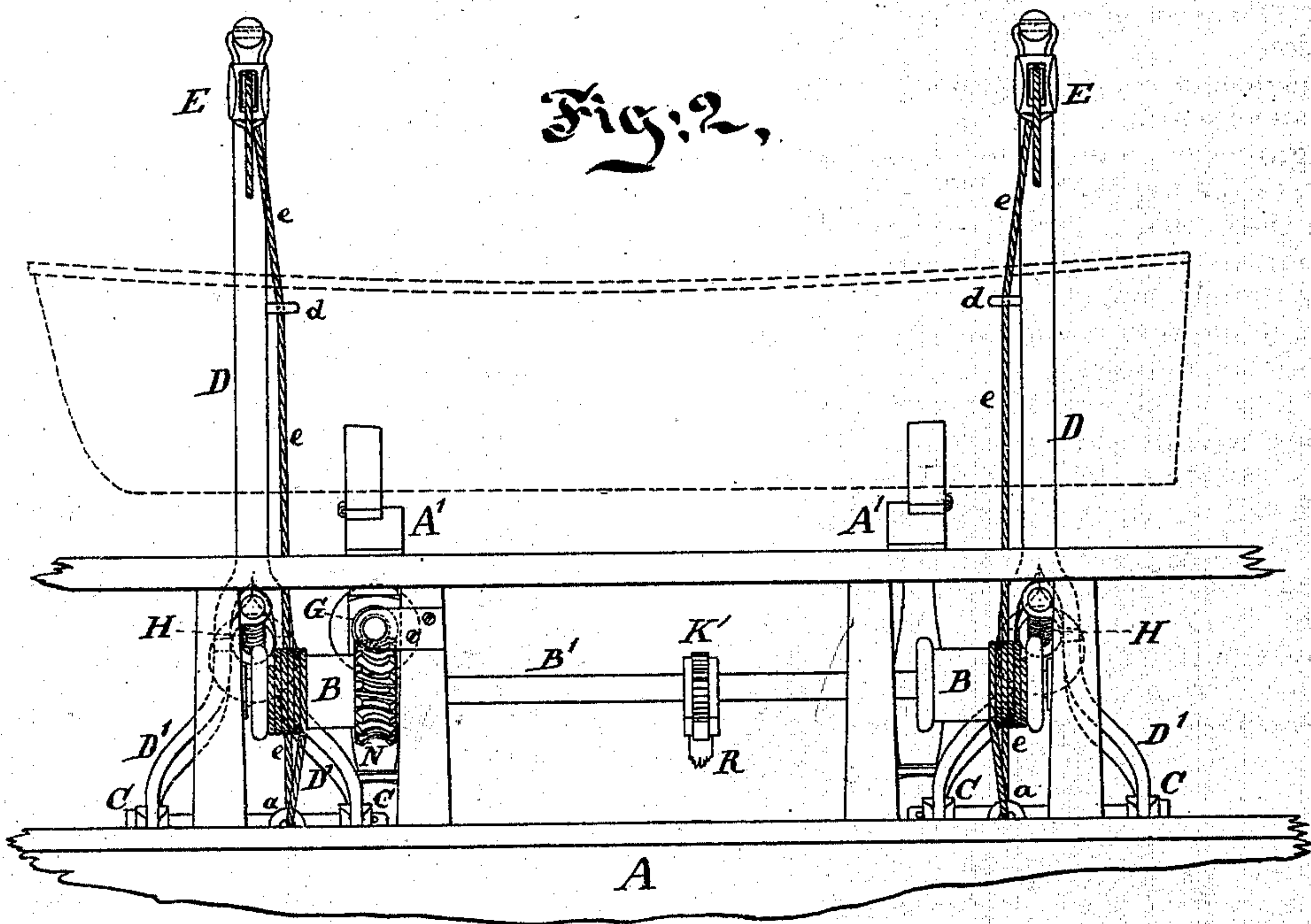
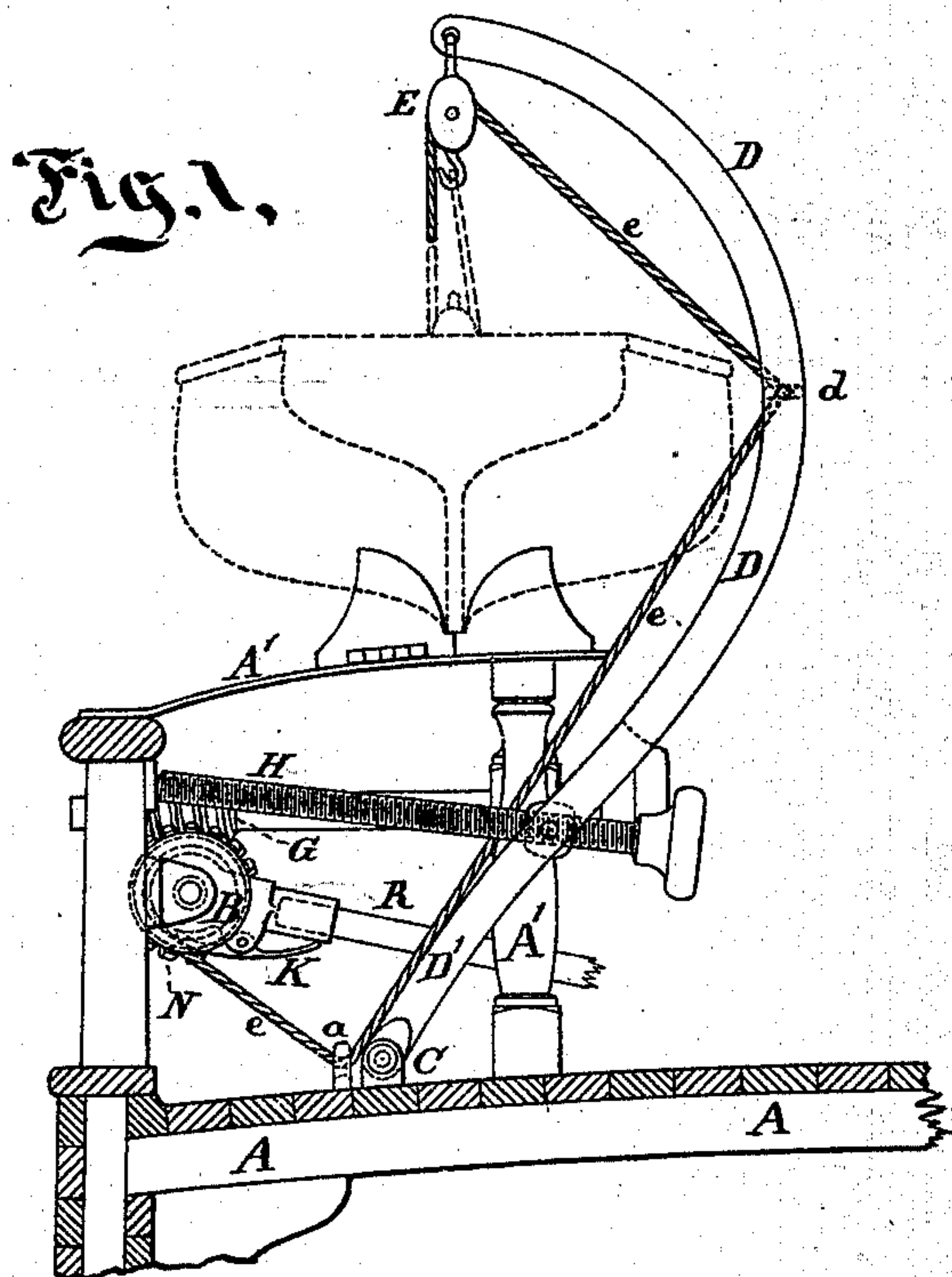


