June 14, 1960 E. E. SANDERS 2,940,413

DAVIT UNIT FOR BOAT ANCHORS

Filed Nov. 13, 1958 2 Sheets-Sheet 1

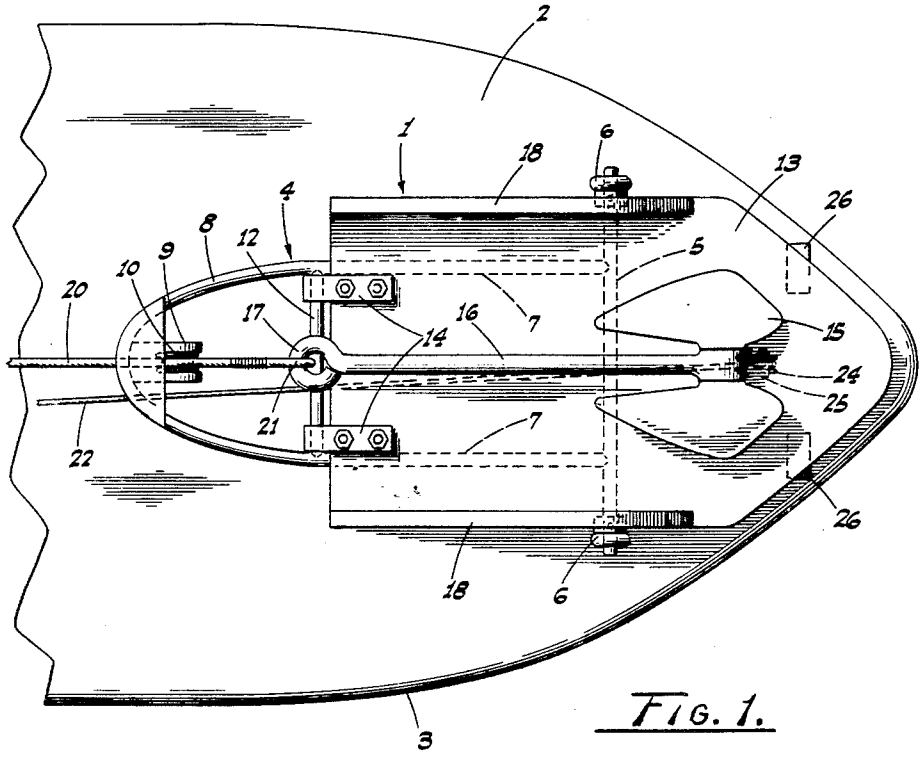


FIG. 1.

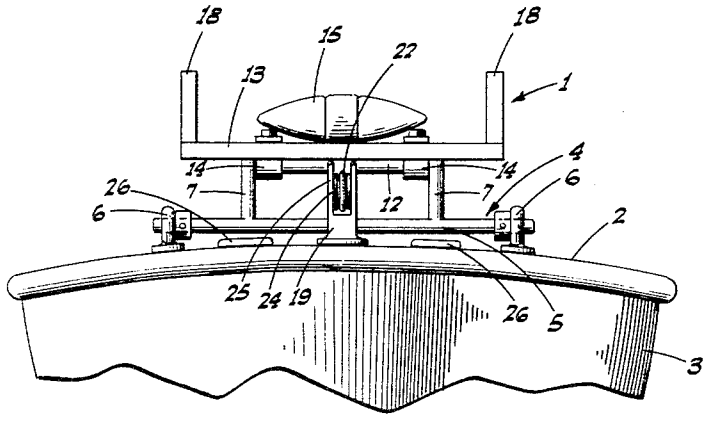


FIG. 2.

