyage. No expert testified that such a rivet would have been considered unsafe. On the contrary, the only witness to whom such a question was addressed—a shipbuilder and mechanical engineer of great experience and intelligence—testified that the irregularity was not an unusual one, and was not enough to affect the strength of the rivet substantially. Persuasive evidence that the rivet was originally reasonably strong and sufficient is found in the fact that it had proved to be so throughout the previous voyages of the vessel. There was no leakage during the first two weeks of the voyage. The sluices were opened February 14th, and no water was found. Owing to the continually heavy weather that followed, they were not opened again until March 6th, and it was during the intervening time that the rivet became loosened. The excessive strain to which it was subjected during the exceptionally severe weather of this period of 20 days in which it broke adequately explains the cause of the mishap. Whether a more perfect rivet, if it had been located precisely where this rivet was, would have endured without breaking, is wholly a matter of conjecture. What are termed the "factors of safety" in estimating the capacity of different materials to endure tensile or torsional strains are within the knowledge of competent shipbuilders; but whether a particular rivet, though inherently perfect, will hold or break, is a problem, to use the words of Rudvard Kipling, "depending upon that unknown force men call the 'pertinacity of materials,' which now and then balances that other heart-rending power, the perversity of inanimate things."

In the case of The Warren Adams, 38 U. S. App. 356, 20 C. C. A. 486, and 74 Fed. 413, this court had occasion to consider the presumptions to be indulged upon the question of the seaworthiness of a vessel at the outset of the voyage. The court said:

"Where a vessel soon after leaving a port becomes leaky, without stress of weather, or other adequate cause of injury, the presumption is that she was unsound before setting sail. The law will intend the want of seaworthiness, because no visible or rational cause other than a latent or inherent defect in the vessel can be assigned for the result. But, where it satisfactorily appears that the vessel incurred marine perils which might well disable a

staunch and well-manned ship, no such presumption can be invoked. And where for a considerable time she has incurred such perils, and shown herself staunch and strong, any such presumption is not only overthrown, but the fact of her previous seaworthiness is persuasively indicated."

We conclude in the present case that the vessel was seaworthy, and that the rivet was fractured and loosened by the extraordinary strain inflicted upon it by stress of weather.

We have not overlooked the contention for the appellant that the steamship should be held liable for negligence because of the omission to open the sluices during the 20 days of the storm. If this was a negligent omission, it occurred as a part of the "management of the vessel"; and the owners having exercised due diligence to make her in all respects seaworthy, and properly manned, equipped, and supplied, she is not liable for faults in her management, and the terms of the Harter act (section 3) apply. In the recent case of The Silvia (decided at the present term) supra, the supreme court defined the meaning of the words "management of said vessel," as used in the "Harter Act," as follows:

"They might not include stowage of cargo, not affecting the fitness of the ship to carry her cargo. But they do include, at the least, the control, during the voyage, of everything with which the vessel is equipped for the purpose of protecting her and her cargo against the inroad of the seas."

The decree is affirmed, with costs.

## THE FREY.

(District Court, S. D. New York. March 10, 1899.)

- 1. Shipping—Damage to Cargo—Unseaworthiness from Improper Loading. The loading of drums of glycerine, which, from their shape and weight, require care in loading, in the between-decks, without filling the entire cargo space to prevent them from jumping, and when the entire loading was so light as to bring the glycerine very high above the water, where it would be subject to the greatest effect of the rolling of the vessel, and the result of which was that the drums shifted and the cargo was damaged thereby, although no extraordinary weather was encountered, constitutes such improper loading as rendered the vessel unseaworthy at time of sailing, and the damage resulting is not within exceptions in the bill of lading against "unseaworthiness" or "damage by leakage, breakage, or contact with other goods," since the bill of lading also bound the owners to the exercise of "due diligence to render the vessel seaworthy"; nor are they, for the same reason, relieved from liability by section 3 of the Harter act (2 Supp. Rev. St. p. 81), which does not cover negligence in loading, stowing or ballasting the ship.
- SAME—HARTER ACT—EFFECT ON FOREIGN VESSELS.
  Foreign vessels being entitled to the benefit of the Harter act (2 Supp. Rev. St. p. 81), they will be held subject to its limitations by courts of the United States in suits for damages to cargo arising on the high seas on voyages to this country.

This was a libel by Frederic Marx and others against the steamship Frey for damage to cargo.

Carter & Ledyard, for libelants. Convers & Kirlin, for claimant.