BOAT ANCHOR WITH MEANS FOR MANIPULATING SAME AT A DISTANCE FROM THE BOW OF THE BOAT

Inventor:

Robert Ellis
BOAT ANCHOR WITH MEANS FOR MANIPULATING SAME AT A DISTANCE FROM THE BOW OF THE BOAT

Filed Jan. 3, 1964

INVENTOR.

Robert Ellis
This invention relates to boat anchors and means for manipulating same from a distant point on the boat and the principal objects of the invention are the provision of means for hauling the anchor into the boat and also casting it into the water from such distant control point (such as the steering wheel), to haul the projecting shank of the anchor into a horizontal position into either the chock or hawse-hole-ring with the circular fluke of the mushroom type anchor tightly flush against the outer side of the bow of the boat, to provide a hollow anchor shank within which the anchor rope may be securely and inconspicuously attached and also to house a helical compression spring to which the end of the rope may be attached and which spring serves to ease the tensional strain on the anchored anchor as the boat swerves by the action of wind or waves, the same spring also serving to cast the anchor into the water or hold it tight against the outer side of the bow, means being also provided for causing the free upper end of the shank of the anchor to easily enter the hole in either the chock or hawse-hole-ring when the anchor is hauled in.

There are at present three general types of boat anchor in use, all of which are unwieldy and cumbersome to haul into a small boat but only one of which, the "mushroom" type is capable of holding onto the bottom effectively. However, this type of anchor has the additional fault of rolling over the deck in wavy weather and is therefore seldom used with any but a row boat. In my invention however, I eliminate the possibility of this fault by causing the shank of the mushroom anchor to enter the hole in either the chock or hawse-hole-ring with the circular fluke thereof tightly held to the outer side of the bow of the boat, entirely clear of the deck.

Other and further objects will appear in the specification and be specifically pointed out in the appended claims, reference being had to the accompanying drawings exemplifying the invention, and in which:

FIG. 1 is a top view of the anchor.

FIG. 2 is a sectional view of the line 2—2 of FIG. 1.

FIG. 3 is a side view of a similar half part of a fitting for clamping the end of the anchor rope and incidentally serving as an abutment for the lower end of a helical compression spring within the hollow shank.

FIG. 4 is an inner side view of FIG. 3.

FIG. 5 is a top view, partly in section, showing how the anchor is hauled into and ejected from the boat from a distant control point.

FIG. 6 is a sectional view showing an alternate method of construction and securing the end of the anchor rope to the anchor.

FIG. 7 illustrates the simplest method of constructing the anchor.

FIG. 8 shows my preferred method of making and using the anchor.

FIG. 9 shows a sectional view of a slightly different method of operating the anchor.

FIG. 10 shows a bottom view of the anchor of FIG. 9.

FIG. 11 is a sectional view illustrating how the anchor shank is fed into the hawse-hole-ring.

FIG. 12 is a larger size detail of the upper part of the shank in section.

Referring to the drawings in which like characters and numerals of reference refer to similar parts throughout the several views, the numeral 8 denotes a circular anchor fluke, in this case being of the mushroom type which resembles a dish and having the usual upright shank 9 either rigidly attached to the fluke at its center as shown in FIGS. 6 and 8 or integral therewith as illustrated in FIGS. 5, 7, 8 and 11. In FIG. 7 is shown the simplest anchor for ordinary use and in which the shank 9 is hollow with a larger opening at the bottom and a smaller or restricted opening 11 at the top, the latter opening being just large enough to pass the anchor rope 12 therethrough, the tying of a simple knot 13 in the end of rope 12 serving to secure the rope to the anchor while in use as will be readily understood. The anchor with means for securing it to the rope 12 is therefore composed on an integral part with the knot being invisible and protected from abrasion or loosening.