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DAVIT UNIT FOR BOAT ANCHORS

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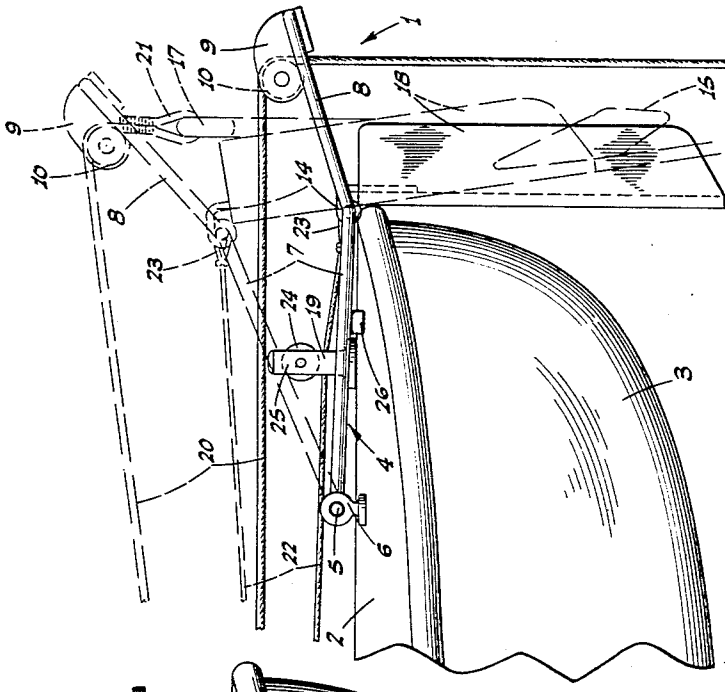


FIG. 4.

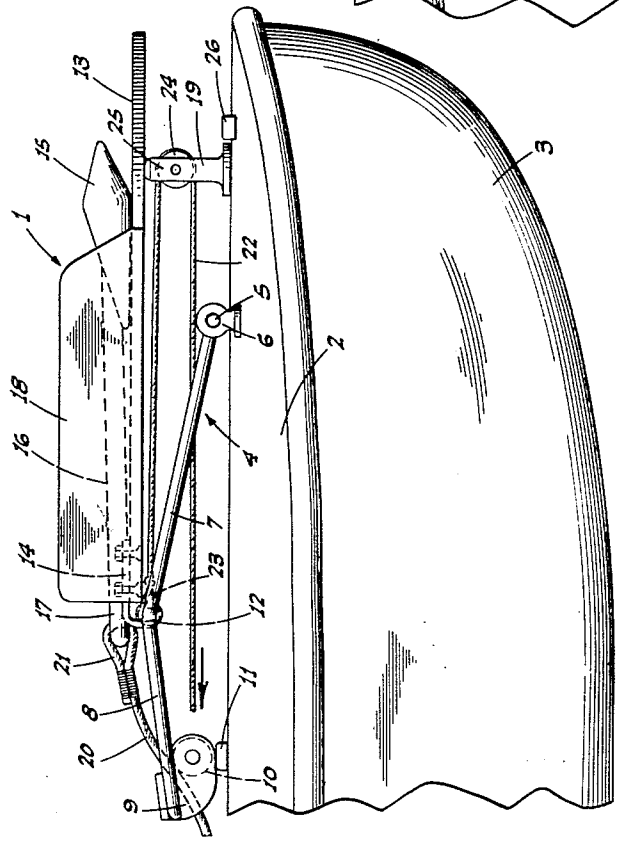


FIG. 3.

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DAVIT UNIT FOR BOAT ANCHORS

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8 Claims. (Cl. 114—210)

The present invention relates to, and it is a major object to provide, a novel davit unit for dropping and retrieving a forward anchor from a boat, particularly a relatively small boat of pleasure type and on which the anchor is carried on the deck adjacent the bow.

Another important object of the invention is to provide a davit unit which is actuated from a rearward point, such as the cockpit, on the boat, and so that there is no necessity of a person going forward on the deck and risking an accidental fall overboard; the device being worked from such rearward point by the simple manipulation of the anchor line and a separate control line.

An additional object of the invention is to provide a davit unit, as above, which includes a normally horizontal apron which supports the anchor on the deck; such apron, together with the remaining parts of the unit, and under control of the lines, being operative to swing the anchor to an outboard position; to then permit lowering and subsequent retrieving of the anchor; and after the anchor is retrieved to return the same to its position on the deck.

