United States Patent [19]

Simpson

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[54] **DAVITS**

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[52] **U.S. Cl.** **9/34**
[51] **Int. Cl.** **B63b 23/02**
[58] **Field of Search** 9/34, 35, 36, 38; 214/141; 212/55

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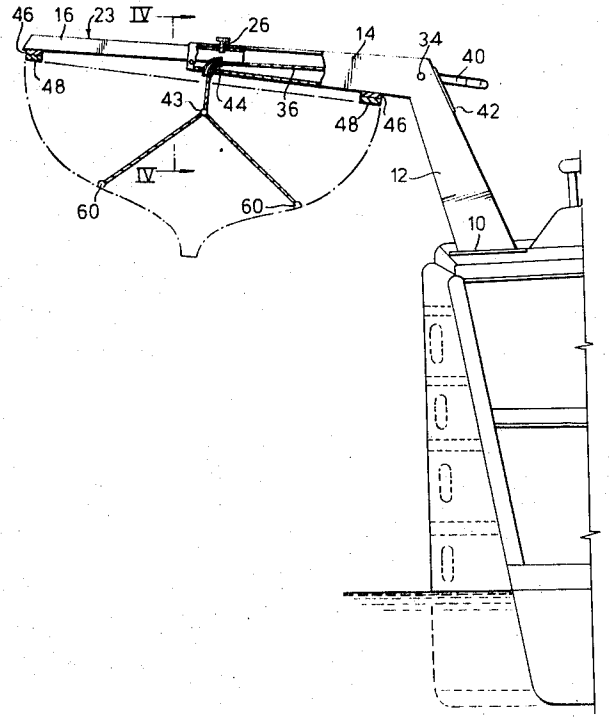
[57] **ABSTRACT**

A davit for use on motor yachts and like craft has a part adapted to be fixed to the craft, a projecting limb, and an extending arm slidable relatively to the limb. A screwed member passes through a slot in either the limb or the arm and is secured in the arm or the limb as the case may be. The davit may be made of a hollow box structure, in which case a cable winch is mounted inside the davit. An elbow shaped tubular cable guide is also mounted in the davit.

