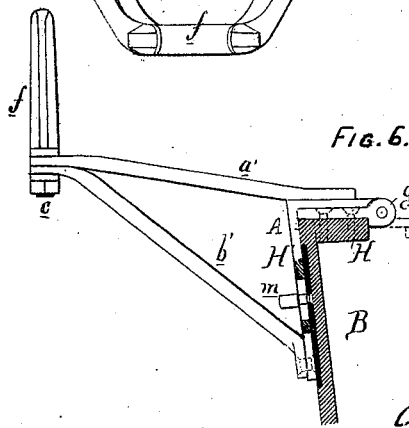
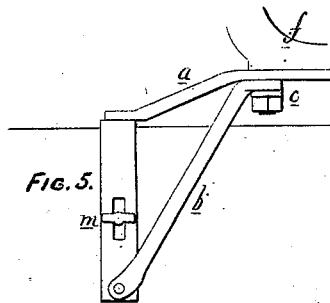
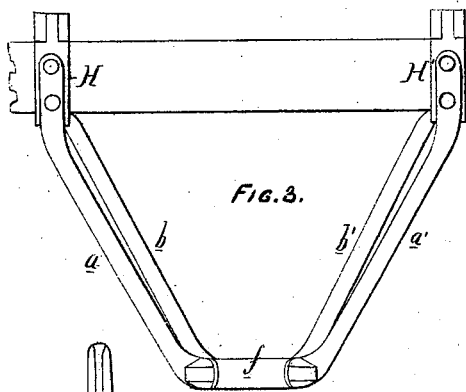
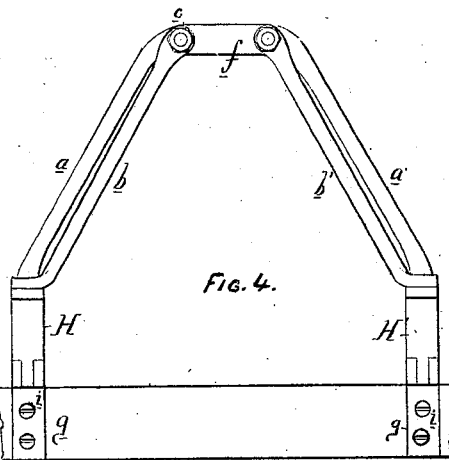
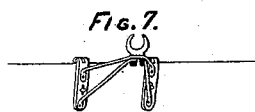
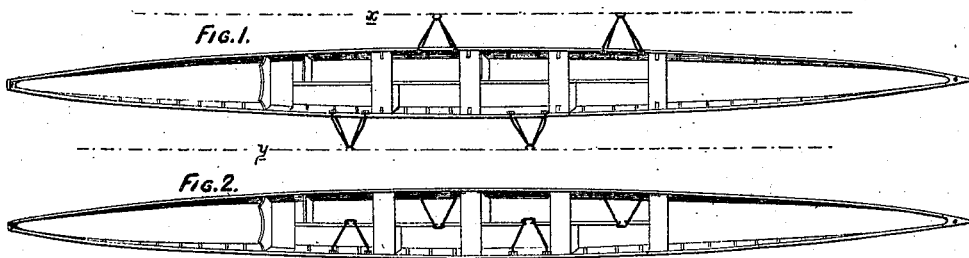


A. J. Luffberry, Jr.,

Oar and Lock.

No. 107,392.

Patented Sept. 13, 1870.



WITNESSES,
Wm. A. Steel.
Geo. B. Harding.

A. J. Luffberry, Jr.
by his Atty.
Howson and son

United States Patent Office.

ANDREW JACKSON LUFFBARRY, JR., OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 107,392, dated September 13, 1870.

IMPROVEMENT IN OUTRIGGERS FOR ROW-BOATS.

The Schedule referred to in these Letters Patent and making part of the same

I, ANDREW JACKSON LUFFBARRY, JR., of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improvement in Outrigger Rowing-Boats, of which the following is a specification.

Nature and Object of the Invention.

My invention relates to an improvement in outrigger rowing-boats; and

The improvement consists in so hinging the outriggers to the gunwale or side of the boat that they can be extended outward when required for use, or folded in out of the way when the boat is approaching or alongside of a wharf, or when in the boat-house, all of which will be fully described hereafter.

Description of the Accompanying Drawing.