In FIGS. 1 and 2 is shown the same anchor as in FIG. 7 but having a helical compression spring 14 around the anchor rope 12 within the hollow shank 9 and interposed between the upper restricted end 11 of the shank 9 and the abutment 15 of the duplex clamp parts 16, which similar parts secure the rope loop 17 therewithin between the bolt bars 18, see FIGS. 3 and 4. It will thus become apparent that this type of anchor with the hollow shank may be used in various ways, in FIGS. 2 and 8 to ease any sudden pull of the boat against the anchored anchor by gradually compressing the spring 14 to a more or less degree so as to dislodge the anchor from the bottom as the boat swerves from side to side.

In FIG. 6 the anchor comprises three separate parts before assembling, the circular fluke 8, the hollow shank 9, which in this case may consist of an ordinary standard commercial pipe 9A, the threaded end screwing into a similar thread in the center of fluke 8, and the circular bottom plate 20 which, by means of bolts 21, secures the rope loop 17 against the opposite face of the circular recess 22 within the bottom center of fluke 8. It will be noted that I prefer to secure the end of the anchor rope 12 to the bottom part of the hollow shank 9 for the reason that, when the anchor is pulled upwards into the hole 24 of chock 23, or hawse-hole-ring 50, the upward pull on the rope is applied to the bottom of the anchor, thus resembling an upward push or lift from the bottom rather than a pull, which fact enables the upper end of the shank 9 to easily enter the flared opening 24 of chock 23, shown in dotted lines in FIG. 5, as actual practice proves to be the case. The all around equal width of the anchor fluke 8 also causes the circular edge to contact the side of the boat while being pulled up to give the shank its initial inclination so that its tip will follow the rope through the opening in the chock or hawse-hole-ring.

And referring now more particularly to FIG. 5, the numeral 25 denotes the gunwale at the bow of a small boat while 26 denotes a seat and onto which is secured the cleat 27 and onto which the other end of anchor rope 12 is secured and the slack of rope 12 wound thereon. When the anchor is hauled in, the circular fluke 8 will assume the position tight against the outer side of the gunwale 25 as indicated by the dotted line 28, its normal boat running position, by pulling on rope 12 in the direction of arrow 29. The rope 12 passes over pulley 30,
through hole 31 in helical spring stop 32, through helical compression spring 33 and hollow shank 9 and around rope thimble 34 which secures the rope 9 on 37, which bolt 35 passing through shank 9 and the hole in the thimble 34 in the usual manner. The pulley 36 is secured to any desirable part of the boat by the screw 36, the distance between the pulley and the chuck 23 being such as to permit sufficient space for the combined lengths of the shank 9 and spring 51, plus the fluke 8 into the engaged position indicated by the dotted line 28. The rope 12 has been pulled with sufficient force which compressed spring 33, the rope then being secured to cleat 27, leaving the circular edge of fluke 8 fitting tightly against the outer face of gunwale 25, stored in a safe manner out of the way and ready for the chamfered end when desired. The end of spring 33 rests against stop 32 while the other end is pressed against the upper chamfered end 42 of shank 9. The dotted line 41 indicates the extent of travel, in the direction of arrow 29, of the tip 42 of shank 9 when the anchor is fully hauled in. In order to eject the anchor into the water from the distant control point. In this case seat 26, the rope 12 cleat 27 is suddenly released, the compressed spring 33 pushing the shank 9 in the direction of arrow 39 with sufficient force to clear the chuck 23, the spring 33 remaining coiled around rope 12 while the position shown in the dotted line 39, the additional bell compression spring 37 may be placed around the upper end of shank 9 as illustrated, one end of this spring being welded at 40 to the fluke 8 while the other end of the spring presses against the inner flared part of the hole in chuck 23. Either one or both springs 33 or 37 may be used to accomplish the results just described. The upper end 42 of shank 9 proceeds to dotted line 41 from fluke position 38, shown in dotted lines, when anchor is fully hauled in to the outer side of gunwale 25. When pulling up the anchor with the top of shank 9 dangling almost vertically against chuck 23 at hole 24, the pull on the rope 12 will first bring the chamfered upper end of shank 9 against the flared hole 24 of chuck 23, the shank 9 being then forcibly tipped at a slight angle from the vertical, the continued pull on rope 12 against its attachment at the bottom of shank 9 or fluke 8 then acting as an upward pull, increasing the angle and permitting the continued pull on the rope 12 to cause the shank 9 to follow the rope through the flanged hole 24 in the chuck 23 to a horizontal position as shown. The anchor is thus in a secure and out-of-the-way position against the outer bow side of gunwale 25 and prevents clattering the deck when an unduly anchored anchor of the old type.

