April 6, 1943. C. R. FITZ GERALD 2,315,513

ANCHORING DEVICE

Filed April 19, 1940

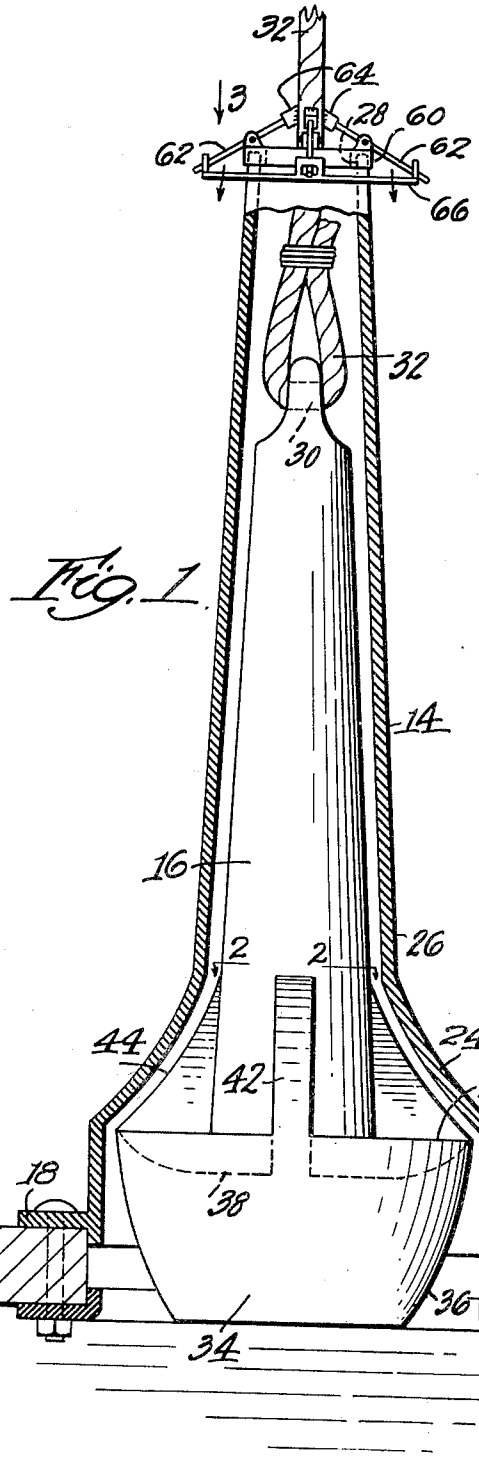


Fig. 1.

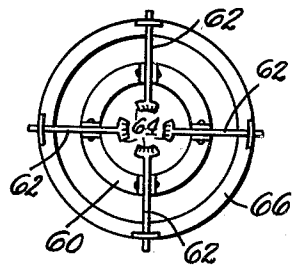


Fig. 3.

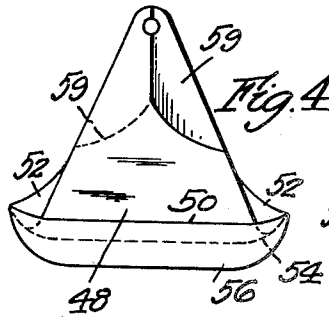


Fig. 4.

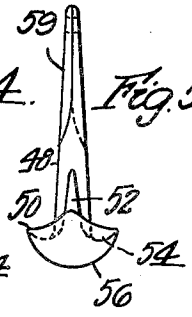


Fig. 5.

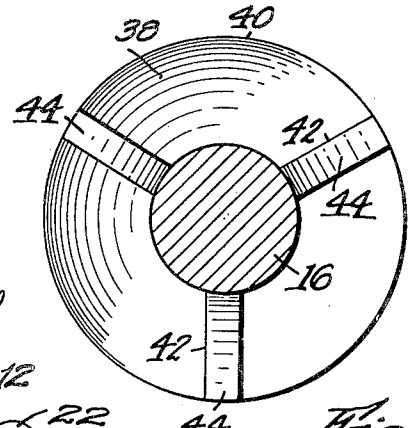


Fig. 2.

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ANCHORING DEVICE

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4 Claims. (Cl. 114—206)

The subject matter of this invention relates to anchors and more particularly to inboard anchors for small boats and means for locking the anchor rope in desired position.

Objects of the invention include the provision of an anchor which may be let down and pulled up thru the side or bottom of a boat, so that it does not have to be thrown overboard or retrieved over the gunwales; the provision of an anchor having an inboard housing through which the anchor rope extends, and a device to lock the rope when desired, the housing being open to the water so that the anchor may be housed to drop therefrom and be returned thereto; and the provision of an anchor having no flukes, but provided with other means to engage the bottom.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawing, in which

Fig. 1 is a view in elevation of an anchor embodying the present invention, with the housing in section;

Fig. 2 is a sectional view on line 2—2 of Fig. 1;

Fig. 3 is a plan view of the rope locking device;

Fig. 4 is a side elevation of a modified form of the anchor; and

Fig. 5 is an end elevation of the anchor of Fig. 4.