Figures 1 and 2 are plan views of boats, with my improved outrigger;

Figure 3, an enlarged plan view of one of the outriggers, thrown outward from the side of the boat, and ready for use;

Figure 4, the same turned over upon its hinged joint, so as to be contained entirely within the boat;

Figure 5, a side view of fig. 3;

Figure 6, a sectional view through the side of the boat and gunwale, showing the outrigger extended outward in full lines, and folded inward in dotted lines; and

Figure 7 is a view of a modification, adapted especially to shell-boats.

General Description.

Outriggers have heretofore been rigidly secured to the sides of boats, so as to practically increase the width of the latter to the full spread of the oar-locks, which the said outriggers support. This will be understood by referring to the dotted lines *x* and *y*, which represent the width of the space actually required by an ordinary outrigger-boat upon the water, or when in the boat-house.

The outriggers also render it extremely inconvenient to get into or out of a boat, as they prevent the close approach of the latter to a wharf or slip, so that, unless considerable care be exercised, there is constant danger of upsetting, especially as boats of this class are generally both light and narrow.

To overcome the above objections, I have conceived the idea of a hinged outrigger, which, as I will now proceed to describe, can be thrown outward from the side of the boat and locked when it is required for use, or turned inward, so as to be contained entirely within the boat when the latter is approaching or alongside of a wharf, or when in the boat-house.

On reference to the drawing—

A represents the gunwale, and

B, part of the upper streak of a rowing-boat.

Each outrigger consists of four rods or braces, *a a'* and *b b'*, joined together at their outer ends by the bolts *c*, which secure the row-lock *f* to the same.

The bracing-rods *a* and *b* are secured to the upper and lower portions of a plate, H, which is bent at right angles, or thereabout, so that it may rest upon the upper edge of the gunwale A, and also against the upper streak B of the boat, as shown in fig. 6; and the said plate is hinged at the inner edge of the gunwale to a plate, *g*, which is suitably secured to the gunwale by screws or other fastenings, *i*.

The bracing-rods *a'* and *b'* of the outrigger are also secured to a similar angular plate, H', hinged, in the same manner as the plate H, to the inner edge of the gunwale, and at a distance from the said plate H depending upon the angle of the bracing-rods.

In order to relieve the strain upon the hinges, and to render the outrigger perfectly firm and rigid when it is extended outward from the side of the boat, as shown by full lines in fig. 6, each of the plates H and H' is provided with a locking device, *m*, by which it may be securely fastened to the boat. This device consists, in the present instance, of a T-headed button, secured to and arranged to turn in the side of the boat, and adapted to an oblong slot in the plate; but I do not confine myself to the use of this fastening only, as a spring catch or other locking device can be substituted for the same.

For shell-boats, or other boats which have no gunwale, the modification of my invention shown in fig. 7 may be employed. In this case the plates H and H', instead of being angular, are perfectly straight, and are hinged to the extreme upper and outer edge of the side of the boat. In all other respects the arrangement is precisely the same as before described, the locking devices being retained.

It will be evident that the extended bearing afforded by the plates H and H' against the side of the boat, or side of the boat and gunwale, will be sufficient to prevent all undue strain upon the hinges, while the employment of the locking devices *m*, or their equivalents, will render the arrangement as firm, and as little liable to work loose, as the ordinary rigid connections.

My invention can be applied as well to wooden outriggers which spring from the keelson of the boat as to outriggers consisting wholly of metal, it being only necessary in such case to hinge the wooden portion of the outrigger at or near the gunwale, as well as the bracing-rods connected to the same.

The advantages of my invention will be best understood on referring to figs. 1 and 2, the dotted lines *x* and *y* in fig. 1, as before mentioned, representing the width of the space required for an ordinary outrigger-

boat, under any and all circumstances, while fig. 2 shows that, by the use of my arrangement, the usual objectionable outriggers can be so folded in out of the way as to enable the boat to be brought close up to a wharf, &c.

It will be evident that my invention is as applicable to single shells and other sculling-boats as to boats of the class illustrated in the drawing.

Claims.

1. An outrigger provided with an oar-lock, and hinged to the gunwale of a boat so that it can be

turned within the latter, or outward, so as to carry the oar-lock to a position beyond the gunwale, substantially as set forth.

2. A hinged outrigger, carrying an oar-lock, in combination with plates H H', substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANDREW JACKSON LUFFBARRY, JR.

Witnesses:

WM. A. STEEL,

F. B. RICHARDS.