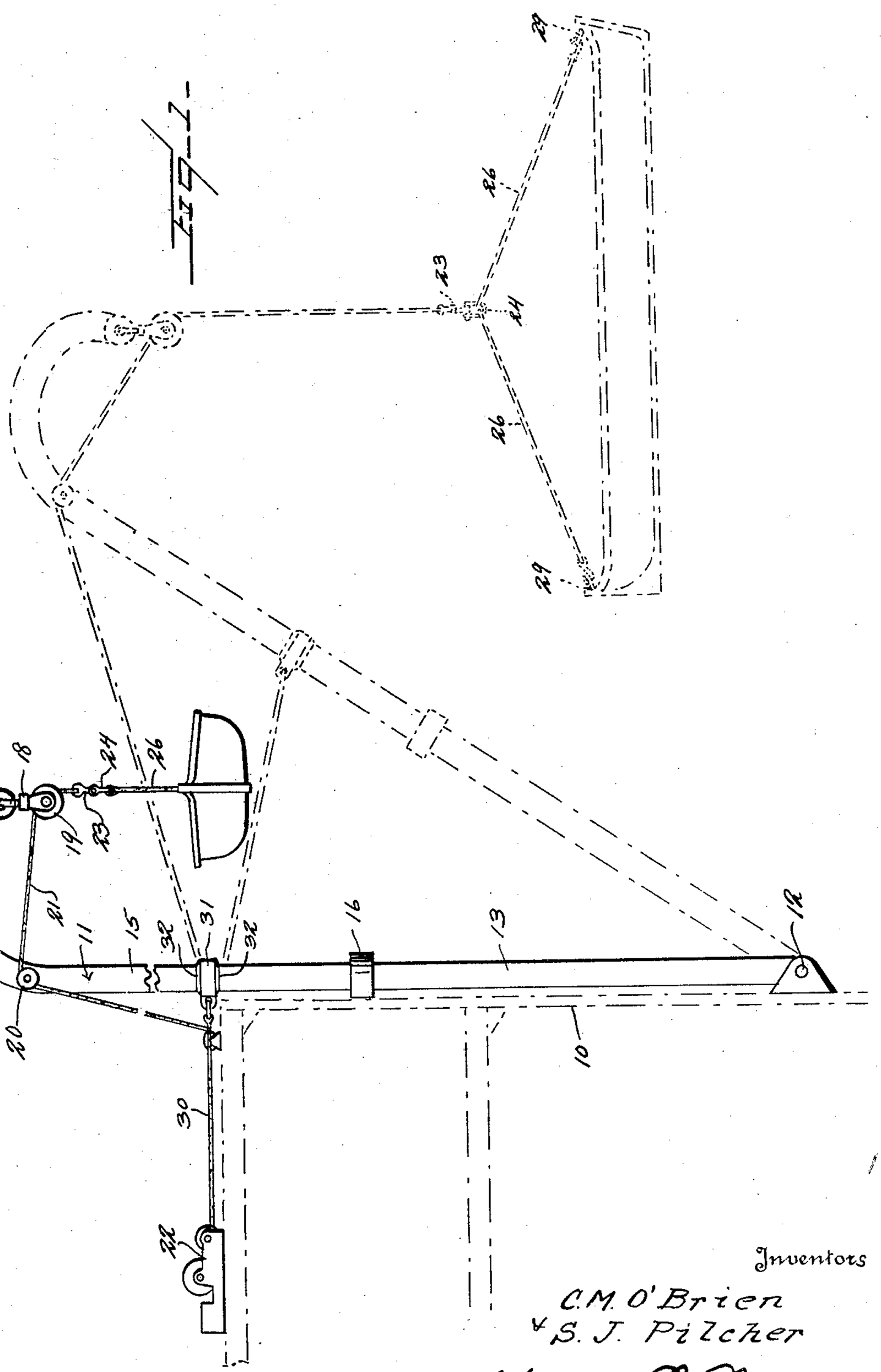
Oct. 7, 1930. C. M. O'BRIEN ET AL 1,777,980