G. W. MALLORY.
Boat-Detaching Apparatus.

No. 146,835.

Patented Jan. 27, 1874.



Witnesses,
Arnold Hornmann.
W. C. Oley

Inventor,
Geo. W. Mallory,
by his attorney J. B. Stetson

UNITED STATES PATENT OFFICE

GEORGE W. MALLORY, OF MYSTIC BRIDGE, CONNECTICUT.

IMPROVEMENT IN BOAT-DETACHING APPARATUS.

Specification forming part of Letters Patent No. **146,835**, dated January 27, 1874; application filed July 11, 1873.

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON MALLORY, of Mystic Bridge, New London county, State of Connecticut, have invented certain Improvements in Boat-Operating Means, of which the following is a specification:

I have, in patents before issued to me, shown how boats may be taken on board and put over the side of a ship by means of davits hinged to the deck a little within the rail, and with means for inclining them inboard and outboard, as required. The present invention relates to improved means for guiding and operating such davits, and to means for hoisting and lowering the boat from the same or other davits.

The following is a description of what I consider the best means for carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is an end view, and Fig. 2 is a side view, of the apparatus. The view in Fig. 2 is from the outside of the vessel, the planks from the bulwarks being represented as removed to show the mechanism.

Similar letters of reference indicate like parts in both the figures.

