

J. McCREARY.

CONSTRUCTION OF IRON BOATS, &c.

No. 182,080.

Patented Sept. 12, 1876.

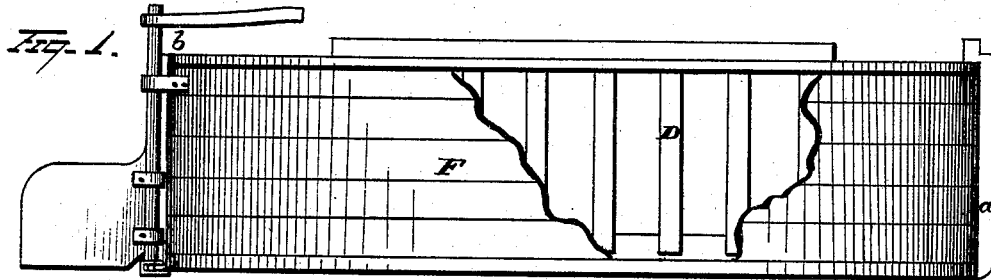
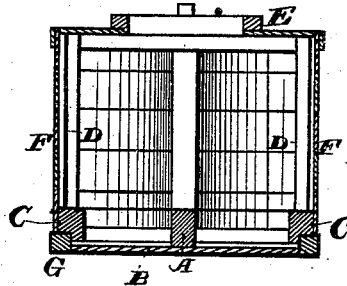


Fig. 2 -



WITNESSES

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IMPROVEMENT IN CONSTRUCTION OF IRON BOATS, &c.

Specification forming part of Letters Patent No. 182,080, dated September 12, 1876; application filed August 7, 1876.

To all whom it may concern:

Be it known that I, JOHN McCREARY, of Middletown, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

In the construction of iron boats it has heretofore been difficult to form such a structure as will, in operation and actual wear, prove a success, a main defect being the exposure of the metallic outer skin of the frame, and its consequent liability of being torn, abraded, or in some manner injured by striking obstacles or abutting substances. Especially has this appeared in canal and other flat-floor iron boats, that part of the frame known as the "knuckle" or "bilge" being subjected to much wear and drag from coming in contact with the bank of the canal, which contact is of frequent occurrence, and often inevitable, as the boat is in transit. As the boat comes to dock, also, it strikes against the wharfage, and this immediate receipt of the blow by the metal itself is damaging to a serious extent. Further, as is well known, iron has a strong grit or bite, so that the progress of the trip is so much the more retarded by the greater friction existing between any opposing matter and the metallic skin of the boat than if the latter were of a less gritty nature. An iron canal-boat has, by reason of such disability, suffered a deterioration, the remedy of which is the object of my invention; and the latter consists, first, in constructing the knuckle-piece or bilge of wood or other fibrous material suitable to impart supporting-strength to the frame and yet render the same elastic at this point; secondly, in guarding this wooden knuckle-piece or bilge-log by a fender of the same or similar material.

In the drawings, Figure 1 is a side elevation, and Fig. 2 a cross-section amidships, of a boat embodying my improvements.

A is the keelson, and B the floor, setting flush into the bottom of the knuckle-piece C, which latter extends from stem to stern posts

a b, and receives in like manner in its exterior side the ribs D. These latter, as well as the floors, are of T-iron, as shown in the drawings, but may be of angle or any other shaped iron. The deck E is constructed after any desired manner, and is not vital to the matter in hand. F is the outer skin of the frame, and is of metal plates, fastened to the ribs as siding, and to the floor as sheathing, while the tread of the deck is also the same. This outer skin or metal plating may be secured to the frame in any desirable mode; but on reaching the bilge timber or log C, both at the side and bottom of same, it comes up flush with a projecting strip, G, running about the knuckle its entire length, and acting as a guard to ward off or receive any concussion or wear, which otherwise would be suffered by the knuckle-piece C itself. This fender G I prefer to construct of wood, since it is peculiarly applicable on account of its less relative density and greater elastic texture as comparable with iron; also, it admits of very ready and strong adjustment to the frame; but it is evident that any other material might be substituted in its stead, provided it possessed the suitable qualities, as above premised, and will serve to protect the frame from the injury and wear occasioned by the immediate contact of itself with foreign matter. It may be in a separate piece, or in the same timber as the knuckle-piece C.

It will be understood that the general build of the boat is immaterial to the present issue, and may be of any agreeable style or nature. Thus, there may be a keel, more than one keelson, knees supporting the deck-beams, &c. So, also, the ribs may butt or lap joint with the floor, instead of each of the two setting flush into the knuckle-piece and interposed by the same, as is above shown. The interior and other details of the boat likewise may be formed and equipped as may be desired, my invention relating, broadly, to the knuckle-piece and its fender, neither of which are affected by changes in the above parts.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a canal or other flat-floor iron boat, the knuckle-piece C, constructed of wood, and

adapted to render the frame elastic at such point, substantially as and for the purpose described.

2. The combination, with the iron floors B and iron ribs D, of the knuckle-piece C, the latter adapted to support and receive the said ribs and floors, substantially as and for the purpose described.

3. The bilge-fender G, projecting both laterally outward and vertically downward from the knuckle of an iron boat, substantially as and for the purpose described.

4. The combination, with the metallic outer skin F, iron ribs and floors D B, of the knuckle-piece C and fender G, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of August, 1876.

JOHN McCREARY.

Witnesses:

THOMAS S. HALL,
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