6 Claims, 6 Drawing Figures



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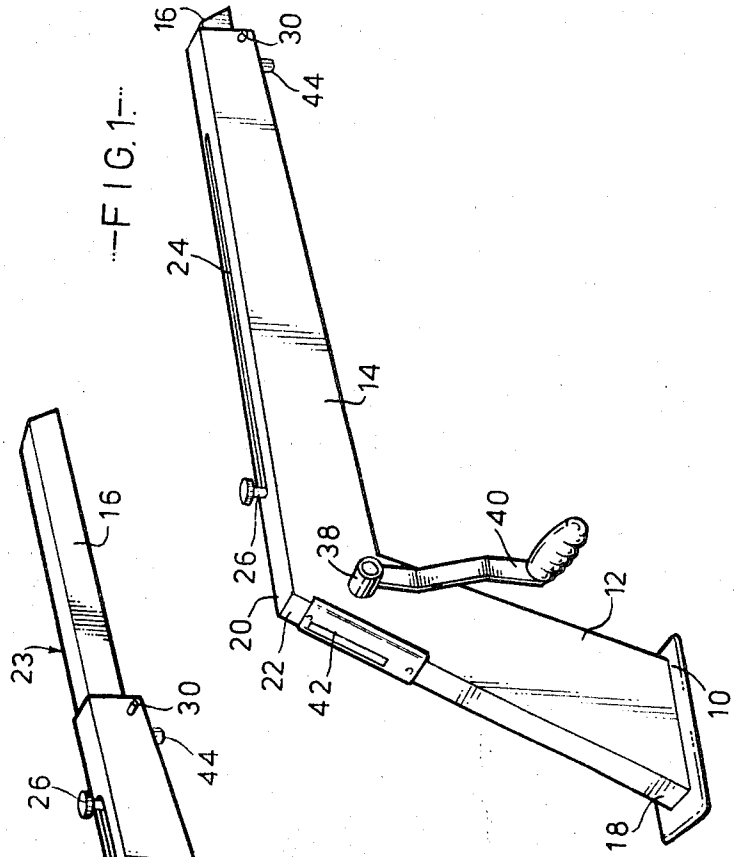
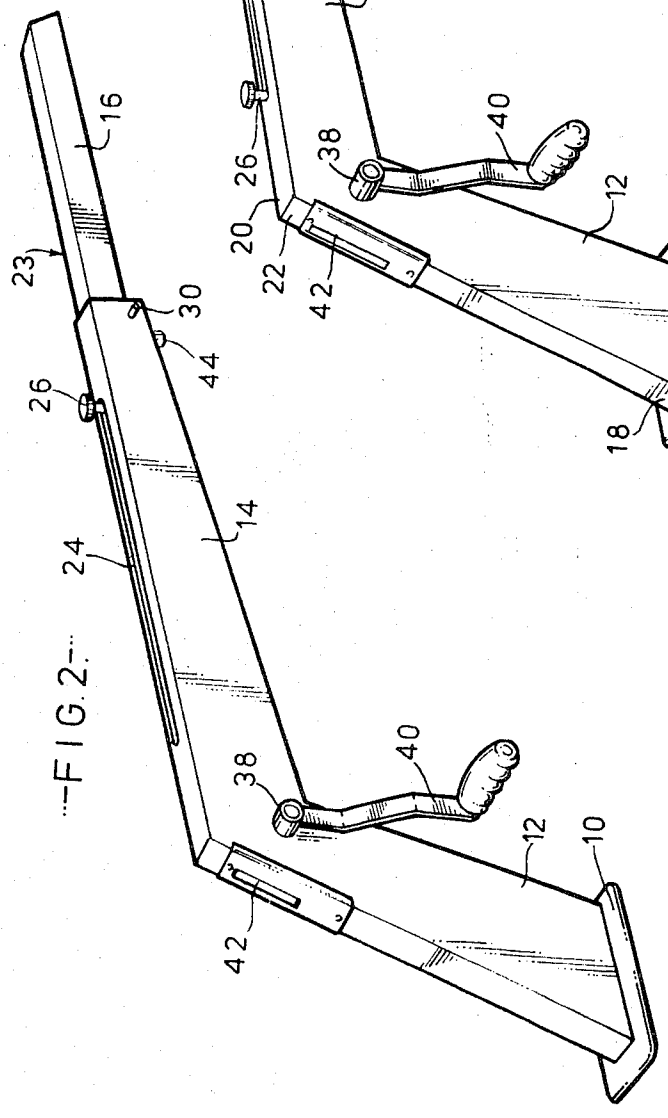
