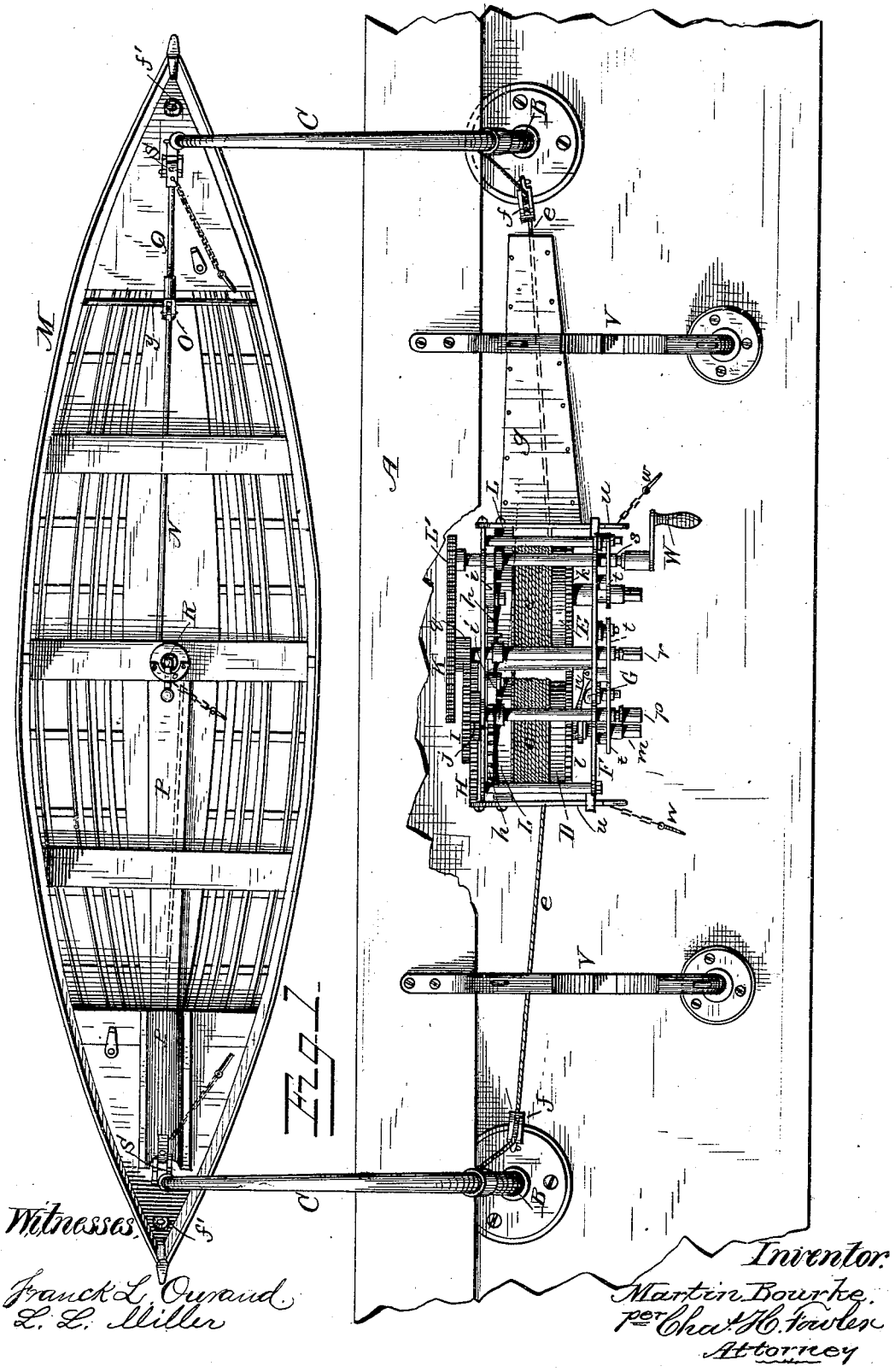
(No Model.) 5 Sheets—Sheet 1.

M. BOURKE.

BOAT LOWERING AND DETACHING APPARATUS.

No. 267,322. Patented Nov. 14, 1882.



Witnesses.
Franck L. Ouyand
L. L. Miller

Inventor.
Martin Bourke.
per Chas. H. Fowler
Attorney

(No Model.) 5 Sheets—Sheet 2.

M. BOURKE.

BOAT LOWERING AND DETACHING APPARATUS.

No. 267,322. Patented Nov. 14, 1882.