LIFEBOAT DAVIT

Filed Oct. 26, 1929 2 Sheets-Sheet 1



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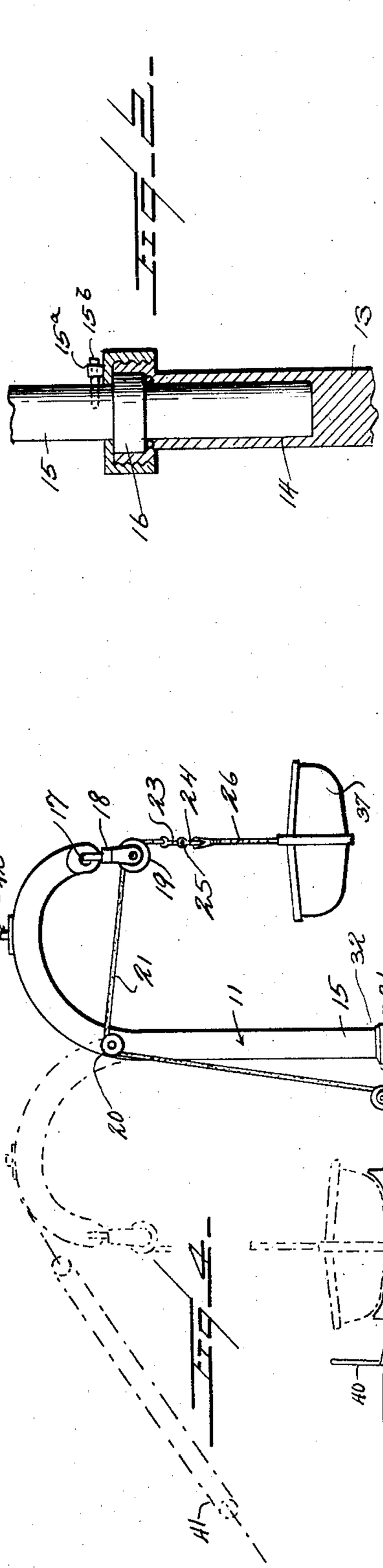

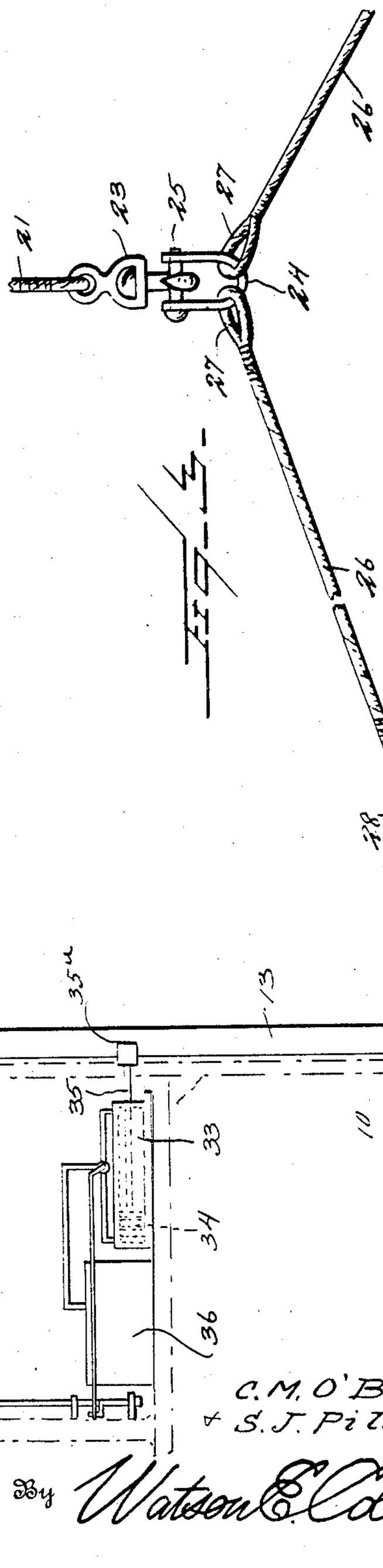

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UNITED STATES PATENT OFFICE

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LIFEBOAT DAVIT

Application filed October 26, 1929. Serial No. 402,699.

The present invention relates to life saving apparatus and more particularly to means for lowering lifeboats over the side of a vessel.

