Aug. 20, 1963 E. W. BRYDON 3,101,067

ANCHOR SECURING DEVICE

Filed July 21, 1961

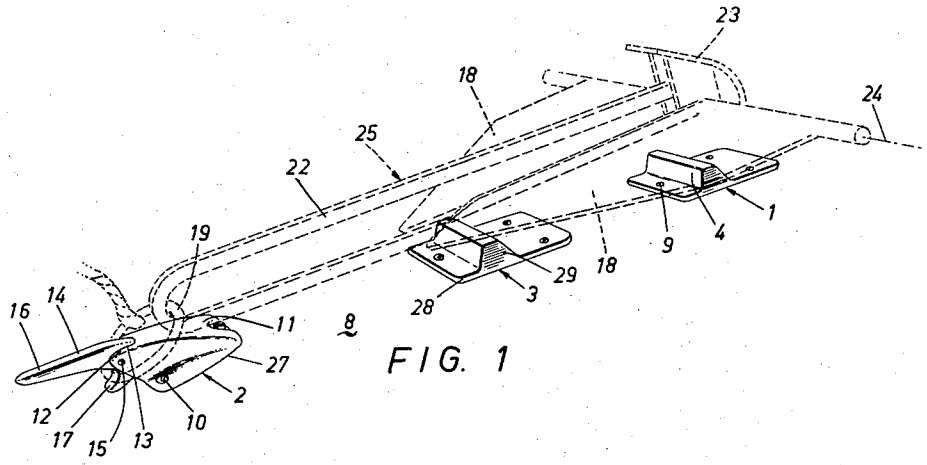


FIG. 1

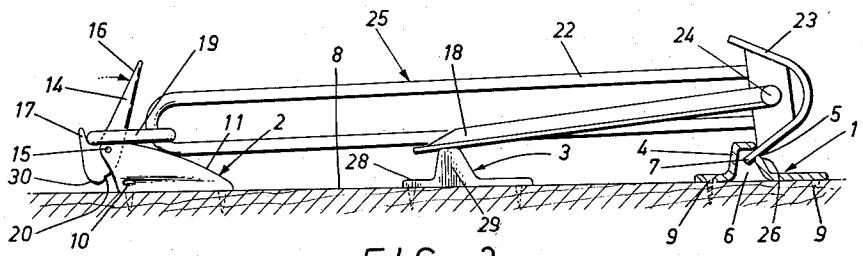


FIG. 2

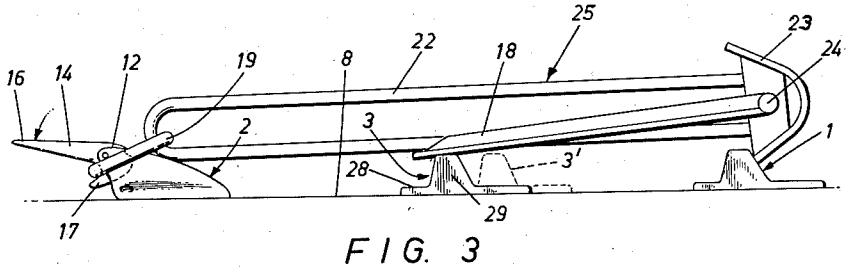


FIG. 3

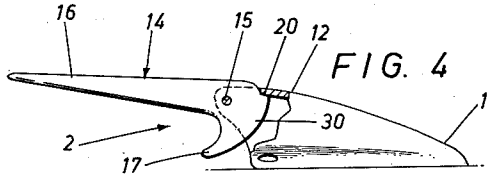


FIG. 4

Inventor

EDWARD W. BRYDON

by: Douglas S. Johnson

Attorney

United States Patent Office 3,101,067 Patented Aug. 20, 1963

3,101,067

ANCHOR SECURING DEVICE

Edward W. Brydon, 1341 Steavebank Road N., Port Credit, Toronto, Canada

Filed July 21, 1961, Ser. No. 125,726
Claims priority, application Canada July 11, 1961
12 Claims. (Cl. 114—210)

This invention relates to devices for securing anchors and more particularly to devices for securing anchors in which the anchor crown and flukes are rigidly secured together and hingedly secured to the shank to rotate about a transverse axis thereof.