The conventional anchor as used in small boats is a cumbersome device which must be cast overside and drawn back up over the gunwales with water and mud clinging thereto, and in general is an awkward and boat-dirtying element, although very necessary. This invention avoids these drawbacks and provides an improved anchor.

In Fig. 1, the numeral 10 designates the bottom of a boat, although the present invention may be easily applied to a side of a boat. An aperture is formed in the bottom 10, and of a size to fit the widest portion 12 of the housing 14, which is conical and fits the tapering shank 16 of the anchor. A flange 18 is provided inwardly of the end of the wide portion 12, and a ring 20, similar to the flange, is bolted thereto through the bottom 10 as at 22. This connection will form a water-tight joint whether the bottom 10 is thicker or thinner than shown, as the end 12 does not have to contact the ring 20, if the bottom is thicker, and may extend past the ring if the bottom is thinner.

Inwardly of end 12, the housing curves rapidly inwardly at 24 to the long tapering portion 26 which rises from the lower end of the housing, and terminates in an aperture at 28. Thus it will be seen that both ends of the housing 14 are open, but the top end is above the water-line and the tapering portion 26 tends to stop splashing water and turn it downwardly. A down-turned interior flange may be provided in the top of the housing to further insure against splashing, if desired.

The anchor itself is solid and tapers corresponding to the housing, terminating at one end in an eye 30 for the reception of the rope 32. At the other end, the anchor widens out into an inverted, generally mushroomed head 34, which is curved at 36 so as to provide means whereby the anchor will tip over when let down from the housing 14 to the bottom. A smooth hollowed out annular groove 38 surrounds the tapering shank 16, and is located at the underside of the head 34. This groove forms sharp edges 40, with curved surface 36, to engage the bottom and take the place of the conventional flukes, and it has been found that these edges will hold on any bottom that the usual flukes will hold on.

At spaced points around the shaft 16, webs 42 rise from the groove 38 and extend for a short distance up the shaft. These webs have gently curved outer surfaces 44 which act as guides for the head 34 when it is pulled up into the housing, and ensure that the edges 40 will not catch on the portion 12 of the housing, and thus prevent entrance of the head into its receptacle. In the absence of the guiding webs, the anchor would be rather difficult to lodge in the housing, especially in the case of a drifted boat or in rough water.

A modified form of anchor is shown in Figs. 4 and 5, and it will be seen that this anchor is generally similar to the conical form, as seen from the end, as in Fig. 5. However, in this case, the shank 48 is made thin, flat, and elongated, so that when the anchor tips over on the bottom the sharp edges 50 will have a long, bottom-contacting area. Guiding webs 52 are provided, for the same purpose as webs 42, to guide the anchor into its housing (not shown) which will of course follow the outline of the anchor and be constructed in other respects like the housing 14. Grooves 54 in the head 56 are provided for the same reason as grooves 38, but in addition, the shank 48 is oppositely beveled, as at 59, to insure that the anchor will aline with its housing when drawn up.

The open top of housing 14 may be provided with an annular cap 60 to which are pivoted a plurality of levers 62 having knurled heads 64 to overbalance the levers towards the rope 32. The

levers could be pivoted directly to the top of the housing **14**, but are shown as mounted on the separable cap **60** as a preferred embodiment. The heads **64** are shaped to conform to the curvature of the rope, and by being overbalanced, naturally will grasp the rope therebetween.

A ring **66** is provided with slots for the sliding reception of the free ends of the levers **62**, so that upon movement downwardly of the ring **66**, as shown by the arrows in Fig. 1, the heads **64** will be pivoted upwardly and release the rope, so that the anchor will be free to descend. When the ring is released from its down position, the heavy heads **64** will pivot downwards and again grasp the rope and stop its descent. When the anchor is to be brought up, the rope **32** is merely pulled vertically and this action releases the levers, so that the rope may be pulled in. When the anchor is up in its housing, the rope is released by the operator, and the overbalanced heads will again grasp the rope between them. The greater the pull downwards, the stronger is the grasping action of the lever heads.

It will be apparent from the above, that the present invention provides an inboard anchor which is securely held and which will not dirty the boat, and is very convenient in operation.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. An anchor comprising a generally triangular shaped shank, an elongated and enlarged head along one edge of said shank, said head being longer than said edge, and guide webs in extension of said edge between the ends of the head and the other two edges of said shank.

2. An anchor comprising a generally triangular shaped shank, an enlarged rounded head along one edge of said shank, substantially continuous surface-engaging edges on said head, said edges being arranged on said head to face said shank, and thus forming a groove facing said shank, and guiding webs in said groove at the ends of the head, said webs extending from the bottom of the groove to the other edges of said shank.

3. An anchor comprising a generally triangular shaped shank having diverging plane sides forming a thick edge, an enlarged head extending along the thick edge of said shank, grooves in said head facing said shank, said grooves forming edges in said head to act as engaging means with an anchoring surface, and webs at the ends of said grooves, said webs extending outwardly of said grooves and tapering to the thinner edges of said shank.

4. An anchor comprising a generally triangular shaped shank having an enlarged head along one edge thereof, said head having ground-engaging edges parallel thereto, and said shank having sides converging toward each other towards one angle of the triangle, the thickest part of said shank being at said one edge.

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