(No Model.) 2 Sheets—Sheet 1.

J. A. GAMBLE.

DEVICE FOR LOWERING BOATS.

No. 560,490. Patented May 19, 1896.

Fig 1.

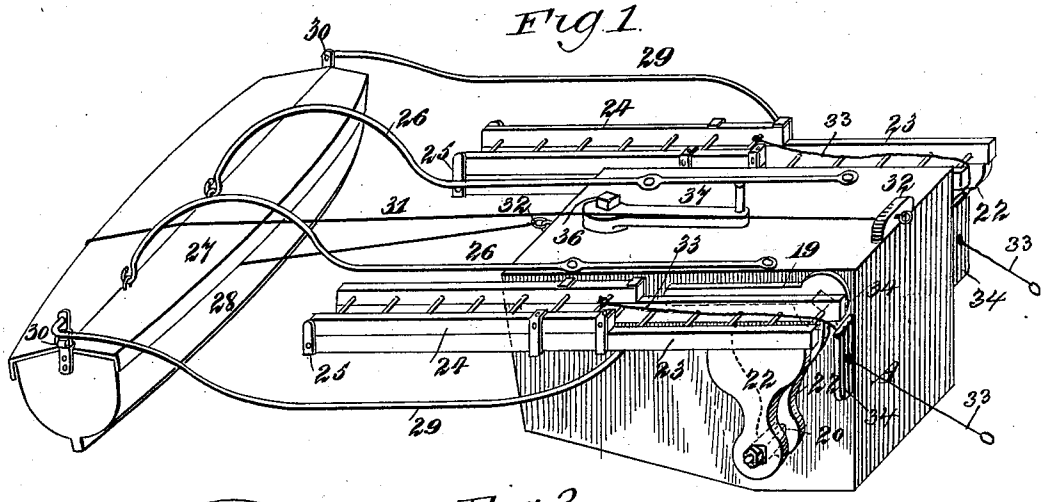


Fig 2.

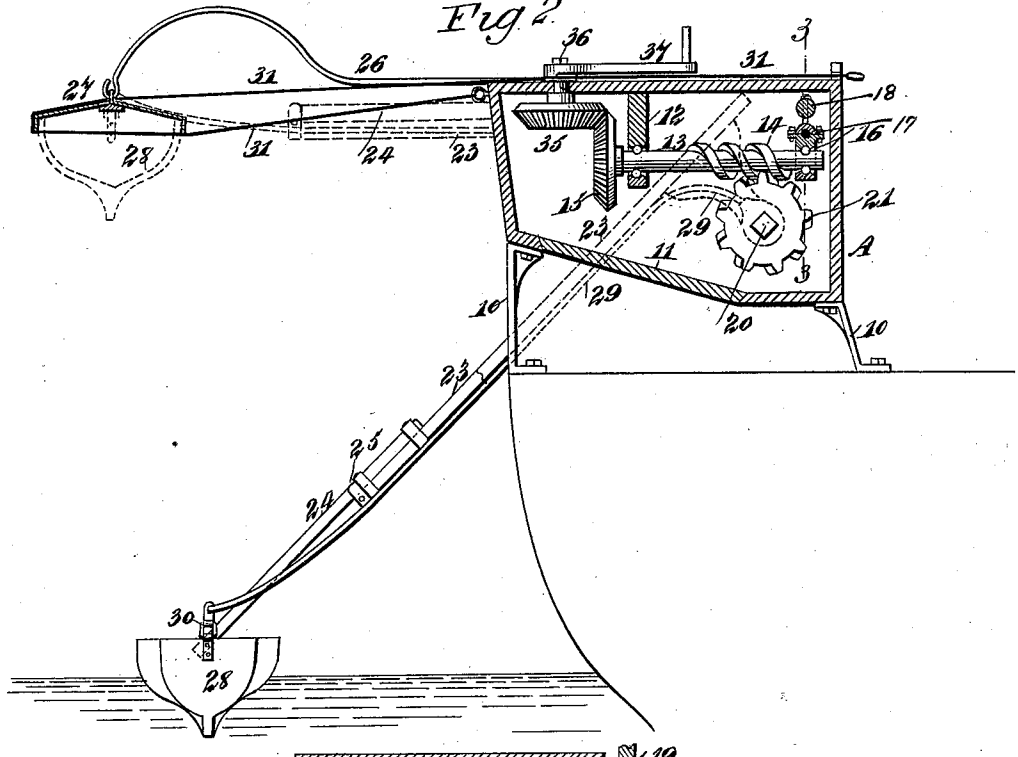
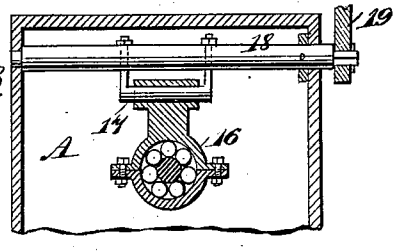


Fig 3.