There has always been a traditional neatness among sailors no less among amateurs than among professionals. However, this neatness has arisen not so much through obsession, but through necessity. It is important in the interest of safety, that a ship or boat be well maintained and any equipment capable of storage be stowed. A great deal of equipment has been provided for the stowage of ropes and other equipment, but no convenient provision has been made for the securing of anchors. On larger vessels there is no problem with regard to anchor stowage since the anchor is usually suspended through the anchor port. However, with smaller yachts and boats, anchors are usually left lying around the deck and present a hazard. By their very nature and design, anchors will, if left lying around, score the deck of the vessel, causing unnecessary maintenance. While anchor locking devices have been provided in the prior art, these have, in the main, been either too heavy or awkward, or have afforded little protection to the deck of the vessel.

It is therefore the main object of this invention to provide an anchor locking device which will firmly secure an anchor.

It is another object of this invention to provide a device for securing an anchor in which the anchor crown and flukes are rigidly secured together and hingedly secured to the shank to rotate about a transverse axis thereof.

To accomplish these and other objects in this present application the inventor provides a member which is adapted to engage and provide a fulcrum for the anchor crown. Spaced apart from this first member there is provided means for engaging the anchor eye and applying a turning moment to the crown. Between the aforementioned member and means a chock is provided to limit the resultant movement of the flukes when the turning moment is applied. The reaction between this chock and the flukes governs the security with which the anchor is held so that if, relative to a predetermined position, the chock is nearer the means for applying the moment then the chock will be more securely held, and if nearer the fulcrum less securely held.

Further objects and a fuller understanding of the invention may be had by referring to the following description taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a perspective view of one embodiment of an anchor securing device in accordance with the invention showing the anchor to be secured in phantom outline;

FIGURE 2 is a partial fragmentary side view of one embodiment of the invention showing an anchor mounted on the anchor securing device prior to final securing;

FIGURE 3 is a side view of an anchor securing device showing the anchor in a finally secured position; and

FIGURE 4 is a partial fragmentary view of an anchor eye engaging member in accordance with the invention.

In FIGURE 1 an anchor **25** to which the securing device of the present invention is particularly adapted is shown in phantom outline and a preferred embodiment of the securing device is shown in solid outline. The anchor comprises a shank **22** on which an anchor eye or ring **19** is slidably mounted. At one end of the shank a crown **23** and a pair of flukes indicated at **18** are mounted. The crown and the flukes are rigidly secured together and are hingedly secured to the shank so that they rotate about an axis **24** transverse to the shank. It will be evident therefore that as crown **23** is rotated about axis **24** so will flukes **18**. It is usual in anchors of the type shown for the crown to be provided with at least one projection or bearing surface portion. The crown **23** of anchor **25** is provided with a pair of projections one of which is indicated at **7**.

The preferred embodiment of the anchor securing device, as illustrated, comprises a crown-engaging member **1**, means for engaging eye **19** of the anchor and exerting a turning moment of the anchor crown, this means is generally indicated at **2**, and a third member **3** intermediate **1** and **2** for limiting the movement of the flukes **18**.

Crown-engaging member **1** has a basal plate **25** adapted to be rigidly secured to the deck **8** by screws such as shown at **9**. From basal plate **25** an upwardly extending transverse ridge **4** projects and in the front surface **26** of ridge **4** a transverse slot **5** is provided to receive the projection **7**, or an equivalent bearing surface portion of crown **23**.