A further object of the invention is to provide a davit unit, as in the preceding paragraph, wherein the apron serves to prevent the anchor from swinging against and marring or damaging the bow or adjacent sides of the boat during dropping or retrieving of said anchor.

It is also an object of this invention to provide a davit unit which is designed for ease and economy of manufacture, ready installation, and convenience of use.

Still another object of the invention is to provide a practical, reliable, and quick-ready davit unit, and one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a top plan view of the davit unit in its initial position and as mounted on the forward deck of a boat; there being only a fragmentary showing of the latter.

Fig. 2 is a front end elevation of the davit unit in the same position.

Fig. 3 is a side elevation of the same in such position.

Fig. 4 is a side elevation of the davit unit; the view showing the in-use position of the davit unit—in full lines—and an intermediate position—in dash lines.

Referring now more particularly to the drawings, and to the characters of reference marked thereon, the davit unit is indicated generally at 1, and is mounted on the forward deck 2 of a boat 3 adjacent the bow thereof, and centrally of the sides.

The davit unit 1, and by reference to the position of its parts in the initial pisition supporting an anchor on the forward deck of the boat, comprises a longitudinally extending, swingable frame, indicated generally at 4. Such frame 4 includes a front cross shaft 5 journaled at its ends in eyes 6 which are fixed in connection with and

upstand from the deck 2 in transversely spaced, alined relation.

Transversely spaced side rods 7 are fixed at their forward ends to the front cross shaft 5, and thence extend rearwardly some distance in parallelism and then merge in integral relation with a half-elliptical, rearwardly projecting bail 8.

In their initial position the side rods 7 extend at an upward and rearward incline from the front cross shaft 5; the bail 8 then projecting rearwardly from said side rods with a slight downward and rearward incline.

At the rear end, and centrally thereof, the bail is fitted with a sheave block 9 which carries a transverse-axis sheave 10; such sheave block 9 normally resting on a cushion pad 11 secured to the deck 2.

A cross bar 12 is rigidly connected to and extends between the rear ends of the side rods 7; i.e., at the front end of the bail 8. A longitudinal anchor supporting plate or apron 13 is disposed above the frame 4 forwardly from adjacent the cross bar 12; such apron 13 being hinged at its rear edge and at transversely spaced points to the cross bar 12, as at 14.

The apron 13 is of a width and length to receive and support an anchor 15 which includes a rearwardly extending shank 16 having an eye 17 on the rear end thereof. Upstanding side flanges 18 on the apron 13 prevent accidental escape of the anchor laterally from such apron 13 in the event of excessive rocking of the boat.

The forward end portion of the apron 13 is tapered in substantially matching relation to the corresponding portion of the deck 2, and such apron is supported at its front end portion, and from the deck, by a post 19 fixed on the latter in a central position transversely of said deck.

The apron 13 in its initial or normal position and as supported at the rear end from the cross bar 12, and at the front end portion by the post 19, is substantially horizontal. The anchor line 20 is connected at its forward end, as at 21, to the eye 17 on the anchor shank 16, and said anchor line 20 thence extends rearwardly, passes over the sheave 10, under the rear of the bail 8, and then runs rearwardly to a point on the boat, as at the cockpit (not shown); the sheave block 9 and sheave 10 thus forming an anchor line guide.

A separate control line 22 is connected, as at 23, to the crossbar 12 intermediate its ends, and such separate control line 22 thence extends forwardly and is turned, from the top, about a sheave 24 journaled in an upwardly opening fork 25 formed on the post 19. From the bottom of the sheave 24 the separate control line 22 extends rearwardly to the same point on the boat as does the anchor line 20.

When it is desired to drop the anchor 15, the operator, from his rearward station on the boat, manually grasps both the anchor line 20 and the separate control line 22 and pulls rearwardly on the latter, while said anchor line is permitted to correspondingly pay out. This causes the frame 4 to swing upwardly and forwardly, about cross shaft 5 as an axis, until said frame is slightly in front of top dead-center. Thereafter, as the frame 4 begins to gravitationally fall or swing forwardly and downwardly (and at which time eye 17 stops at sheave 10), such motion is controlled or restrained by gradually paying out of the anchor line 20, which extends about the upper portion of said sheave 10.

