(No Model.) 2 Sheets—Sheet 1.

J. H. THROOP.

BOAT LOWERING APPARATUS.

No. 472,410. Patented Apr. 5, 1892.

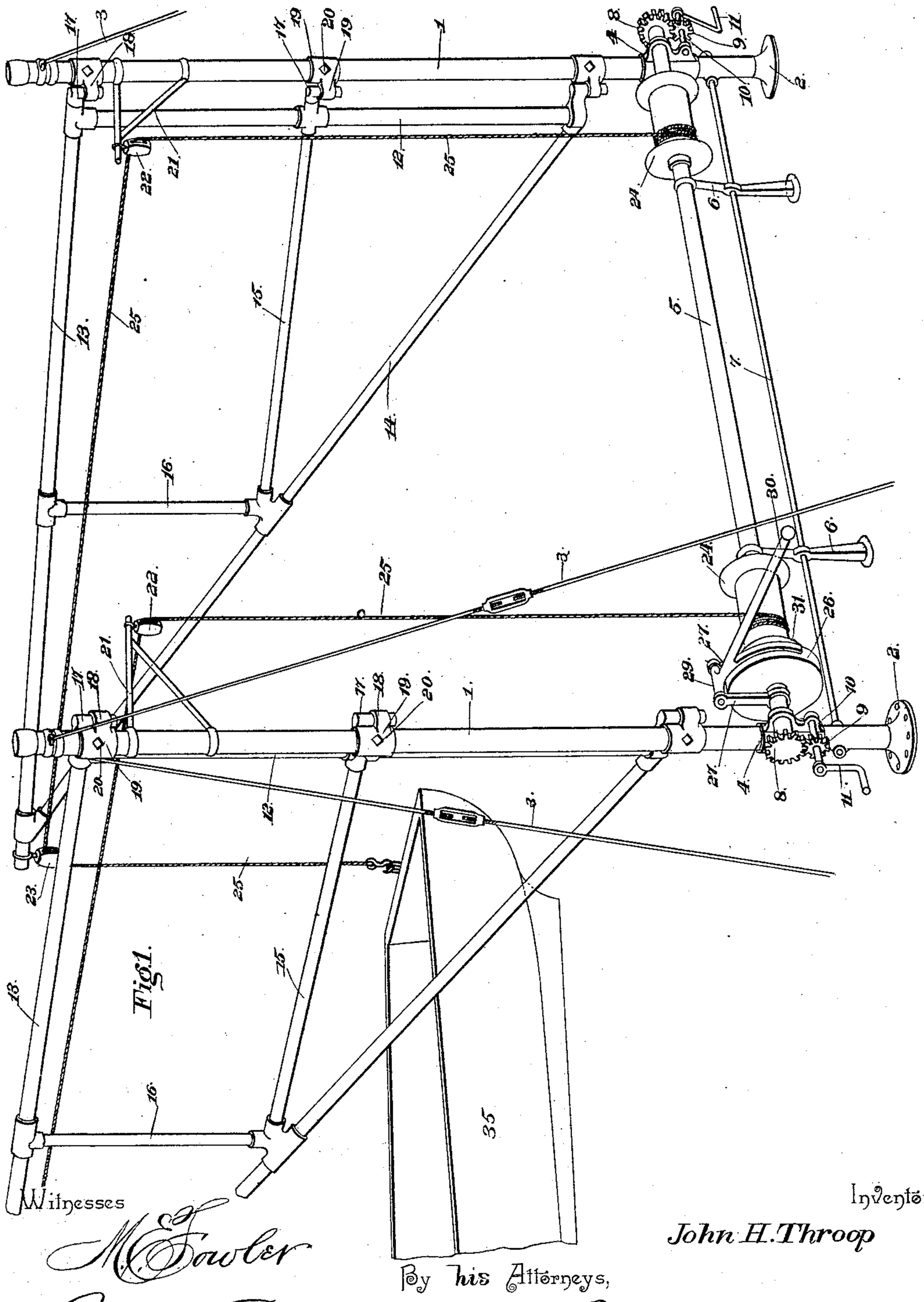

Fig. 1.