An object of this invention is to provide a davit which is adapted to swing the lifeboat away from the side of the vessel so as to permit the oarsmen to position the oars in the oar-locks ready for operation before the boat comes into contact with the water. In the devices at present in use, the lifeboat is lowered so closely alongside the vessel that it is impossible to position the oars particularly on the side of the lifeboat immediately adjacent the vessel.

Another object of this invention is to provide a davit wherein only one boom is required in place of the two now in use.

A still further object of this invention is to provide a device of this character having means secured thereto for swinging the boom outwardly from the side of the ship to a point where the lifeboat will not come into contact with the side of the vessel even though the vessel may have a decided list which would, in present structures, eliminate any possibility of successfully lowering the lifeboat.

Another object of this invention is to provide a device of this character with lowering means which will eliminate any possibility of tangled ropes obstructing the lowering thereof, the lowering means including the use of cables, wire rope or the like.

The above and various other objects and advantages of this invention will in part be described in and in part understood from the following detailed description of the present preferred embodiment, the same being illustrated in the accompanying drawings wherein:—

Figure 1 is a side elevation of a davit constructed according to the present invention mounted on a vessel, the dotted lines showing the outward movement of the device with relation to the vessel;

Figure 2 is a fragmentary sectional view of the boom showing in detail the swivel joint with ball bearings and an oil retaining cap at top;

Figure 3 is a fragmentary view in elevation of the lifeboat securing means, and

Figure 4 is a side elevation of a modification of this invention.

Referring to the drawings, the numeral 10 indicates generally the side of a vessel on which is hingedly mounted a boom 11, the lower end of the boom 11 being hingedly secured at 12 to the side of the vessel in any desirable manner so as to permit the free outward movement of the boom on the hinge 12. The boom 11 is preferably constructed in two sections, the lower portion 13 of which is secured at its lower end to the hinge 12 and is provided with a downwardly extending opening 14 in its upper end.

It will, of course, be understood that the lower member 13 may be constructed of any desired material and, if desired, a hollow pipe or the like may be used. The upper portion 15 of the boom is adapted at its lower end to be rotatably mounted in the opening 14 of the lower member 13 and in order to facilitate the free rotation of the upper portion, a swivel member 16 is provided.

The upper end of the boom 11 is preferably arcuately inclined and is provided at its upper end with an opening 17 in which may be mounted a swivel 18 of any suitable construction. An idling pulley 20 may be mounted on the boom 11 spaced downwardly from the upper end thereof, the pulley 20 being adapted to carry a cable or wire rope 21 which may be secured to a winch 22 or the like, mounted on the vessel. The rotary movement of the boom 11 is restricted by stop members 15^a mounted on the lower boom member 13 and stop members 15^b mounted on the boom 11.

The rope 21 is adapted to engage the pulley 19 and is provided at its outer end with a swivel 23 and a shackle 24 engages the swivel 23 being provided with threaded apertures at its upper end in which may be mounted a pin 25 or the like. A pair of slings or flexible links 26 having loops or eyes 27 at the opposite ends thereof are adapted to be mounted at their upper ends on said shackle 24 and are provided at their lower ends with swiveled hooks 28.

The swiveled hooks 28 preferably engage

in eyes 29 which may be mounted at the opposite end portions of the lifeboat or at any convenient position so that when the lifeboat is lowered the hooks 28 may be readily disengaged to release the boat therefrom.

It will be noted from the above that the lifeboat may be lowered over the side of the vessel through the use of only one boom. Where the water is calm and it is not necessary for the crew of the lifeboat to position the oars in the oar-locks before entering the water the boom 11 may be held firmly against the side of the vessel, the arcuate upper portion of the boom being such that ample freeboard is provided for lowering the lifeboat to a point where it will lie substantially against the side of the vessel.

In cases, however, where it is essential to have the lifeboat lowered a considerable distance away from the side of the vessel, the boom 11 may be swung outwardly on its hinge 12 and a holding rope or other flexible member 30 may be mounted on any suitable power winch at its inner end and secured at its outer end to a swivel 31 which is loosely mounted about the upper portion 15 of the boom and is held against longitudinal movement thereon by collars 32, or the like, which are secured about the periphery of the upper portion 15 and loosely engaging the opposite end portions of the swivel. Through the use of the lowering means 30, the boom may be swung outwardly from the side of the vessel on its hinge 12 to a position where the lowering of the lifeboat by means of the cable or flexible member 21 may proceed in the usual manner.