A is the hull of the vessel. A' are rigid frames extending inboard from the bulwarks and supporting the boat upon chocks, the outboard half of each of which is hinged to turn down at pleasure, and allow the boat to be swung outboard so soon as it is lifted a little by the ropes *e e*. D D are davits, curved as represented, and equipped with the proper tackles E, by means of which the boat is hoisted and lowered, the ropes being both operated by one windlass, as will presently appear. The bottom of each davit is forked, and the branches are widely spread apart, as indicated by D'. The feet of these branches are hinged in stout eyes C, which form axes on which the davits may be turned in being moved outboard and inboard. Each rope *e* is led through an eye or pulley, *d*, on the davit, and through another eye or pulley, *a*, on the deck, the latter being very near the axis of motion of the corresponding davit, so that the moving of the boat outward or inward does not materially raise or lower the boat. The hoisting and lowering are effected by turning windlasses B B, so as to

wind up or unwind the ropes *e e*. To raise the boat, the gypsy K is reciprocated powerfully by acting on the lever R. In this gypsy K a pawl acts on the teeth of a ratchet-wheel, K', fixed on the shaft B'. I prefer that the pawl shall be equipped with a spring to urge it into contact with the teeth, and that it be mounted on the under side of the gypsy, so that in operating the lever R by hand the up-motion is easy and the down-motion is effective in lifting the boat. G is an endless screw, provided with a hand-wheel or other suitable means for operating conveniently and working in the periphery of a wheel, N, which is keyed fast on the shaft B'. The threads of the screw G, and the corresponding teeth or half-threads on the wheel N, are made so oblique as to form what is sometimes called a "quick-screw," and, being smoothly finished and properly lubricated, the weight of the boat is nearly sufficient to cause the screw G to turn of itself when caused to depend on the ropes *e*. A little assistance from a man or a boy will cause the screw G to turn rapidly and the boat to be gently and steadily lowered into the water, or, when the davits D D are properly inclined inward, to be lowered into the chocks. In hoisting the boat, the quick-screw G is able to hold, with one man or boy in attendance, all that the gypsy turns the shaft B' at each movement. During the idle up-motion of the lever R the pawl of the gypsy K slides over the teeth of the ratchet-wheel K', and the shaft B' is held against turning backward by means of the screw G. On the depression of the gypsy-lever R the shaft B' is turned, and the ropes *e e* are taken up upon the windlass B B, the screw G being actively turned during this movement by the attendant, so as to hold all it gets. It may be necessary, when the windlass-shaft B is long and slender, to provide a stanchion on one side or on each side of the gypsy K, close to the same, in addition to the end supports. I propose to move the davits D D outboard and inboard, with the boat properly suspended thereto, by turning the endless screws H H, which are threaded through blocks of brass or other suitable material hung in trunnions between the branches of the davits. The outboard end of each screw is fitted in a bearing, with proper liberty to change its inclination a little to accommodate

the varying angular position of the screws as the davits are moved out and in. I can connect the two screws H H by a cross-shaft with suitable gearing, so as to compel both to operate uniformly, if desired.

My experiments, however, induce a belief that an advantage will result from allowing the davits to be moved independently. Thus arranged, a weaker man, or a smaller number of men, can get a boat outboard or inboard by moving one end at a time.

There may, if preferred, be provisions, by an eccentric box or otherwise, for lifting the endless screw G out of its engagement with the wheel N during the hoisting motion of the boat. In such case the wheel N, or some other suitable toothed wheel, should be provided with one or more pawls mounted on fixed centers. The branched form of the davits D D' gives each a wide base, so that the davit is efficiently guided without any necessity for addition of guides or braces. This breadth of base fore and aft is important, especially in case of a pitching motion of the vessel. The broad base may be obtained by a T shape of the davits at their feet; but I prefer the forked form, as represented.

I claim as my invention—

1. The rigid bent davits, constructed, as shown, with the wide bases D', and mounted on hinged joints or eyes C, arranged inboard on the ship, so as to be self-guiding, and to move the boat inboard and outboard by a direct motion, as specified.

2. The combination, with a windlass having suitable operating means, of the quick-screw G, whereby the windlass may be readily held at any desired point, and the boat steadily and rapidly lowered, as specified.

3. In combination with the forked or widely-hinged davits D D', the davit-operating screws H H, traversing through suitable threaded nuts connected to the self-guided davits, the whole operating together substantially as herein specified.

In testimony whereof I have hereunto set my hand this 27th day of June, 1873, in the presence of two subscribing witnesses.

GEO. W. MALLORY.

Witnesses:

ASA FISH,

E. P. RANDALL.