Witnesses

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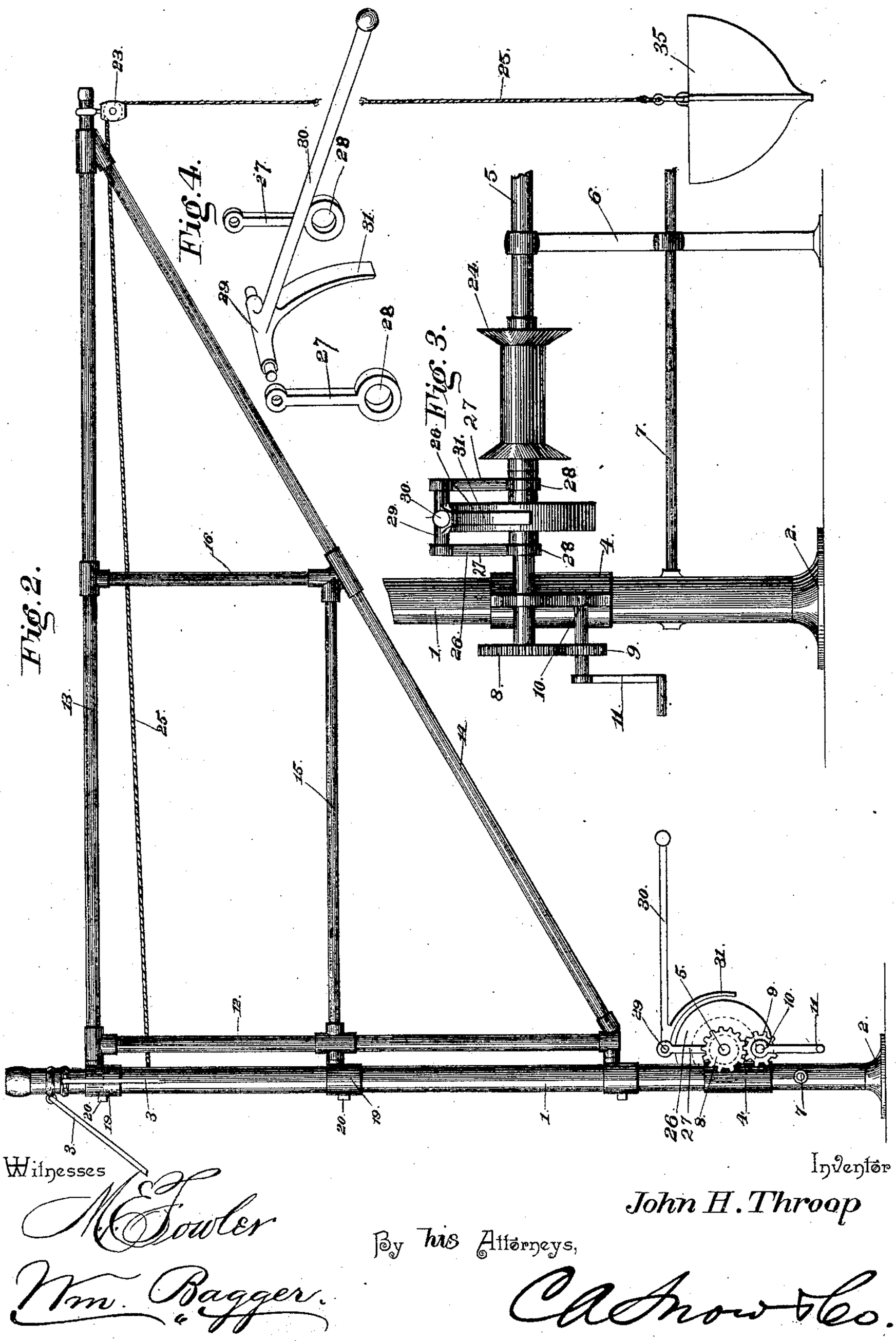

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UNITED STATES PATENT OFFICE.

JOHN HAMILTON THROOP, OF EVANSVILLE, INDIANA.

BOAT-LOWERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 472,410, dated April 5, 1892.

Application filed June 4, 1890. Serial No. 354,266. (No model.)

To all whom it may concern.

Be it known that I, JOHN HAMILTON THROOP, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented a new and useful Boat-Lowering Apparatus, of which the following is a specification.

This invention relates to boat-lowering apparatus; and it has for its object to provide an improved apparatus comprising all the necessary elements by means of which boats may be quickly and safely lowered from vessels while under way and in such a manner as to be held perfectly level at all times while being lowered and when striking the water and when not under way to support the boat within the vessel.

A further object of my invention is to so construct the boat-lowering apparatus that it may be operated and controlled by a single man for the purpose of either hoisting or lowering the boat.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings, Figure 1 is a perspective view showing my improved boat-lowering apparatus, with the boat in position for being lowered. Fig. 2 is a side view of the same. Fig. 3 is a front view, on an enlarged scale, of a portion of the operating mechanism. Fig. 4 is a perspective detail view showing the brake mechanism.

Like numerals of reference indicate like parts in all the figures.