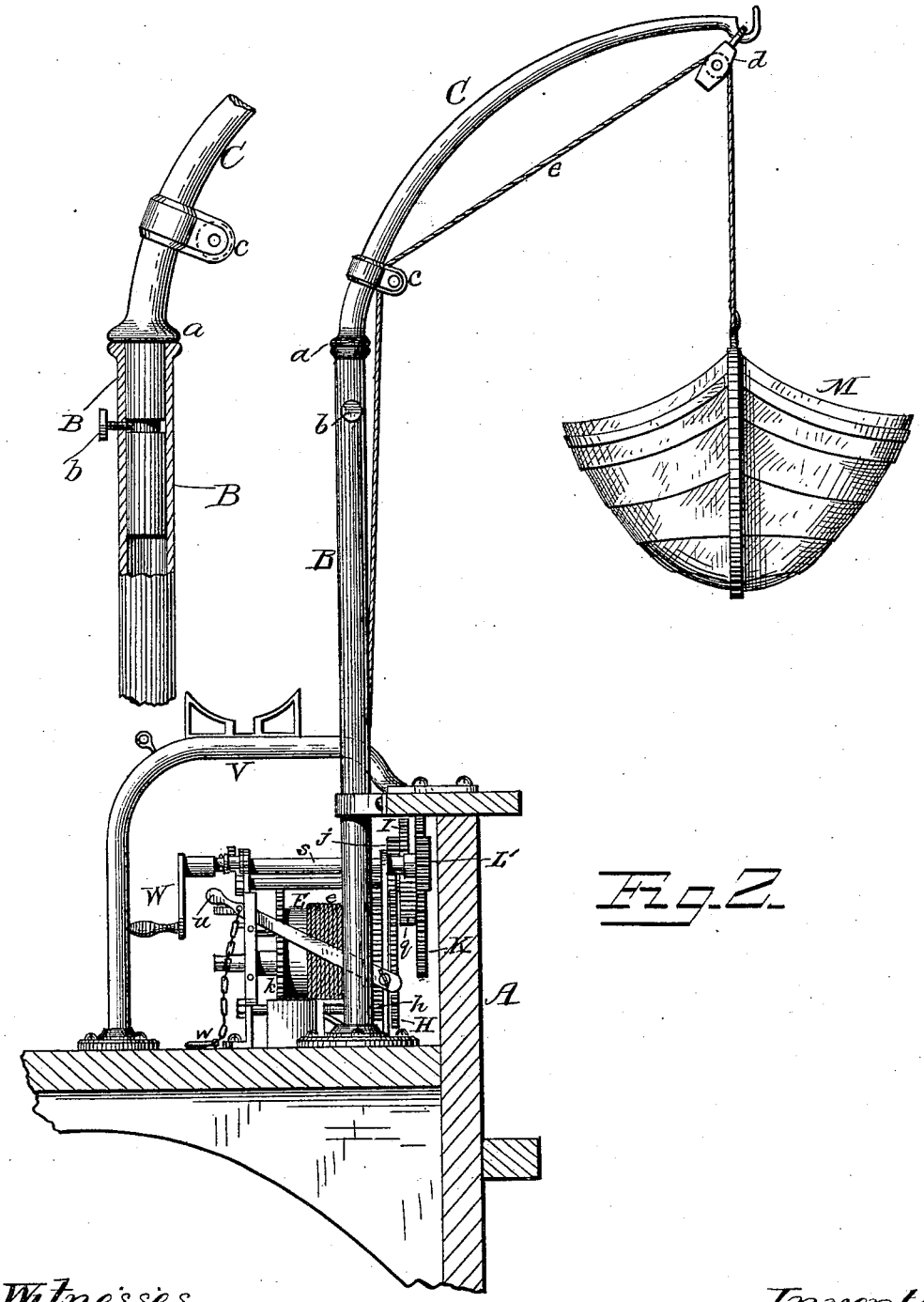


Fig. 2.

Witnesses.
Frank L. Ourand.
L. L. Miller

Inventor.
Martin Bourke.
per Chas. H. Fowler
Attorney

(No Model.) 5 Sheets—Sheet 3.

M. BOURKE.

BOAT LOWERING AND DETACHING APPARATUS.

No. 267,322. Patented Nov. 14, 1882.