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(No Model.) 2 Sheets—Sheet 2.

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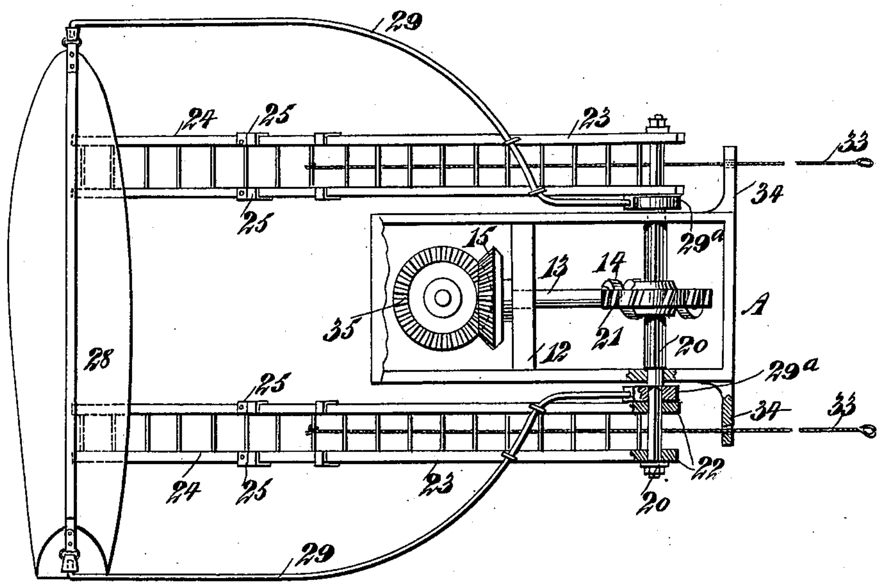
Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN ALBERT GAMBLE, OF ASHVILLE, ALABAMA, ASSIGNOR OF ONE-HALF TO DAVIS E. CASON, OF SAME PLACE.

DEVICE FOR LOWERING BOATS.

SPECIFICATION forming part of Letters Patent No. 560,490, dated May 19, 1896.

Application filed October 2, 1895. Serial No. 564,359. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALBERT GAMBLE, of Ashville, in the county of St. Clair and State of Alabama, have invented a new and Improved Device for Lowering Boats, of which the following is a full, clear, and exact description.

The object of the invention is to provide a device of simple and durable construction and applicable to any form of vessel, through the medium of which device a boat may be expeditiously and conveniently lowered, and whereby simultaneously with the lowering of the boat ladders or steps will be carried down, enabling a person to readily descend from the deck to the boat; and another object of this invention is to hold the boat away from the sides of the vessel in a rough sea, thereby preventing the boat from becoming swamped or crushed.

Another object of the invention is to so construct the device that while the boat will be held from the vessel's side it will be free to rise or fall with the motion of the water.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the boat-lowering device, the boat being shown as suspended from the davits and the davits as in their upper or normal position. Fig. 2 is a longitudinal vertical section through the device, the boat being lowered in the water and shown in end view, the steps being illustrated in side elevation, and the weather-covering of the boat being shown in vertical section and upon its supports; and Fig. 3 is a vertical section taken substantially on the line 3 3 of Fig. 2. Fig. 4 is an under side plan view of the boat-lowering device, the bottom of the box-like casing being broken away in order to better show the inclosed parts.

In carrying out the invention a box-like casing or support A is supported on the deck of the vessel by suitable legs or brackets 10, the latter being attached to the deck or other convenient part of the vessel adjacent to its sides, and the box or casing is preferably provided with a removable bottom 11, in order that its contents may be rendered readily accessible. A fixed bearing 12 is projected downward from the upper inner surface of the casing, the said bearing being provided with friction balls or rollers, and in this bearing one end of an operating-shaft 13 is journaled, that portion of the bearing through which the shaft passes being cut away or beveled at each side to permit this end of the shaft to be thrown downward or upward, as required. A worm 14 is formed on the shaft 13 between its ends, and at what may be termed the "outer" end of the shaft a beveled gear 15 is secured. A second ball-bearing 16 is made to receive the inner or rear end of the shaft 13, and this bearing is pivotally connected with a knuckle 17, attached to a shaft 18, transversely journaled in the upper portion of the casing at the rear, and the shaft is provided with a handle or crank-arm 19, whereby it may be rotated, and as the shaft is turned the gear 15 on the worm-shaft will be raised or lowered. A main shaft 20, preferably polygonal in cross-section except where it is journaled, has bearing in the sides of the casing at the rear and below the worm on the shaft 13. The shaft 20 extends some distance beyond the sides of the casing, and within the casing a worm-wheel 21 is secured on the main shaft, meshing with the worm 14, as shown in Fig. 2. Preferably two bracket-arms 22 are secured upon each outer end of the main shaft 20, as shown in Fig. 1, and the inner end portion of a ladder 23 or its equivalent is secured to the bracket-arms at each side of the casing, the ladder 23 having a second ladder 24 slidably located thereon, and the main or under ladder is provided at its outer extremity with a stop 25, which limits the outward movement of the upper or extension ladder 24.