It will be apparent to those skilled in the art, that although crown engaging member **1** is shown as being formed from one piece and that the ridge **4** defines an inverted trough **5**, the ridge may be formed separately from the basal plate and depending on the form of the anchor may be provided with a suitable configuration adapted to engage a bearing surface of the crown.

The means **2** for engaging the eye of the anchor and exerting a turning moment on the crown of the anchor is spaced apart a predetermined distance from member **1**. It comprises a basal portion **27** with a longitudinally extending ridge **11**. Ridge **11** rises from the front end of base **27** to a turning or high point, above and adjacent the rear end of the base **27**. At the same time, the ridge narrows as it rises. From the turning point of the ridge and along the ridge a longitudinal slot **13** extends forward for a short distance, and in this slot a hook member **14** is hingedly mounted by means of a pin **15** which extends through hook **14** to engage aligned holes on the opposed walls **12** of the slot. Hook **14** has a relatively long upper arm **16** which serves as a handle or lever, a shorter lower arm **17**, and a heel **30** which is provided with a detent **20**.

The intermediate member **3** also has a basal portion **28** which is adapted to be secured to the deck and from base **28** an upwardly extending ridge **29** projects.

To mount the securing device on the vessel the crown engaging member **1** is first secured by screws **9** in the desired position and the intermediate member **3** is placed in an approximately suitable position, as illustrated, so that it supports flukes **18**. Anchor **25** is then placed so that projection **7** of crown **23** engages slot **5** on crown-engaging member **1**. The eye-engaging member **2** is then positioned with hook **14** engaging the anchor eye **19** and hook **14** is then depressed to assume the attitude shown in FIGURE 3.

When crown-engaging member **1** and eye-engaging member **2** are correctly positioned anchor **25** will be held securely by them so that no longitudinal movement is permitted. When this position is assumed the eye-engaging member **2** is secured to the deck by the screws such as **10**. As hook member **14** is depressed to assume the position shown in FIGURE 3 projection **7** of the anchor crown **23** will be held in engagement with slot **5**, crown **23** will tend to rotate about axis **24** towards the eye-

engaging means 2. At the same time axis 24 will tend to move towards eye-engaging means 2 and the extremities of flukes 18 will be urged towards the deck to clamp same against the intermediate member 3. The tautness or degree of the clamping pressure with which the anchor is held depends on the position of the intermediate fluke engaging member 3. In FIGURE 3 it is shown in position in which the anchor will be most securely held. If the fluke engaging member is moved towards the crown engaging member 1 as shown in dotted outline and indicated at 3', the anchor will be less securely held. If member 3 is moved closer towards 2 then the tautness with which the anchor is secured will be increased.

In FIGURE 4 the near side wall 12 of the basal portion 27 of the eye-engaging means 2 has been partially broken away to show the relationship between the hook member 14 and the ridge 11. The hook member 14 in this figure is shown in the fully depressed or locking position, corresponding to the position illustrated in FIGURE 3. When in this position the detent 20 engages the under surface of ridge 11 forward of slot 13 so that when the eye 19 is engaged with the hook the reaction between the upper surface of detent 20 and the under surface of ridge 11 will lock the hook member 14.

The release of the anchor is effected by pressing hook member 14 up.

Although the invention has been described with particular reference to a specific embodiment it will be understood that changes may be made therein without departing from the spirit and scope of the invention as defined in the appended claims.

What I claim is:

1. A device for securing an anchor of the type having an elongated shank, attaching means adjacent one end of said shank, and a crown and a pair of flukes rigidly secured together and rotatable about an axis adjacent the other end of said shank and transverse thereto, the crown having a bearing surface portion, said device comprising: first means engageable with the bearing surface portion of the crown of such an anchor and adapted to constitute a fulcrum therefor; second means adapted to be spaced apart a predetermined distance from said first means, for engaging the attaching means of such an anchor and applying a turning moment thereto whereby the crown is adapted to move from a first free position to a second locking position; and third means having a predetermined height adapted to be positioned intermediate said first and second means and adapted to limit the movement of the flukes of such an anchor.

