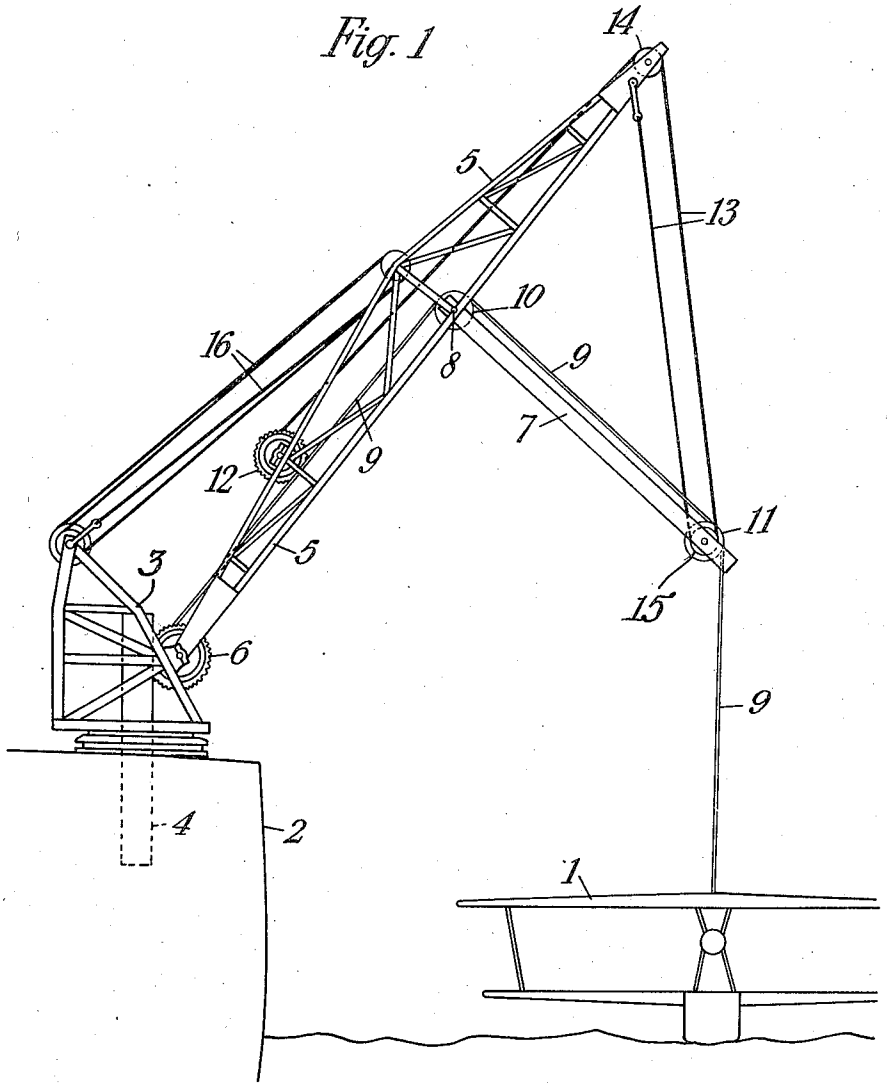
Jan. 16, 1940. W. A. WOODESON ET AL 2,187,714

MEANS FOR THE LAUNCHING AND RECOVERY OF WATER-BORNE CRAFT FROM AND TO SHIPS

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Fig. 1



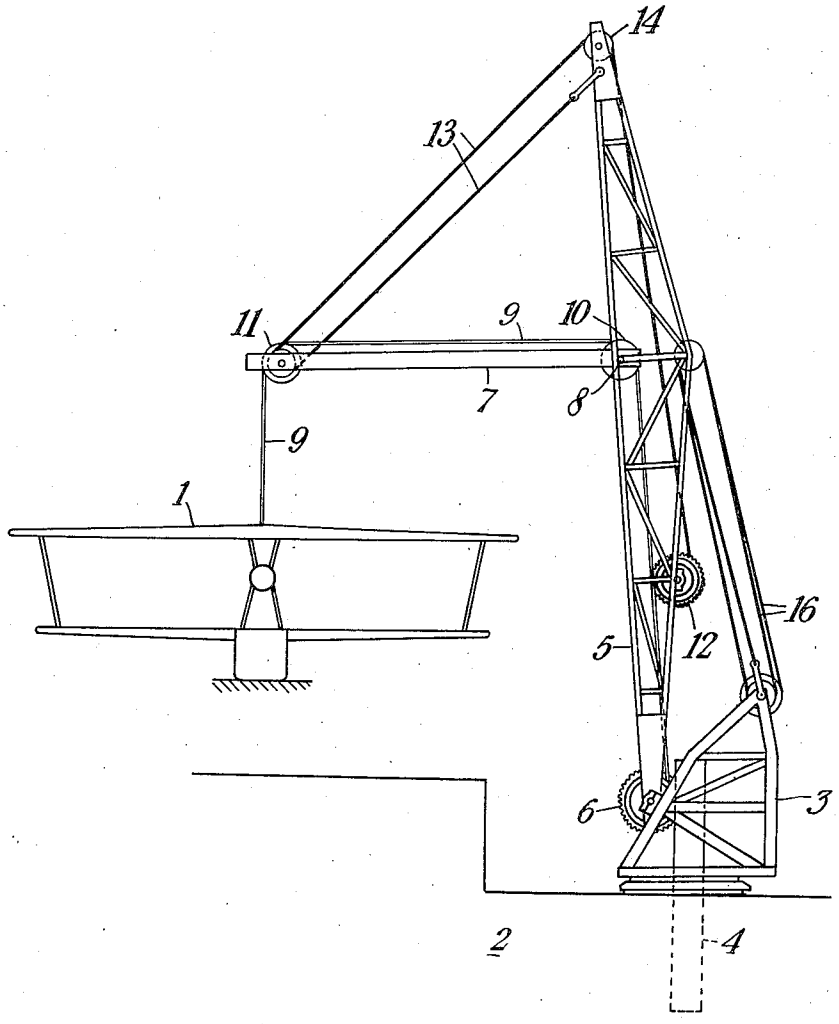

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Filed Nov. 28, 1938 2 Sheets-Sheet 2