SHEET 1 OF 3

--FIG. 1--



--FIG. 2--



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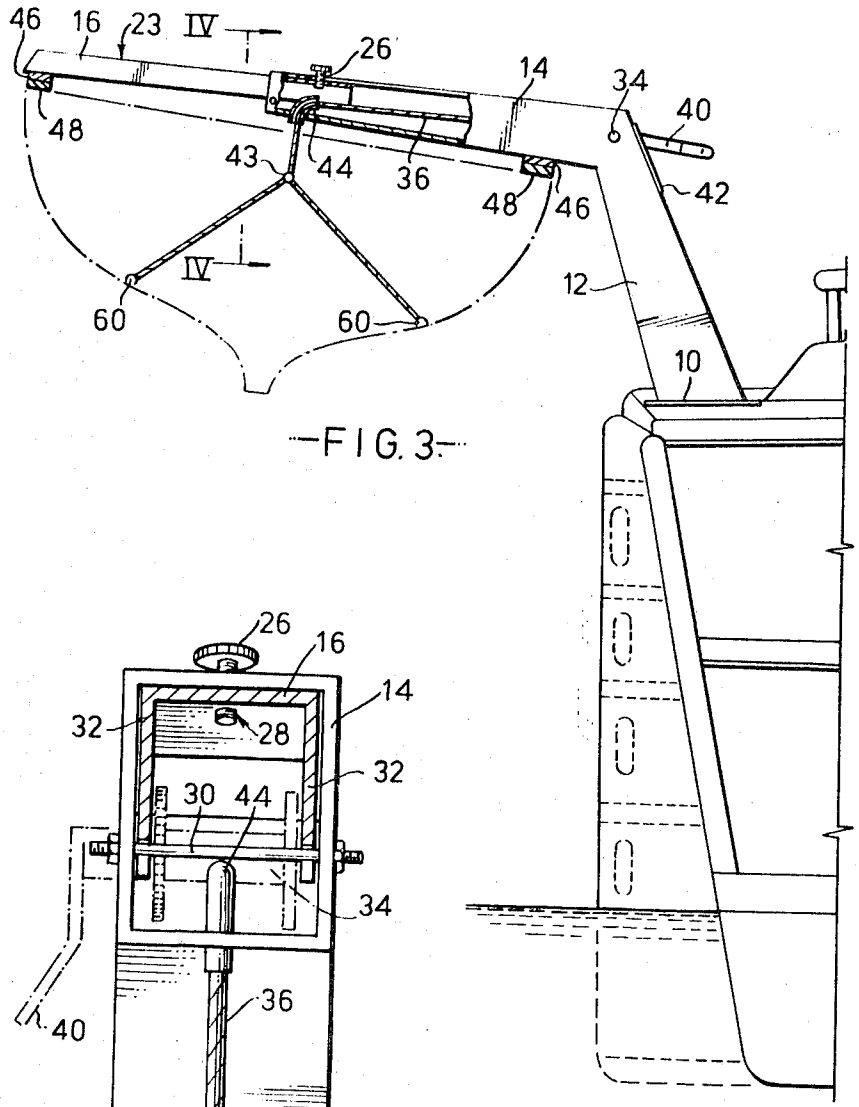