2. A device as claimed in claim 1, in which said first means comprises a basal plate adapted to be secured to a supporting surface, and an upstanding projection on said basal plate adapted to engage the bearing surface portion of the crown.

3. A device as claimed in claim 1, in which said second means comprises a basal portion adapted to be secured to a supporting surface, a supporting member extending upwardly from said basal member, and an attaching means engaging member movably mounted on said supporting member.

4. A device as claimed in claim 3, in which said attaching means engaging member is a substantially hook-shaped member hingedly mounted on said supporting member.

5. A device as claimed in claim 1, in which said first means comprises a basal plate adapted to be secured to a supporting surface, and an upstanding ridge extending transversely of said plate, said ridge having a slot therein adapted to receive said crown bearing surface portion.

6. A device as claimed in claim 1, in which said third means comprises a basal plate adapted to be secured to a supporting surface, and having a projection extending upwardly therefrom.

7. A device as claimed in claim 2, in which said third means comprises a basal plate adapted to be secured to a supporting surface, and a transversely extending ridge projecting upwardly from said plate.

8. A device as claimed in claim 1, in which said second means comprises a basal member having a front end and a rear end adapted to be secured to a supporting surface, a longitudinally extending ridge projecting upwardly from said basal member, said ridge rising from said front end to a turning point above and adjacent said rear end, said ridge having a longitudinal slot therein, and a hook member adapted to engage said attaching means hingedly mounted in said slot.

9. A device as claimed in claim 8, in which said slot extends along said ridge from said turning point for a predetermined distance, said hook member being hingedly mounted in said slot adjacent said turning point and having a terminal detent adapted to engage the adjacent end of said slot.

10. A device for securing an anchor having an elongated shank, attaching means adjacent one end of said shank, and a crown and a pair of flukes rigidly secured together and rotatable about an axis adjacent the other end of said shank and transverse thereto, said crown having a bearing surface portion, said device comprising: a first means comprising a basal plate adapted to be secured to a supporting surface, and an upstanding projection on said basal plate adapted to engage the bearing surface portion of said crown; second means, spaced apart a predetermined distance from said first means, for engaging said attaching means and applying a turning moment to said crown whereby said crown moves from a first free position to a second locking position, said second means comprising a basal portion adapted to be secured to a supporting surface, a supporting member extending upwardly from said basal member and an attaching means engaging member movably mounted on said supporting member; and third means having a predetermined height disposed intermediate said first and second means for limiting the movement of said flukes.

11. A device for securing an anchor having an elongated shank, attaching means adjacent one end of said shank, and a crown and a pair of flukes rigidly secured together and rotatable about an axis adjacent the other end of said shank and transverse thereto, said crown having a bearing surface portion, said device comprising: first means comprising a basal plate adapted to be secured to a supporting surface, and an upstanding transversely extending ridge on said plate, said ridge having a slot therein adapted to engage the bearing surface portion of said crown; second means, spaced apart a predetermined distance from said first means, for engaging said attaching means and applying a turning moment to said crown whereby said crown moves from a first free position to a second locking position, said second means comprising a basal member having a front end and a rear end adapted to be secured to a supporting surface, a longitudinally extending ridge projecting upwardly from said basal member, said ridge rising from said front end to a turning point above and adjacent said rear end, said ridge having a longitudinal slot therein, a hook member adapted to engage said attaching means hingedly mounted in said slot; and third means having a predetermined height intermediate said first and second means for limiting the movement of said flukes.

12. A device as claimed in claim 11, in which said slot extends along said ridge from said turning point for a predetermined distance, said hook member being hingedly mounted in said slot adjacent said turning point and having a terminal detent adapted to engage the adjacent end of said slot.

References Cited in the file of this patent

UNITED STATES PATENTS

603,674	Arkell	May 10, 1898
2,705,467	Ogg et al.	Apr. 5, 1955