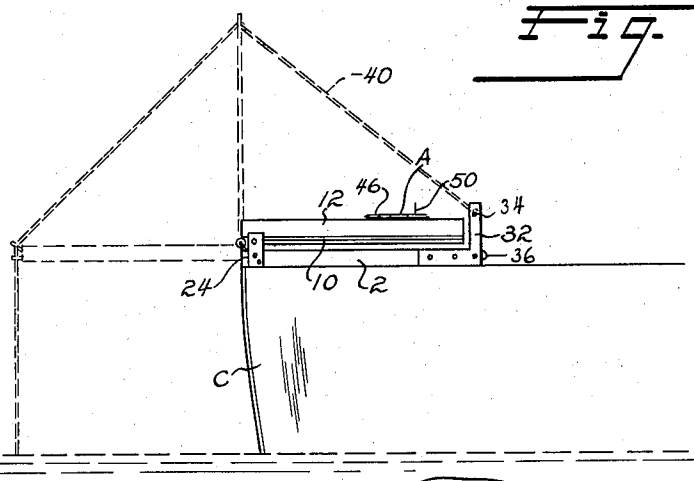
July 22, 1958 L. J. DUGAN 2,844,119

HOIST FOR ANCHOR

Filed Jan. 20, 1956

Fig. 1



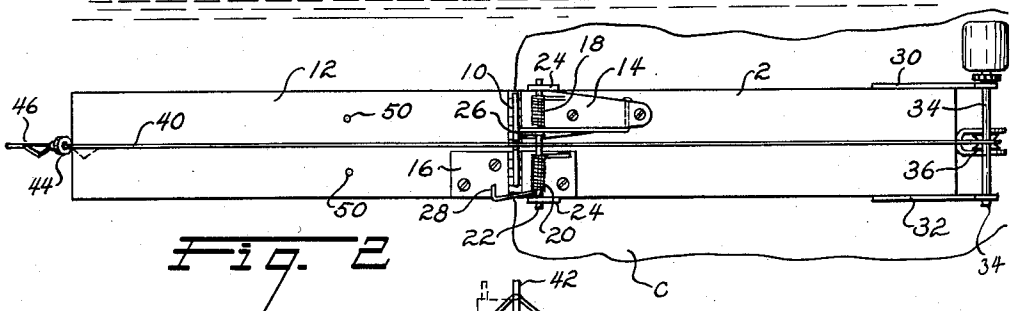


Fig. 2

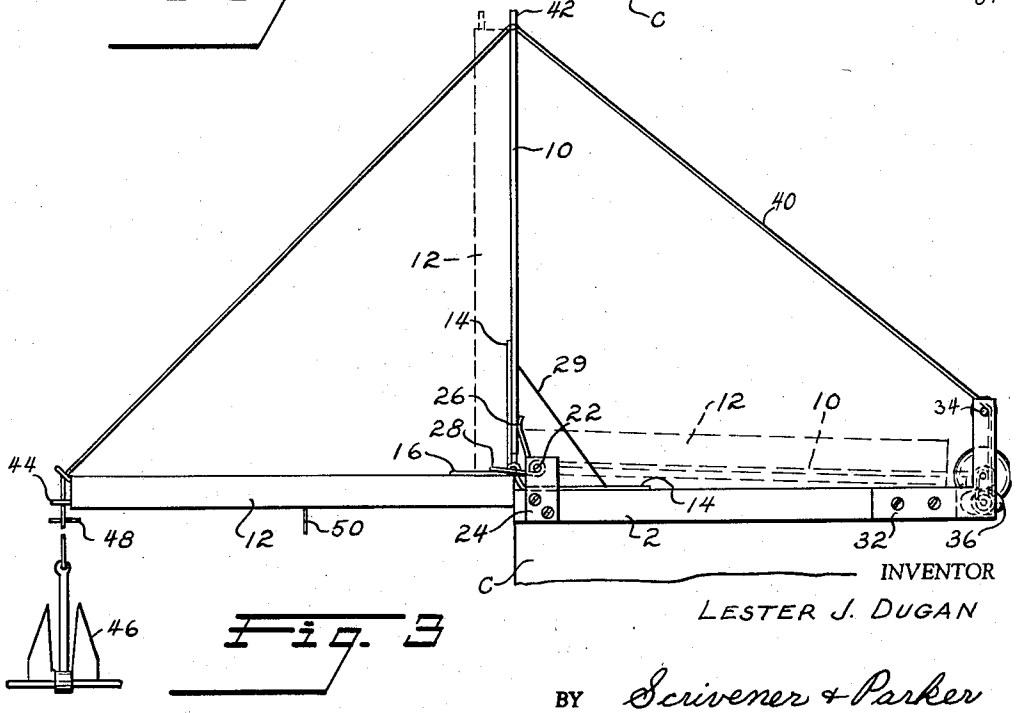


Fig. 3

INVENTOR

LESTER J. DUGAN

BY Scrivener & Parker

ATTORNEYS

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HOIST FOR ANCHOR

Lester J. Dugan, Washington, D. C.

Application January 20, 1956, Serial No. 560,317

4 Claims. (Cl. 114—210)

The present invention relates to a device for raising and lowering anchors on small craft.

The principal object of the invention is to provide means whereby an anchor may be lowered from the deck of a small boat or raised thereto automatically from a remote point.

A further object of the invention is to provide a compact device for raising and lowering the anchor of a small craft which will insure proper positioning of the anchor on deck at all times after the same has been raised.

Other objects and features of novelty of the invention will be made apparent by the following description and drawings, which, it will be understood are only illustrative of the invention and impose no limitation thereon not imposed by the appended claims.