It will be apparent that a chain may be easily substituted for the rope 12, the end link of the chain being secured by the bolt 35 to the shank 9 as in FIGS. 5, 8, 9 and 11 or the link may be secured by the bolt 18 as in FIGS. 2, 8, 9 and 11. When rope is referred to in the specifications and claims herein, it is understood that chain is also intended.

This same anchor may be used in a variety of applications by the boat operator himself as for instance in FIG. 9 where the anchor illustrated in FIG. 8, which is used primarily for the purpose of easing the pull of the swivelling boat, may also be used for tightening the edges of the fluke against the outer side of the gunwale 25 but also to eject the anchor from a distant control point by suddenly loosening the rope 12 from cleat 27, the compressed spring 14 forcibly compelling the clamp fitting 16 against the bottom 35 to kick the anchor to the direction of arrow 39 towards position of dotted lines 38 into the water. Helical compression spring 51, welded to the upper end of shank 9 at 52, also assists in expelling the anchor from its horizontal resting place within chuck 23, as will be readily understood, the other end of this spring being stopped by the stop lug 32, see FIG. 12. The spring 51 also serves to guide the top of shank 9 into hole 24 or hole 24A in case a hawse-hole-ring 50 is used as shown in FIG. 11, the spring 51 preferably being tapered as illustrated, the larger end of the spring fitting snugly over nipple 54 at the top end of shank 9 to which it is welded at 52. In FIG. 11 is illustrated how spring 51 bends when anchor is hauled into boat and guides top of shank into hole in chock or hawse-hole-ring.

From the foregoing description it will be apparent that I have evolved a boat anchor of extraordinary simplicity and inexpensively welded to the gunwale, the said anchor being adapted to cause the rigid shank to follow the flexible rope into the hole of said chock to a normal horizontal position therein.

2. As in claim 1, wherein said guide member comprises a helical compression spring loosely surrounding said anchor rope, said spring being interposed between said chock and said pulley welded and adapted to be compressed between the upper end of said shank and said pulley when said anchor is fully hauled into its normal horizontal position by the pull of said anchor rope from said distant attachment thereof, the said anchor being adapted to be ejected from said chock into the water by the compression of said compressed spring against the end of said shank when said anchor rope is suddenly released from its attachment of said distant point.

4. In a boat anchor with means for manipulating same from a distant point on a boat, an anchor comprising a fluke and a hollow centrally attached shank, an anchor

8,279,411
rope, a chock, a helical compression spring, a rope pulley, said chock being attached to the gunwale of a boat, and adapted to receive therethrough both said anchor rope and the shank of said anchor, said pulley being attached to an inner part of said boat at a slightly longer distance from said chock than the length of said shank, means for attaching one end of said anchor rope to an inner part of said hollow shank, the other end of said anchor rope passing first from said control station over said pulley, then through the said compression spring located between said pulley and said chock, into said hollow shank to its attachment thereto, and means encircling said rope at the upper end of said shank for guiding the upper end of said shank into and through the hole in said chock.

References Cited by the Examiner

UNITED STATES PATENTS

2,643,629 6/1953  Huck ------------------ 114—206
3,106,180 10/1963  Rice ------------------ 114—210

MILTON BUCHLER, Primary Examiner.
FERGUS S. MIDDLETON, Examiner.