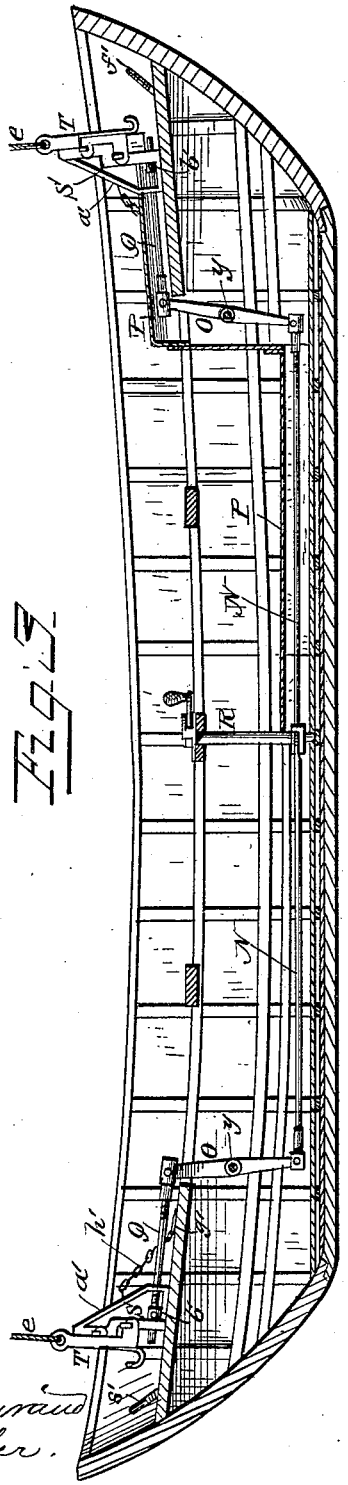


Fig. 5.

Witnesses.
Frank L. Ourand
L. L. Miller.

Inventor
Martin Bourke,
per Chas. H. Fowler,
Attorney

(No Model.) 5 Sheets—Sheet 4.

M. BOURKE.

BOAT LOWERING AND DETACHING APPARATUS.

No. 267,322. Patented Nov. 14, 1882.

Fig. 4.

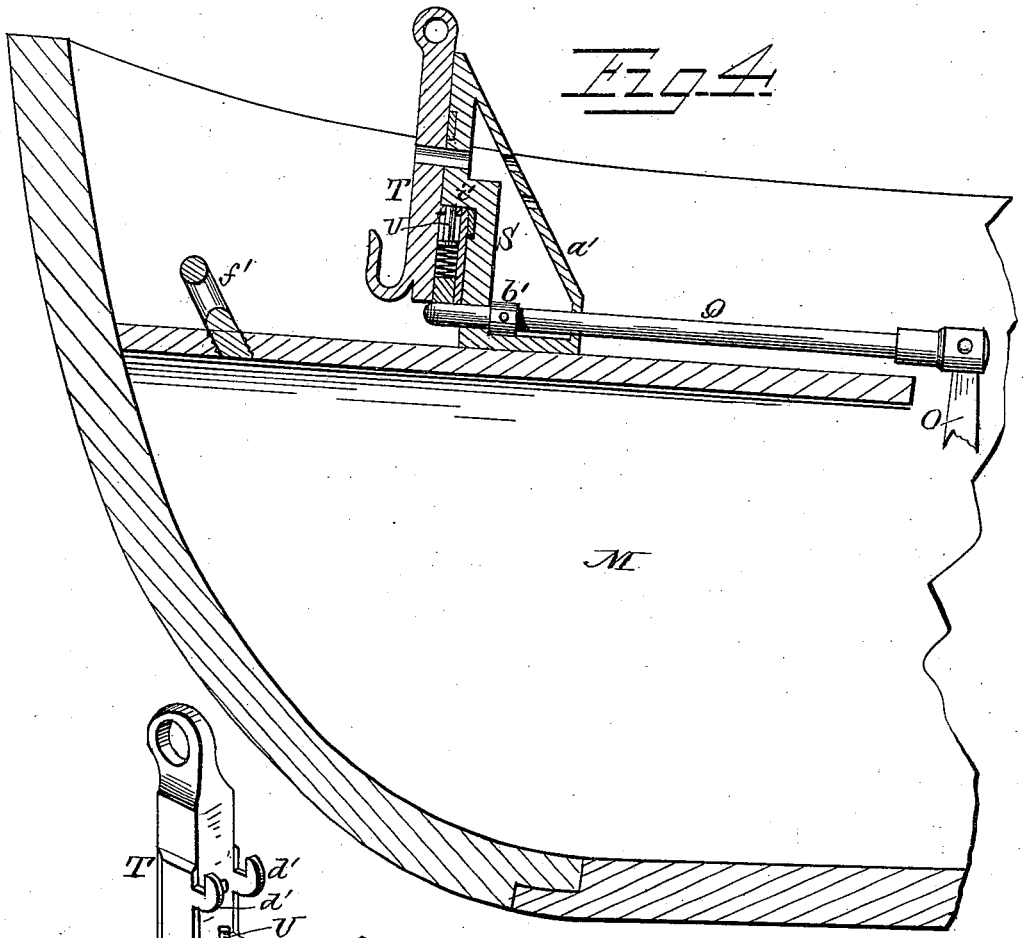
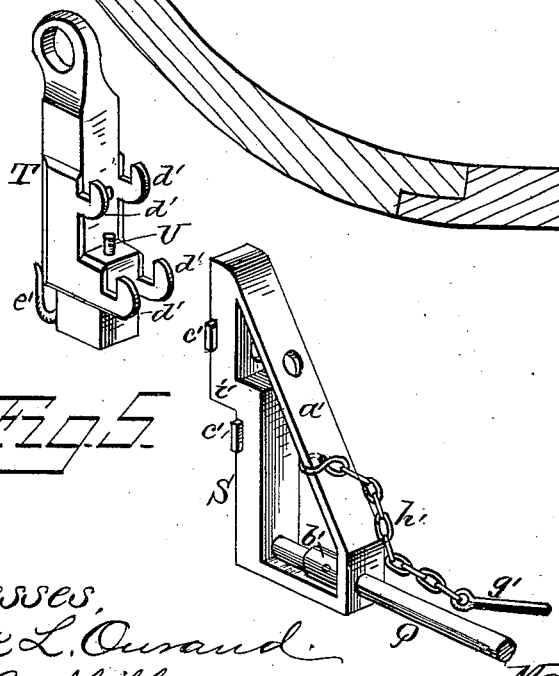