—FIG. 3—

—FIG. 4—

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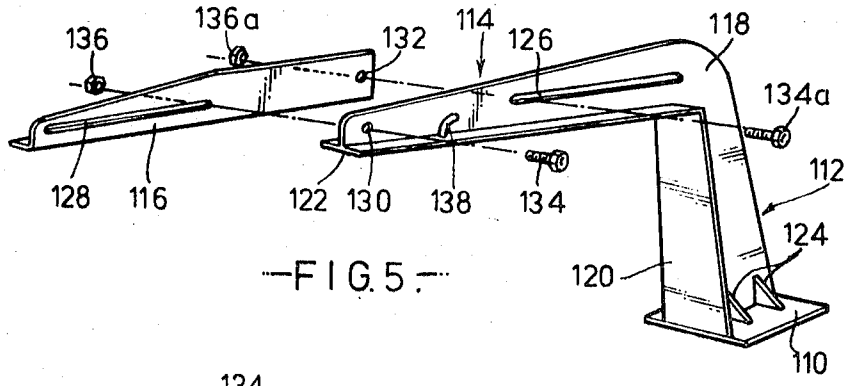

FIG. 5

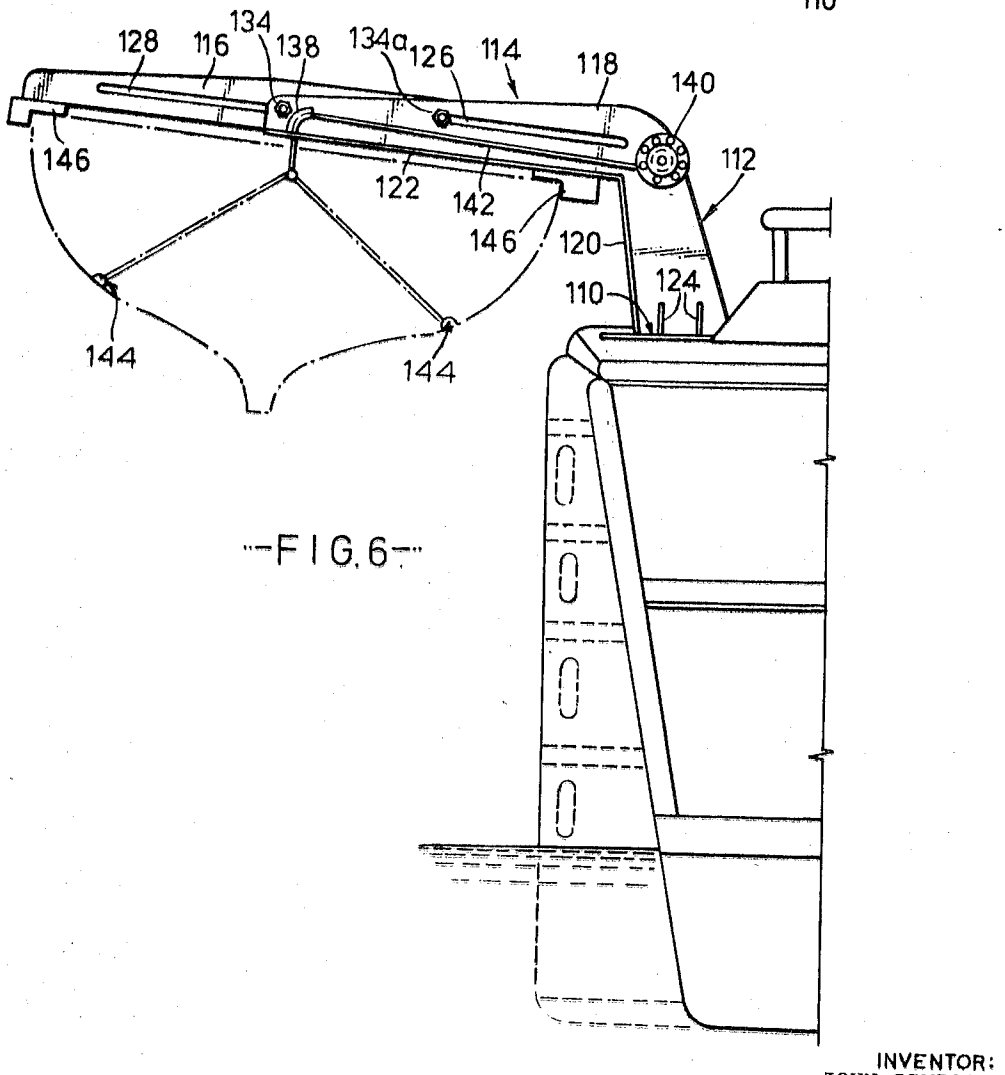

FIG. 6

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DAVITS

This invention relates to davits for use on motor yachts and like craft which carry at least one dinghy or similar small boat. Known types of davits are generally used in pairs and usually project over the stern of a craft, particularly on small craft where only one dinghy is carried. The dinghy is suspended from positions spaced lengthwise on its longitudinal axis but there is sometimes provision for locating or holding one side of the hull of the suspended dinghy, although types of davit exist which are simply adapted to suspend the dinghy. In either case, in suspending a dinghy from davits, not only is the dinghy insecurely suspended for heavy weather conditions, but under such conditions, the suspended dinghy may be subjected to damaging stresses, particularly in that side of its hull which is held.

To overcome these disadvantages, the suspended dinghy should be held by both sides of its hull, and one way of achieving this is to suspend the dinghy with the top of each side of the dinghy engaging with a long member secured to the craft. When the dinghy is being used, the long member projecting outwardly from the carrying craft may be dangerous and waste mooring space along the quayside.

The object of the invention is to provide a davit which when in use holds a dinghy securely and when not in use is not as dangerous nor space-wasting as a long member adapted to engage with both sides of a dinghy. It is a further object of the invention to provide a davit which is easily operated by one person.

According to the invention, a davit has a member adapted to be fixed on to a supporting structure, such as a boat, and has a projecting limb, a tubular elbow-shaped cable guide, an extending arm to extend the effective length of the projecting limb.

Alternatively, the projecting limb may be formed as a T-sectioned member and the extending arm may be formed as an L-sectioned member.

One construction of a davit and an alternative construction thereof, both in accordance with the invention, will now be described, each, by example only, with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of a davit with an extending arm fully retracted,

FIG. 2 is a perspective view of the davit shown in FIG. 1, means for lifting a dinghy into engagement with said projecting limb and said extending arm, said projecting limb being of box-section construction having said lifting means disposed substantially inside said projecting limb. It is preferred that the extending arm is formed as an inverted channel member the davit having its extending arm fully extended,

FIG. 3 is a side view of a davit, similar to those of FIGS. 1 and 2, the davit being fixed to the stern of a carrying craft,

FIG. 4 is a sectional view through the davit on the line IV—IV shown in FIG. 3,

FIG. 5 is an exploded perspective view of an alternative construction of a davit, and

FIG. 6 is a side view of the davit shown in FIG. 5, the davit being assembled and fixed to the stern of a carrying craft.