The davits of my improved boat-lowering apparatus are composed of the uprights 1 1, secured in position by means of the base-flanges 2 and guys 3. Said uprights, as well as the cranes of the davits, are preferably constructed of metal pipe—such as ordinary gas-pipe—of suitable dimensions to insure the elements of strength and lightness. The uprights 1 1 are provided near their lower ends with sleeves 4, having bearings for a horizontal shaft 5. Additional bearings for said shaft may be formed in the supplemental uprights 6, which are connected with each other and with the uprights 1 by means of a brace-rod 7, which is arranged below and parallel to the shaft 5. The latter is provided at its ends with spur-wheels 8, meshing with pinions 9 upon the short crank-shafts 10, which are journaled in suitable bearings in the sleeves 4. The said crank-shafts have handles 11, by means of which they may be conveniently manipulated.

The cranes of my improved davits are constructed of metal pipes and consist of the vertical rods 12, the horizontal arms 13, and the diagonal braces 14, which are joined together by means of suitable couplings and which are likewise jointed with the horizontal and vertical brace-rods 15 and 16, thus making a frame structure which is very strong and able to resist any strain to which it may be subjected. The said cranes are of less length than the distance between the uprights, and at their rear ends are provided with pintles 17, hinged in eyes 18, which are formed upon the sleeves 19, which are secured in suitable positions upon the uprights 1 by means of set-screws 20. The cranes are thus enabled to swing outwardly or toward each other, as may be desired, and also by the uprights, so as to support a boat over the vessel.

The uprights 1 are provided near their upper ends with brackets 21, at the outer ends of which pulleys 22 are arranged. Guide-pulleys 23 are likewise secured at the outer ends of the horizontal arms of the frames.

Suitably secured upon the revolving shaft 5 are the drums 24, to which are attached the ropes 25, passing from thence over the pulleys 22 and 23 to the ends of the boat 35, where they may be connected with boat-detaching mechanism of ordinary construction.

Suitably secured upon the shaft 5 near one end of the same is a friction wheel or disk 26. Mounted loosely upon the shaft adjacent to the sides of said friction-disk are a pair of arms 27, provided with eyes 28, by means of which they are mounted upon the shaft. Journaled between the arms 27 at the outer ends of the latter is a rock-shaft 29, having a handle 30 and a brake-shoe 31, adapted to bear against the rim of the friction-wheel.

The operation of my invention and its advantages will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. In order to lower the boat, it is only necessary to swing

the davits outward and to permit the shaft 5 to revolve. The descent of the boat may be controlled by means of the brake operated by the handle 30. One or at most two men stationed one at each end of a shaft 5 may readily rotate the latter when it is desired to hoist the boat.

The apparatus now in general use for lowering boats from vessels is more or less complicated and requires some knowledge of the arrangement of blocks and tackle in order to be successfully operated. It not infrequently happens at times especially of the most pressing urgency that the lowering-tackle becomes disarranged, thereby making it impossible to lower the boats with the requisite rapidity and safety. Loss of life frequently results from the use of such defective boat-lowering apparatus. By my invention any one, even though not familiar with the working of blocks and tackle, may readily lower the boat in a safe, rapid, and convenient manner.

Another advantage of my improved apparatus is that any desired number of boats may be quickly and rapidly lowered in succession by the said apparatus, thus avoiding the necessity of having separate davits for each boat.

It will be observed that the cranes may be swung inwardly by the standards or uprights, and thus adapted to support the boat above the deck of the vessel. Furthermore, although the davits are thus adapted it is also obvious that all the elements—such as the windlass-shaft, the drums, brake, gear, &c.—are supported by the uprights, and hence by removing the uprights the entire device is removed with them.

It is obvious that in my improved boat-lowering apparatus ordinary Manila rope or wire cable may be used with equal efficiency. I also desire it to be understood that I reserve the right to make any changes in the general structure of the device which may be resorted to without departing from the spirit of my invention.

Having thus described my invention, I claim—

In a boat-lowering apparatus, the combination of the davits arranged in pairs, each davit comprising an upright permanently attached to the deck of the vessel and a horizontally-swinging crane hinged to the upright and of a length adapting it to swing by the opposite upright, the shaft journaled to the uprights, the supplemental bearings for said shafts, guide-pulleys on the uprights and the cranes, the drums and the friction-disk on the shaft between the upright and supplemental bearings, the arms journaled upon the latter adjacent to the friction-disk, the rock-bar journaled between the outer ends of the arms and having a handle and a brake-shoe, and the ropes wound on the drums and passed over the guide-pulleys to the boat, one rope being connected to the bow and the other rope to the stern of the boat, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN HAMILTON THROOP.

Witnesses:
AARON A. PENTECOST,
JAMES HOWARD, Jr.