Fig. 5.



Witnesses,
Franck L. Durand.
L. L. Miller.

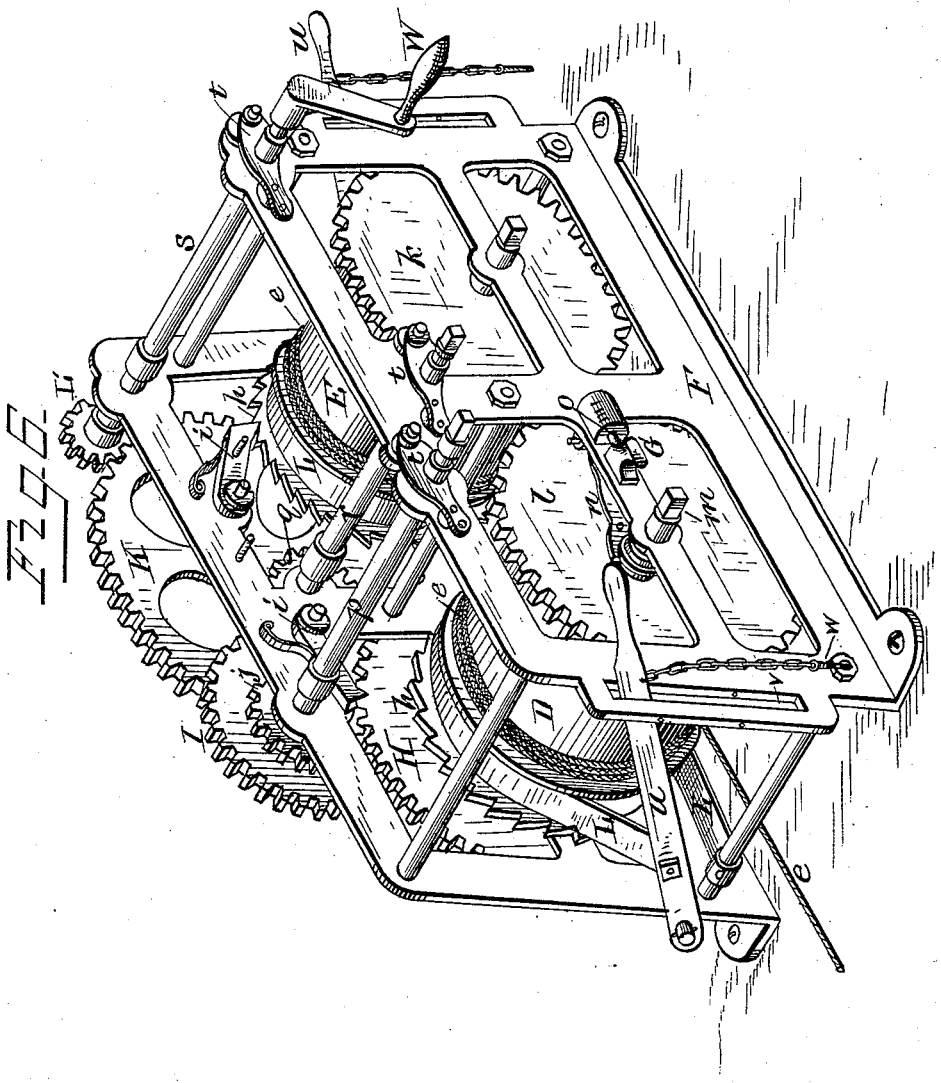
Inventor.
Martin Bourke.
per Chas. H. Fowler,
Attorney