FIGS. 1 to 4 inclusive show a davit which essentially comprises a base plate 10, an upright portion 12, an outwardly projecting limb 14 and an extending arm 16. The upright portion 12 is formed as a hollow tapered box section member, having its wider end 18 secured to the base plate 10 so that when the base plate 10 is secured to a horizontal surface, the upright portion 12 is inclined to the vertical as shown in FIG. 3. The projecting limb 14 is also formed as a hollow tapered box section with its wider end 20 secured to the top end 22 of the upright portion 12. The extending arm 16 is formed as an inverted channel section and is adapted to slide in and out of the projecting limb 14 with the outer face 23 of its web against the upper inner face of the projecting limb 14.

A longitudinal slot 24 is formed in the upper side of the projecting limb 14 and a bolt 26 passes through this slot and engages in a screw-threaded hole 28 in the web of the extending arm 16. The hand of the bolt 26 is above the projecting limb 14 of the davit and provides a hand grip by means of which the extending arm 16 can be manipulated. Thus, this arrangement provides that the extending arm 16 can be moved to any required position and the arm can be locked in a selected position by tightening the bolt 26 and drawing the arm into engagement with the limb of the davit. Also the bolt 26 provides a maximum extension stop so that the extending arm is not able to slide completely out of the projecting limb. A guide pin 30 is provided across the inside of the projecting limb 14 and near the outer end of the limb. The bottom edges of the two flanges 32 of the extending arm rest on this pin and the extending arm 16 slides on the pin when the davit is being extended.

A winch mechanism is provided for the raising and lowering of craft to be secured to the davit. An axle 34 is mounted in the box section of the davit, at the inner end of the projecting limb 14. The axle is provided with anchoring means (not shown) for a winch cable 36 and forms the reel on to which the cable 36 is wound. The axle projects out of one side wall of the davit to provide a mounting 38 for a cranked handle 40. The winch employs an internally mounted ratchet and pawl means (not shown) of conventional construction which prevents unwinding of the cable both during a winding up action and whilst the dinghy is held in its raised position. The pawl can be disengaged from the ratchet wheel to allow the dinghy to be lowered. An internally mounted speed reducing gear arrangement (not shown) may be provided on the winch. The upper end of the upright portion 12 of the davit structure is formed with an inspection hole, whereby inspection and maintenance of the winch mechanism is facilitated, there being provided a plate 42 with securing means to cover the hole. The cable 36 for the winch passes through the interior of the projecting limb 14 and through an elbow guide tube 44 near the outer end of the projecting limb. The elbow guide is secured to the inside face of the underside of the projecting limb with one end facing towards the upright portion 12 of the davit whilst the other end passes through a corresponding hole formed in the underside of the projecting limb 14 and faces in a downward direction. A hook or loop 43 will be provided on the free end of the cable to facilitate the securing of a dinghy and also to prevent the cable from being completely drawn into the davit.

In order to reduce movement of a dinghy when suspended from the davit, the underside of both the projecting limb 14 and the extending arm 16 are provided with corrugated rubber or plastics gripping pads 46, the corrugations of which extend longitudinally, or later-

ally or both with respect to the davit. Thus, when a dinghy (indicated in chain dotted lines in FIG. 3), provided with complementary shaped gripping pads **48** on its gunnels is suspended in engagement with the davit, its movement (longitudinal, or lateral, or both) is substantially reduced.

Two davits such as that described are fitted on the stern of a craft, each davit being secured by its baseplate to the deck or other structure.

Referring now to FIGS. **5** and **6** of the accompanying drawings, an alternative construction of a davit essentially comprises a base plate **110,** an upright portion **112,** an outwardly projecting limb **114** and an extending arm **116.** Both the upright portion **112** and the outwardly projecting limb **114** are formed from an elbow-shaped plate member **118.** Two plates **120** and **122** are secured, as by welding, on the two inner edges of the elbow member **118,** thereby forming a T-shaped cross-section in both the upright portion and projecting limb. The base plate **110** is secured to a bottom edge of the member **118** and is given extra support by small triangular fillets **124** which are welded in position.