Two arms 26 are secured to the top part of the casing A, one at each side of its center, and these arms are carried forward and outward beyond the casing and are then curved in an upwardly direction and provided with hooks or their equivalents to receive eyes on a storm-cover 27, which cover is adapted to be placed over and protect the boat 28 when

on the davits 29, and when the boat is in its normal position.

The davits 29 have a detachable coupling 30 of any approved construction with the bow and stern of the boat, and these davits are preferably curved outwardly in a lateral direction and then inwardly beneath the main ladders 23 to support the outer ends of the same, and the inner ends of the davits are secured to arms 29 on the outer end portions of the main shaft 20 inside the arms 22, as shown in Fig. 4. A rope 31 is secured to the central portion of the outer face of the casing A, and this rope is passed below the central portion of the cover 27 and over the top of the cover back over the casing through a guide 32, so that by drawing inward upon the rope 31 the cover 27 may be lifted from the boat, as the under strand of the rope will be forced to an engagement with the inner face of the cover when the latter is over the boat.

The upper or extension ladders 24 are drawn inward to their folded position (shown in Fig. 1) preferably by means of ropes 33, attached to them and passing through guide-blocks 34, secured on the side faces of the casing. A beveled gear 35 is adapted to mesh with the beveled gear 15 on the worm-shaft. This gear 35 is attached to a shaft 36, which extends up through the top of the casing, and by means of a crank 37 attached to the aforesaid shaft, the gear 35 may be turned and motion imparted to the worm-shaft 13 in a direction, for example, to turn the main shaft 20, so as to carry the bracket-arms 22 in an outwardly and downwardly direction, as shown in Fig. 2, whereupon the davits will be carried downward and the boat placed on the surface of the water and held there, and the ladders will assume an inclined position, as shown in Fig. 2, the extension-ladders 24 sliding downward within the boat, thereby enabling passengers to readily gain access to the boat.

In order that the boat may rise and fall with the waves, the crank-arm 19 is manipulated to throw the inner end of the worm-shaft upward so as to carry the worm out of gear with the worm-wheel and the beveled gear 15 out of engagement with its driving-gear 35. In carrying the boat up to its normal position, the gearing being in working order, the crank-arm 37 is simply turned in a reverse direction to that required for lowering the boat.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a boat-lowering device or the like, the combination of a rotative shaft, means for actuating said shaft, davits connected with the shaft and arranged to be raised and lowered, a main ladder connected to the shaft and also arranged to be raised and lowered, and an extension-ladder arranged to slide on the main ladder, substantially as set forth.

2. In a boat-lowering device or the like, the combination of davits mounted to swing in vertical planes and adapted to support a boat at their outer ends, a main ladder connected to and arranged to move with the davits, said davits and the ladder carried thereby being arranged when the boat is lowered, to stand in an inclined position, and an extension-ladder mounted to slide on the main ladder and adapted when the davits are lowered to stand with its lower end adjacent to the boat carried thereby, substantially as set forth.

3. In a boat-lowering device or the like, the combination of a support, davits adapted to support a boat, arms carried by said support and arranged to extend over the boat carried by the davits, a storm-cover carried by the arms and arranged to cover said boat, and a dislodging-cable passing around said storm-cover and having its opposite ends connected with the support, substantially as set forth.

4. In a boat-lowering device or the like, the combination of a shaft mounted to turn and adapted for pivotal movement, means for rotating the same, a second shaft adjacent to the first-mentioned shaft, gearing for driving one shaft from the other, said gearing being normally in engagement and being adapted to be moved out of engagement by the pivotal movement of the first-mentioned shaft, davits carried on the ends of the last-named shaft and arranged to be raised and lowered when the same is turned, said davits being adapted to support a boat, and means for moving the first-named shaft pivotally, substantially as set forth.

5. In a boat-lowering device or the like, the combination of a shaft mounted to turn and adapted for pivotal movement, means for turning the shaft, a main shaft mounted to turn adjacent to the first-mentioned shaft, gearing between the two shafts, said gearing being normally in engagement, a crank-shaft journaled adjacent to the pivoted shaft and connected thereto, said crank-shaft being adapted when turned to move the shaft to which it is connected pivotally to throw said gearing out of engagement, and davits carried on the ends of said main shaft and arranged to be raised and lowered, said davits being adapted to support a boat, substantially as set forth.

6. In a boat-lowering device or the like, the combination of davits normally held in a raised position and adapted to support a boat or the like at their ends, means for lowering the davits, and a ladder adapted to move with the davits and constructed in sections mounted to slide on one another, said ladder being arranged to stand when the davits are lowered, with its lower end adjacent to the boat, substantially as set forth.

JOHN ALBERT GAMBLE.

Witnesses:
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LINNIE D. COX.