(No Model.) 5 Sheets—Sheet 5.

M. BOURKE.

BOAT LOWERING AND DETACHING APPARATUS.

No. 267,322. Patented Nov. 14, 1882.



Witnesses.
F. L. Ourand
L. L. Miller

Inventor
Martin Bourke.
per Chas. H. Fowler
Attorney

UNITED STATES PATENT OFFICE.

MARTIN BOURKE, OF YOUNGSTOWN, OHIO.

BOAT LOWERING AND DETACHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 267,322, dated November 14, 1882.

Application filed May 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, MARTIN BOURKE, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Boat Lowering and Detaching Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a top plan view of my invention; Fig. 2, an end view thereof; Fig. 3, a longitudinal section of a life-boat with my improvements attached; Fig. 4, a similar view of one end of the boat on an enlarged scale, showing the clutch mechanism; Fig. 5, a detail view, in perspective, of the clutch mechanism; and Fig. 6, a perspective view of the windlass mechanism.

The present invention has relation to certain new and useful improvements in apparatus or mechanism for lowering or detaching boats from ships or other vessels; and the object thereof is to provide simple, practical, and effective means by which the boat can be quickly lowered, and automatically detached from its fastening immediately upon coming in contact with the water, when so required or found necessary. These objects I attain by the construction and arrangement of devices substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A represents the side of a ship or other vessel, to which are suitably connected hollow standards B at the required distance apart. These standards support curved arms C, the vertical portion or shanks thereof extending into the hollow standards, the flange *a* of the arms resting upon the ends of said standards, a set-screw, *b*, holding the arms in place, but allowing them to swing around horizontally over the side of the vessel when in use.

To the arms C are suitably connected pulleys *c d*, of any desirable construction, over which pass ropes or falls *e*, the same extending down and around pulleys *f* at the base of the hollow standards. The ropes or falls *e* pass around drums D E, and, if desired, they may be protected by caps *g* from getting injured. The drums D E have each a ratchet-wheel, *h*, with which engages a pawl, *i*, pivoted to a frame, F, said frame supporting the several shafts or journals of the drums and gearing. The drum E has rigidly connected to it a gear-wheel, *k*, the teeth thereof meshing with those of a similar gear-wheel, *l*, said wheel being adjustably connected to the shaft *m* of the drum D.

The gear-wheel *l* may be caused to slide to or from the end of the drum D by any suitable means, so as to bring it in or out of gear with the wheel *k*, when both drums are required for use, or only one, as the case may be. This adjustment of the wheel *l* is made by a notched push-bar, G, operating against a clutch, *n*, said bar being held in place by a spring-plunger, *o*, or other suitable means. This is only one of many means that may be employed for operating the sliding gear-wheel *l*, and I therefore do not desire to be understood as confining my invention to the precise means shown.

To one end of the shaft *m* is rigidly connected a gear-wheel, H, which engages with a pinion, *j*, of a gear-wheel, I, said gear-wheel being connected to a shaft, *p*, and engaging with a pinion, *q*, upon a large gear-wheel, K. The wheel K is rigidly connected to a shaft, *r*, and gears with a small toothed wheel, L, secured to a shaft, *s*. These shafts *p r s* have their bearings in the frame F, and are each adapted to slide in the frame to bring the wheels and pinions in or out of gear when required to increase or diminish the power as it may be required. The shafts *p r s* are held in position by suitable locking-bars, *t*, pivoted to the frame F, after the shafts have been adjusted to bring the wheels and pinions in or out of gear, as the case may be.