The forward and downward motion of the frame 4 continues under the control of the anchor line 20 until such frame is in a forwardly projecting, working or anchor-dropping position, as in Fig. 4, and at which time said rods 7 rest on cushion pads 26 secured in transversely spaced relation on the deck 2 closely adjacent the bow of the boat. The bail 8 then projects a distance

ahead of the bow, and at such time the separate control line 22 extends substantially straight forward beneath sheave 24, and any slack is drawn out of such line.

As the frame 4 is swung forwardly through its full arc of movement, as above described, the apron, as advanced by cross bar 12, is simultaneously slid forwardly on post 19 and over the bow of the boat; said apron, when the frame reaches its anchor-dropping position, depending from said cross bar 12 vertically in front of the bow in protective relation thereto, as shown in full lines in Fig. 4.

The anchor 15, by reason of the manual control of anchor line 20, remains on the apron 13 until it is close to its vertical position (see the dotted line position in Fig. 4), and then the anchor swings forwardly from the apron and depends directly from the sheave 10. Thereafter, the anchor line 20 is run out freely, so that the anchor drops into the water clear of the boat and without the possibility of striking against and marring or damaging the bow or the adjacent boat sides.

To retrieve the anchor, the above described operation is repeated, but in reverse. By pulling in the anchor line 20 the anchor 15 is first lifted until eye 17 stops at sheave 10. Thereafter, and with continued pulling in of said line 20, the frame 4—together with apron 13 and the anchor 15 which swings back onto said apron—is swung upwardly and rearwardly to a point slightly back of top dead-center. At such time the separate control line 22, and which has returned to sheave 24, is again brought into play, and is used to gradually lower the frame 4, apron 13, and anchor 15 to the initial or starting position on the deck. As this is occurring, the anchor line 20 can be slacked slightly to allow the anchor to assume a centered position on the apron, as shown in Fig. 1.

Thus, by the simple expedient of manipulating the lines 20 and 22 the anchor 15 can be readily and quickly launched or dropped and thereafter retrieved and returned to the deck; all in a manner which assures that the anchor cannot accidentally swing against the boat.

From the foregoing description it will be readily seen that there has been produced such a device as will substantially fulfill the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent are desired:

1. An anchor davit unit, for a boat having a deck adjacent the bow, comprising a longitudinal frame above the deck, means pivoting the frame at one end on the deck for swinging between a normal position projecting rearwardly and a working position projecting forwardly, the other end of the frame being rearmost in said normal position and a distance ahead of the bow in said working position, a normally longitudinally extending apron above the frame, means pivoting the apron at its rear end on the frame intermediate the ends of the latter, the anchor normally being carried on said apron, an anchor line connected to and extending rearwardly from the anchor to a control point rearwardly of the frame, a guide on the frame at said other end, the anchor line extending through said guide, the apron and anchor thereon being advanced beyond the bow upon swinging of the frame between said normal position and said working position, the apron then depending from the frame ahead of the bow and the anchor depending from said guide ahead of the apron, and means connected to the frame and operative from said control point arranged to effect swinging of the frame between said normal and working positions.

2. An anchor davit unit, for a boat having a deck adjacent the bow, comprising a longitudinal frame above the deck, means pivoting the frame at one end on the deck for swinging between a normal position projecting rearwardly and a working position projecting forwardly, the other end of the frame being rearmost in said normal position and a distance ahead of the bow in said working position, a normally longitudinally extending apron above the frame, means pivoting the apron at its rear end on the frame intermediate the ends of the latter, the anchor normally being carried on said apron, an anchor line connected to and extending rearwardly from the anchor to a control point rearwardly of the frame, a guide on the frame at said other end, the anchor line extending through said guide, the apron and anchor thereon being advanced beyond the bow upon swinging of the frame between said normal position and said working position, the apron then depending from the frame ahead of the bow and the anchor depending from said guide ahead of the apron, and means including the said anchor line and a separate line connected to the frame and likewise extending to said control point arranged to effect swinging of the frame between said normal and working positions.