When the lifeboat has been loosened from the slings 26 the boom may be raised upwardly by reversing the movement of the cable or wire rope 30 and it will then be in a seagoing position.

In Figure 4 there is shown a modification of the present invention wherein the swinging of the boom 11 outwardly is assisted by air pressure means. In this modification an air pressure tank 33 having an air plunger 34 slidably mounted therein may engage the lower portion 13 of the boom in any suitable manner but in the present embodiment a connecting rod or the like 35 is attached at one end to the air plunger 34. The outer end of the connecting rod 35 preferably has a segment 35ª secured thereto. The air plunger 34 is adapted to push the boom over the center of gravity so as to facilitate the outward movement thereof.

It will, of course, be understood that the movement of the air plunger in the compressor is such as to effect the desired outward movement of the boom and that the segment 35ª is not attached to the boom so that when the boom passes the center of gravity the air plunger may be returned to normal position. A suitable source of air pressure supply 36 may be provided for maintaining the proper pressure within the compressor.

From the foregoing it will be seen that the details of construction may be varied to meet varying circumstances and where desired, the boom may be equipped with both the flexible member 30 and the hydraulic member 33, the hydraulic member serving the purpose of pushing the boom over the center of gravity while being swung outwardly.

When the boom has been swung inboard the boat 37 may rest on a plurality of chocks 38 or the like. Where facilities are not available for mechanically raising the boat 37 the inboard chocks 39 may be slidably mounted on the deck and hand operating means 40 may be used to remove the chocks 39 so as to release the boat 37 and permit the outboard movement thereof. The boom 11 may be held in inboard position by guy ropes 41 or the like, one end of the guy ropes 41 being secured to the deck and the opposite end removably mounted on a pivoted bar 42 which is mounted on the upper end of the boom 11.

It will, of course, be understood that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of the invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

We claim:—

1. A davit of the character described, comprising a boom hingedly mounted on the side of a vessel, said boom comprising an upper and a lower portion, said upper portion having an enlarged portion at a point spaced upwardly from the lower end, means carried by the lower portion engaging said enlarged portion of the upper portion whereby to swivelly mount the upper portion on the lower portion, a swivel ring loosely mounted about the periphery of said upper portion, said upper boom portion being provided with outstanding collars whereby to prevent longitudinal movement of the ring and flexible means secured to said swivel ring whereby the boom may be swung outwardly of the vessel.

2. A davit of the character described, comprising a hinged boom, said boom having an upper and a lower portion, said upper portion being rotatable in said lower portion, means mounted on said lower portion for swivelly mounting said upper portion thereupon, a swivel ring mounted on the periphery of said upper portion spaced downwardly from the upper end thereof and adapted to rotate thereabout, stop means secured to said boom for holding the ring against longitudinal movement, stop means on said lower portion and engaging said upper portion whereby to limit the rotation of the upper portion, and flexible means for

raising and lowering the boom on its hinge.

3. A davit comprising a boom hingedly mounted on a vessel, said boom having an upper and a lower portion, said upper portion being adapted to rotate on said lower portion, means for limiting the rotation of the upper portion on the lower portion, said means comprising a lug mounted on the lower portion and an outstanding pin on the upper portion mounted in the path of said lug, said upper portion being arcuately inclined, a swiveled pulley mounted on the upper end of said boom, a pivoted pulley mounted on the boom spaced downwardly from the upper end thereof, a flexible member adapted to travel in said pivoted pulley, and said swiveled pulley, and lifeboat securing means mounted at the outer end of said flexible member.

4. A davit of the character described comprising a boom hingedly mounted on the side of a vessel, said boom comprising an upper and a lower portion, said upper portion having an enlarged portion at a point spaced upwardly from the lower end, means carried by the lower portion engaging said enlarged portion of the upper portion whereby to swivelly mount the upper portion on the lower portion, a swivel ring loosely mounted about the periphery of the upper portion, said upper boom portion being provided with outstanding collars whereby to prevent longitudinal movement of the ring, flexible lowering means secured to the swivel ring, and hydraulic means engaging the boom whereby to force the boom past the center of gravity and outwardly of the vessel.

In testimony whereof we hereunto affix our signatures.

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