Suitable brakes, L, pass over the drums D E, and are operated by levers *u*, pivoted to the frame F, the free ends thereof passing through guide-slots *v* and held or locked in any position by a pin, *w*, or other suitable means, to increase or diminish the pressure of the brakes upon the drums.

The life-boat represented at M has upon its bottom horizontal operating-rods N, covered by caps P, to prevent injury thereto, said rods at their inner ends being connected to an upright or vertical rod, R. The rods N at their

outer ends are pivoted to the lower end of a lever, O, one at each end of the boat, and supported by a cross-brace, *y*.

To the upper end of the levers O are pivoted bolts Q, the outer or free ends of which pass through standards S, and when the clutches T upon the ends of the ropes or falls *e* are made to engage with the standards the ends of the bolts Q will project beyond the same and under the clutches. This will effectually prevent the clutches from being accidentally disengaged from the standards when lowering the boat, and when it is desired to have the clutches automatically disengaged from the standards when the boat comes in contact with the water the bolts are withdrawn.

The standards S are cast with braces *a'*, which not only strengthen them, but form guides for the bolts Q, a stop, *b'*, upon the ends of the bolts, between the standard and brace, preventing the bolts from being drawn through the standards and bent or otherwise injured. The standards S are provided with suitable holding devices *c'*, with which engage the shoulders *d'* upon the clutches T, said clutches, if desired, having hooks *e'* at their lower ends to engage with the rings *f'* at the ends of the boat, when found expedient. The standards S are each provided with pins *g'*, connected thereto by suitable chains, *h'*, which operate in connection with the bolts Q, so that when one person only is in the boat and desires to attach it to the clutches the pin at one end of the boat is passed through the standard, brace, and clutch, which holds them engaged until the pin at the opposite end of the boat in like manner holds the clutch to the standard.

After the clutches at both ends of the boat are secured by the pins, as above described, the bolts Q are operated to lock or retain the clutches in engagement with the standards, after which the person in the boat can go to each end thereof at his leisure and withdraw the pins. This enables a single person to attach the boat for raising by the ropes or falls, which would otherwise be exceedingly difficult while the boat was resting on the water.

Each of the clutches T is provided with a spring tripping device, U. When the clutches are made to engage with the standards the elbow *i'* will force the tripping device down; but so soon as the boat touches the water and the weight is all taken off the clutches the spring tripping device will cause the clutch to be automatically forced downward, thereby rendering the operation of disengaging the clutches with the standards more certain and sure.

It is immaterial whether the spring tripping device be connected to the clutches or to the standards, and I therefore reserve the right to make such change, if found desirable.

When the boat is not in use it rests on suitable supports, V, secured to the deck or other part of the vessel.

A suitable crank-handle, W, is employed, and is detachably connected to either one of the shafts for operating it, as required.

The windlass mechanism herein shown and described is to form the subject of a separate patent, and therefore I lay no claim in the present instance to its special construction, but reserve the right to employ and substitute any of the usual forms of windlass that will serve the purpose intended in connection with the other features of my invention.

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

1. In a boat-lowering apparatus, the combination, with the clutches T, constructed substantially as described and shown, of the standards S, having braces *a'*, and the bolts Q, passing through said standards and braces, and having thereon stops *b'*, constructed to operate substantially as and for the purpose set forth.

2. The combination, with the standard S, having elbow *i'* upon its front side, of the clutch T, having connected to it, near its lower end, a spring tripping device, U, operating, in connection with the shoulder, to automatically force down the clutch and disengage it from the standard, substantially as and for the purpose specified.

3. In a boat-lowering apparatus, the combination, with the clutches T, constructed substantially as shown and described, of the standards S and bolts Q passing through them, and pins *g'*, connected to said standards by suitable cords or chains, and employed to hold the clutch engaged with the standard by passing through holes therein, substantially as and for the purpose specified.

4. In a boat-lowering apparatus, the clutches T, provided with spring tripping devices U, and the standards S, having bolts Q passing through them, with stops *b'* thereon, in combination with the swinging cranes, davits, or arms C, the ropes or falls *e*, and a suitable windlass mechanism, substantially as and for the purpose set forth.

5. In a boat-lowering apparatus, the combination, with the clutches T, provided with spring tripping devices U, and the standards S, arranged at or near each end of the boat, and having bolts Q passing through them, of two swinging cranes, davits, or arms, C, supporting the ropes or falls *e*, and a windlass mechanism having two drums around which the ropes pass, each drum adapted to operate independently of the other, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MARTIN BOURKE.

Witnesses:
WM. S. BRANSOM,
H. J. ENNIS.