Referring to the drawings in which similar reference numerals refer to like parts:

Fig. 1 is a perspective view of my improved anchor raising and lowering device mounted on the deck of a small craft;

Fig. 2 is a top plan view of my device in extended position; and

Fig. 3 is a side view showing the device in extended position.

Referring more particularly to the drawing, the novel device of the present invention is adapted to be mounted on the deck of a small craft C and includes an elongated plate **2** secured to the deck, the outer end of which is adjacent the outer edge of the deck.

The anchor is lowered through movement of davit arms **10** and **12** which are pivotally mounted, respectively, on the end of plate **2** by hinges **14, 16.** The arms **10, 12** in their normal anchor-up position overlie plate **2** and the anchor A rests on arm **12,** as shown in Fig. 1.

The novel means for causing movement of arms **10, 12** to lower the anchor comprise power devices in the form of torsion springs **18, 20** mounted in aligned relationship on a shaft **22** which extends between vertical plates **24** mounted on opposite sides of the end of deck plate **2.** One end **26** of spring **18** engages the lower surface of arm **10** while an end **28** of spring **20** engages the lower surface of arm **12.** The springs are maintained under tension when the arms **10, 12** are in their normal position on the deck and the arms are biased outwardly by the springs when the arms are released.

Means are provided for limiting the movement of arm **10** beyond a position perpendicular to the deck, which means comprises the rope or chain **29** affixed to arm **10** and deck plate **2,** as shown in Fig. 3.

Novel means, including the use of the anchor rope, are provided for moving the arms **10, 12** from their outermost position to their normal, anchor-up position. Such means include angle brackets **30, 32** which are mounted on opposite sides of the inner end of plate **2** and a winch drum **34** positioned adjacent the upper ends of the brackets and which extends between the brackets. A pulley wheel **36** is affixed to the end of plate **2** below drum **34.** One

end of anchor rope **40** is attached to drum **34** and extends downwardly around wheel **36,** upwardly over winch drum **34,** through channel slot **42** in the end of arm **10,** through one or more eye members **44** positioned in the edge of arm **12** to the anchor **46** which, in the normal position is positioned on the upper surface of arm **12.** A stop **48** is affixed to the anchor rope a short distance above the anchor for a purpose which will be described hereinafter. Guide pins **50** are provided on the upper surface of arm **12** for the anchor rope **40.**

Means are provided for rotating the drum **34,** which means may include an electric motor connected directly to the drum or positioned remotely therefrom and operating the drum through a belt drive or other suitable means. If desired, a crank handle may be provided to rotate the shaft manually.

In the use of the present invention, when the craft is anchored arm **12** extends in an outboard position, being parallel to the water, while arm **10** is perpendicular to the deck of the craft, its position being so limited by rope **29.** In this position, the springs **18, 20** are not under tension. When it is desired to raise the anchor the winch drum **34** is rotated by means of the electric motor or hand crank, controlled by the boat operator. Sufficient anchor line is wound on the winch drum to bring the stop element **48** to the eye **44** affixed on the arm **12,** a continuation of the winding causing the arm to swing upwardly and toward the boat, loading the spring **20.** When the arm **12** is in a perpendicular position, it will be positioned adjacent arm **10** and on continuation of the winding operation, the two arms will be forced rotatively to a position parallel with the plate **2.** During this phase of the operation, spring **18** is also being loaded. In this position the anchor is lying on the upper surface of arm **12** with the shank thereof between guide pins **50.** Reverse movement of the arms by the spring bias is prevented by the normal drag in the electric motor or by suitable ratchet means, not shown.

When it is desired to lower the anchor, the motor is reversed or the ratchet released thereby relieving the tautness in the anchor line, the springs **18, 20** then forcing the arms upwardly and outwardly, the arm **10** being limited in its travel to a perpendicular position by means of rope **29,** while arm **12** continues its outward travel until it is parallel to the water, the anchor rope continuing to unwind until the anchor is on the bottom. In the form of the invention disclosed, movement of arm **12** beyond the horizontal is limited by the abutment of one end thereof with one end of plate **2,** as shown in Fig. 3. However, other means could be employed, such as a rope or cable similar to the rope **29** which limits movement of plate **10.**

It should be understood that the springs **18, 20** could be replaced by hydraulically or pneumatically operated pistons, if desired.

While one form which the invention may take has been described and illustrated, it will be apparent to those skilled in the art that other embodiments, as well as modifications thereof, may be made without departing in any way from the spirit or scope of the invention, for the limits of which reference must be had to the appended claims.

What is claimed is:

1. An anchor hoist adapted to be mounted on the deck of a boat adjacent the edge thereof including a first davit arm pivotally mounted on the deck, a second davit arm pivotally mounted on the deck and overlying said first davit arm, means for moving said second davit arm outboard of said deck through an arc of 180 degrees to a horizontal position, means for moving said first davit arm from the deck to a vertical position, a winch drum posi-

tioned adjacent the inboard ends of said arms in their overlying position, flexible means having one end attached to the winch drum and being guided over the free ends of the two davit arms, the other end of said flexible means being attached to the anchor and means for winding the flexible means on said drum to cause the positioning of the said second arm and the anchor on the deck after said first and second arms have been moved to their respective vertical and horizontal positions.

2. An anchor hoist as called for in claim 1 in which the means for moving the said davit arms to be raised from the deck comprise torsion springs mounted in aligned relationship.

3. An anchor hoist as called for in claim 2, in which the torsion springs are maintained under tension when said arms are in their normal position on the deck.

4. An anchor hoist as called for in claim 1 comprising, in addition, means positioned on said second davit arm for positioning the anchor after said anchor has been raised.

No references cited.