A longitudinal slot **126** is formed in the outwardly projecting limb of the member **118,** the slot being parallel to the plate **122** which is secured to the lower edge of the projecting limb.

The extending arm **116** is formed as a substantially L-shaped cross-section member and is also formed with a longitudinal slot **128.** A hole **130** is formed in the outwardly projecting limb **114** near its outer extremity and a similar hole **132** is formed in the extending arm **116** at the opposite end to that in which the slot **128** is formed.

When assembled, the extending limb **116** rests on one side of the angled member **118.** A bolt **134** locates in the hole **130** and the slot **128** whilst a similar belt **134***a* locates in the hole **132** and the slot **126.** Each of bolts **134** and **134***a* secures the extending arm to the outwardly projecting limb by the addition of locking nuts **136** and **136***a* respectively.

An elbow-shaped cable guide tube **138** is provided on the davit on the opposite side of the angled member **118** to that on which the extending arm is secured. A cable drum **140** is provided on the davit, said drum housing a cable **142** which extends through the cable guide **138.** L-shaped location pads **146,** as shown in FIG. **6,** may be provided, against which the sides of a dinghy's hull will locate when suspended from the davits.

Two davits such as that illustrated are fitted on the rear of the craft each davit being secured by its base plate to the deck or other structure. A winch device (not shown) of conventional type is provided on one of the davits, and the two cable drums **140** may be operated simultaneously by means of a drive shaft (not shown) which extends between the two davits.

For a dinghy or similar small craft to be suspended from either of the two types of davits, the dinghy (as shown in chain dotted lines in FIGS. **3** and **6**) is positioned below the davits and the cable from each davit is fastened to longitudinally spaced fixings **60** in FIG. **3** and **144** in FIG. **6,** in the dinghy. The locking bolt **26** in FIG. **3** or nuts **136** and **136***a* in FIG. **6** are slackened on each davit to enable the respective extending arms **16** or **116** to be slid outwardly to a position where, when the dinghy is winched out of the water, the top edge of each side of its hull will engage with each davit. When the correct position is reached then the locking bolt or nuts are tightened to secure the respective extending arms in place. When the dinghy is next lowered into the water the extending arms can then be retracted.

In the event that a dinghy of extra wide beam is carried, the extending arm may be substituted by detachable extension member, this member being substantially longer than the extending arm and having corresponding securing facilities for securing to the davit.

It will be appreciated that features of either of the above described arrangements may be used with the other arrangement, where applicable. For example, the L-shaped location pads **146** shown in FIG. **6** could be used on the davit shown in FIGS. **1** to **4.**

I claim:

1. A davit comprising an upright member adapted to be secured at its lower end on a supporting structure such as a boat, an outwardly projecting rigid limb on said member, an outwardly extending arm slidably adjustably mounted on said limb to extend the effective length of said limb, means for locking the limb and arm together in relatively adjusted positions, cable means having one end wound on the reel of a winch on said davit and means at the other end for attaching it to a dinghy or the like, and an elbow guide fixed on said limb for receiving and guiding an intermediate portion of said cable means.

2. A davit as claimed in claim **1,** wherein the projecting limb is formed as a T-sectioned member.

3. A davit as claimed in claim **2,** wherein the extending arm is formed as an L-sectioned member.

4. The davit defined in claim **1,** wherein said projecting limb is a hollow member and said arm is an inverted channel member slidable within said hollow member.

5. The davit defined in claim **1,** wherein said elbow guide is a tubular member open at one end in the lateral direction to receive said cable means and open downwardly at the other end.

6. A davit comprising an upright member adapted to be secured at its lower end on a supporting structure such as a boat, an outwardly projecting rigid limb on said member, an outwardly extending arm slidably adjustably mounted on said limb for extending the effective length of said limb, cable means on said davit extending from a winch on said upright member through a fixed guide on said limb to means for attaching said cable means to a dinghy or the like, and gripping means on the lower surfaces of said limb and arm respectively for engaging spaced surfaces of said dinghy when the latter is in raised position.

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