Fig. 2




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Patented Jan. 16, 1940 2,187,714

# UNITED STATES PATENT OFFICE

2,187,714

## MEANS FOR THE LAUNCHING AND RECOVERY OF WATER-BORNE CRAFT FROM AND TO SHIPS

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Application November 28, 1938, Serial No. 242,798
In Great Britain June 10, 1938

2 Claims. (Cl. 212—3)

This invention relates to the launching and recovery of water-borne craft from and to ships and has for its object to provide improved means whereby excessive swing of craft while being raised or lowered at sea by ship's gear when clear of the water is prevented, thus minimizing risk of damage to the craft due to contact with the side or fittings of the ship.

To this end the invention consists in articulating an auxiliary boom to a main boom at a point intermediate of the length of the latter, leading the hoisting rope along the auxiliary boom and part of the main boom and providing means for altering the angular position of the auxiliary boom in relation to the main boom, the arrangement being such that the load has a suspension point which is always low compared with the outer end of the main boom and is alterable in position independently of movement of the main boom.

The main boom may be part of a seaplane crane, ship's boat crane or ship davits.

One arrangement according to the invention is illustrated in the accompanying drawings, Fig. 1 showing, more or less diagrammatically, the parts in a position assuming a seaplane about to be picked up and lifted aboard ship. Fig. 2 show the parts in another position, the seaplane being assumed lifted and swung inboard.

In this example, 1 represents a seaplane, 2 part of a ship and 3 a crane rotatable about a post 4 on the ship. A lattice type jib which constitutes the main boom 5 has a main hoist 6 at the heel and is provided with a hinge at a suitable position on the underside, one end of an auxiliary boom 7 being attached to the hinge pin 8. The main hoist rope 9 is led from the heel of the main boom 5 over a pulley 10 on the hinge pin and then over a pulley 11 at the other extreme end of the auxiliary boom 7. A separate hoist 12 for the auxiliary boom 7 is mounted on the main boom 5, the rope 13 thereof being led around a pulley 14 at the extreme upper end of the main boom, around another pulley 15 at the extreme outer end of the auxiliary boom 7 and back to the extreme end of the main boom where it is suitably anchored. Topping ropes 16 control in any ordinary or suitable way angular movement of the main boom 5.

The manner in which the arrangement operates will be readily understood from the figures. Thus when commencing to raise the plane 1 from its pick up position the booms 5 and 7 may be inclined somewhat as shown in Fig. 1 from which it is apparent that the pendulum length of the rope 9 is relatively short and held by the boom 7 well out from the jib or main boom 5. As the boom 5 is moved by the topping ropes 16 to a position more nearly vertical, as illustrated in Fig. 2, the boom 7 still holds the rope 9 well away from the boom 5. Actually in Fig. 2 the hoisting rope 13 has been slightly shortened to bring the boom 7 more nearly horizontal, the main hoist rope 9 having been likewise also shortened to still further reduce the pendulum length leading to the plane 1 which is advantageous when slewing the craft inboard. In Fig. 2 the view of the ship 2 is at right angles to Fig. 1 and the crane 3 has been revolved through 90° in relation to the ship.

Topping ropes control in any ordinary or suitable way angular movement of the main boom. The hoisting rope may be equipped or used with other mechanisms or devices such as a grab for automatic attachment to a craft to be lifted or lowered, the rope or ropes for which automatic means will be led in a manner similar to the hoisting rope. Again wave compensator gear may be employed to keep the main hoisting rope taut when the craft is riding on the waves.

What we claim is:—

1. Means for use in the launching and recovery of water-borne craft from and to a ship, comprising a main luffing boom, an auxiliary boom articulated to the main boom at a point intermediate of the length of the latter, a pulley at the articulation pivot, a hoisting rope led along the auxiliary boom, over said pulley and along part of the main boom, a main hoist drum at the heel of the main boom to which said hoisting rope is controllably attached, and hoisting means carried by the main boom adapted to alter the angular position of the auxiliary boom in relation to the main boom, said hoisting means being mounted on said main boom between the articulation pivot of the auxiliary boom and the main hoist drum at the main boom heel in a position of substantially triangular relation thereto, the arrangement being such that neither angular movement of the main boom nor angular movement of the auxiliary boom with respect to the main boom will produce to any considerable extent a travel of the hoisting rope along the auxiliary boom.

2. Means for use in the launching and recovery of water-borne craft from and to a ship, comprising a crane body, a post about which such body is rotatable, a main boom pivoted at the heel to the crane body, a main hoist barrel at the boom heel and coaxial with the pivot of the lat-

ter, an auxiliary boom articulated to the main boom at a point intermediate of the length of the latter, a pulley on the main boom coaxial with the articulation pivot of the auxiliary boom, another pulley near the free end of the auxiliary boom, a hoisting rope led along the auxiliary boom over the two pulleys and along part of the main boom to the main hoist barrel, a hoist on the main boom, means controlled by such hoist adapted to alter the angular position of the auxiliary boom in relation to the main boom and means for luffing the main boom.

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