3. An anchor davit unit, as in claim 2, in which said last named means includes a sheave mounted on the deck ahead of the said frame pivoting means; said separate line being attached to the frame rearwardly of the said sheave, thence normally extending forwardly and passing about the sheave, and then running rearwardly to said control point.

4. An anchor davit unit, as in claim 3, including a post upstanding from the deck and normally supporting a front portion of the apron; the said sheave being journaled on the post.

5. An anchor davit unit, for a boat having a deck adjacent the bow, comprising a longitudinal frame above the deck, means pivoting the frame at one end on the deck for swinging between a normal position projecting rearwardly and a working position projecting forwardly, the other end of the frame being rearmost in said normal position and a distance ahead of the bow in said working position, a normally longitudinally extending apron above the frame, means pivoting the apron at its rear end on the frame intermediate the ends of the latter, the anchor normally being carried on said apron, an anchor line connected to and extending rearwardly from the anchor to a control point rearwardly of the frame, a guide on the frame at said other end, the anchor line extending through said guide, the apron and anchor thereon being advanced beyond the bow upon swinging of the frame between said normal position and said working position, the apron then depending from the frame ahead of the bow, and means connected to said frame and operative from said control point arranged to effect swinging of the frame between said normal and working positions.

6. An anchor davit unit, for a boat having a deck adjacent the bow, comprising a longitudinal frame above the deck, means pivoting the frame at one end on the deck for swinging between a normal position projecting rearwardly and a working position projecting forwardly, the other end of the frame being rearmost in said normal position and a distance ahead of the bow in said working position, a normally longitudinally extending apron above the frame, means pivoting the apron at its rear end on the frame intermediate the ends of the latter, and including a cross bar on the frame intermediate its ends and hinge elements on the apron engaging said intermediate cross bar, the anchor normally being carried on said apron, an anchor line connected to and extending rearwardly from the anchor to a control point rearwardly of the frame, a guide on the frame at said other end, the anchor line extending through said guide, the apron and anchor thereon being advanced beyond the bow upon swinging of the frame between said normal position and said working position, the apron then depending from the frame ahead of the bow and the anchor depending from said guide ahead of the apron, and means con-

nected to the frame and operative from said control point arranged to effect swinging of the frame between said normal and working positions.

7. An anchor davit unit, as in claim 6, in which the frame includes a bail normally projecting rearwardly from said intermediate cross bar; said guide including a sheave mounted on the bail.

8. An anchor davit unit, for a boat having a deck adjacent the bow, a longitudinal frame normally disposed above the deck, said frame including a front cross shaft, transversely spaced side members extending rearwardly from the front cross shaft, a rearwardly projecting bail connecting between the side members, and an intermediate cross bar spanning between said members; means including said front cross shaft pivoting the frame on the deck for swinging between a normally rearwardly projecting position and a forwardly projecting working position, the said bail being rearmost in said normal position and foremost and extending ahead of the bow in said working position, a normally longitudinally extending apron above the frame, means hinging the apron at its rear end to the said intermediate cross bar, a post upstanding from the deck and normally supporting the forward portion of the apron, the anchor normally being

carried on the apron, an anchor line connected to and extending rearwardly from the anchor to a control point rearwardly of the frame, a sheave fixed centrally on the bail, the anchor line passing over the sheave, the apron and anchor thereon being advanced beyond the bow upon swinging of the frame between said normal position and said working position, the apron then depending from the frame ahead of the bow and the anchor depending from said sheave, and means controlled from rearwardly of the frame arranged to effect swinging of the frame between said normal and working positions; said last named means including a sheave journaled on said post, and a separate control line attached to said intermediate cross bar, thence normally extending forwardly and passing about the sheave on the post, and then running rearwardly to said control point.

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