Feb. 17, 1959 J. E. HANCOCK 2,873,711

DE-FOULING ANCHOR

Filed Dec. 24, 1956 2 Sheets-Sheet 1

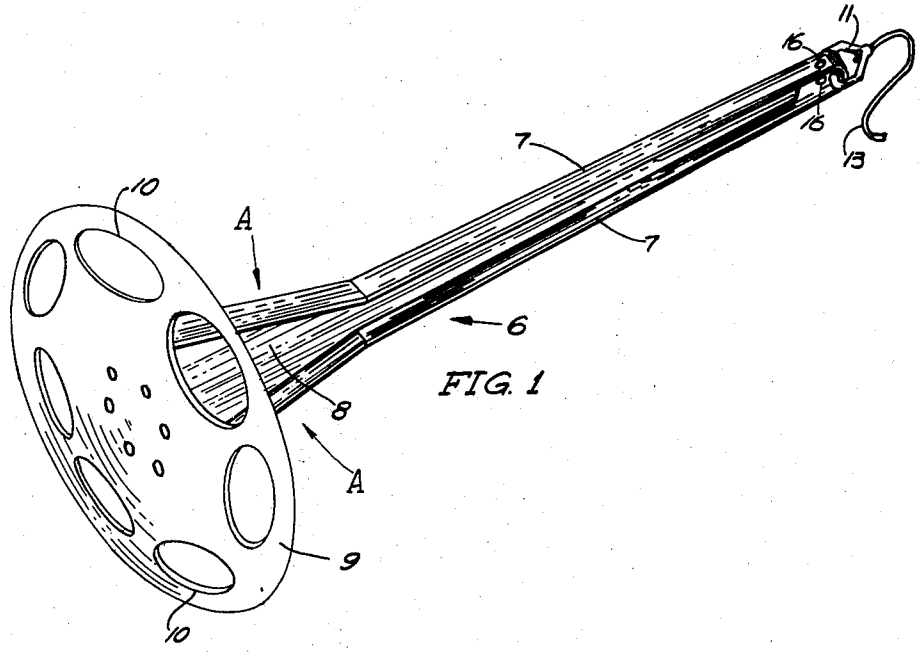


FIG. 1

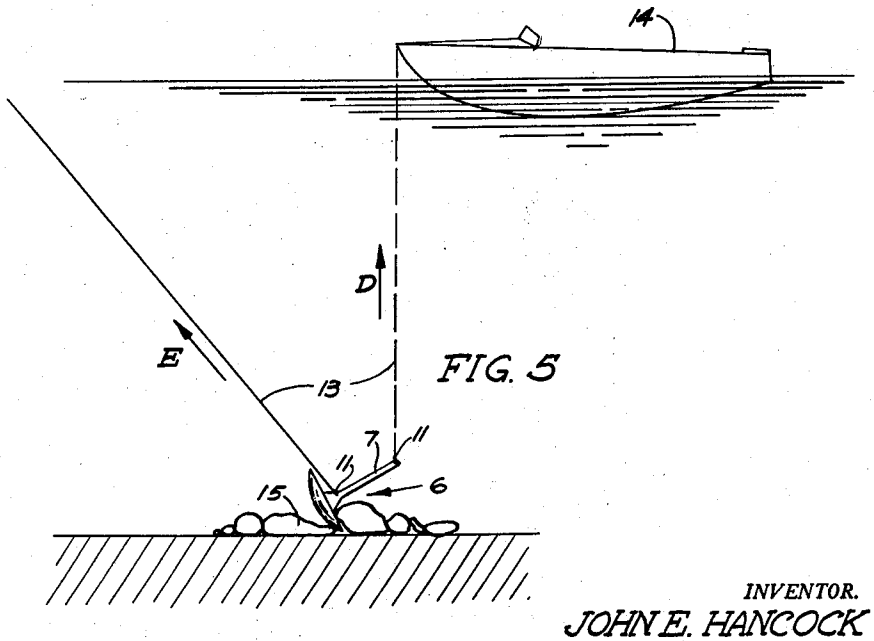


FIG. 5

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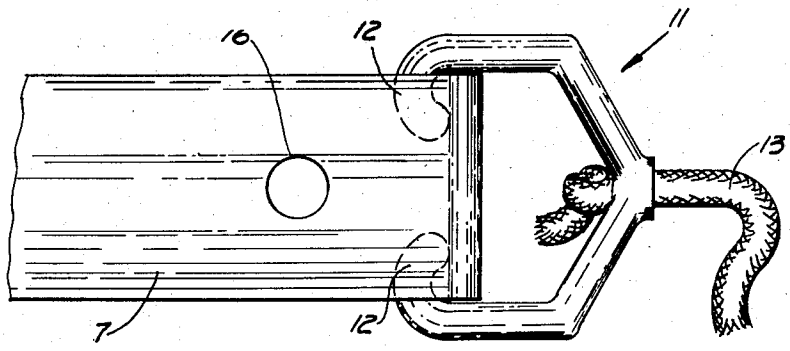


FIG. 2

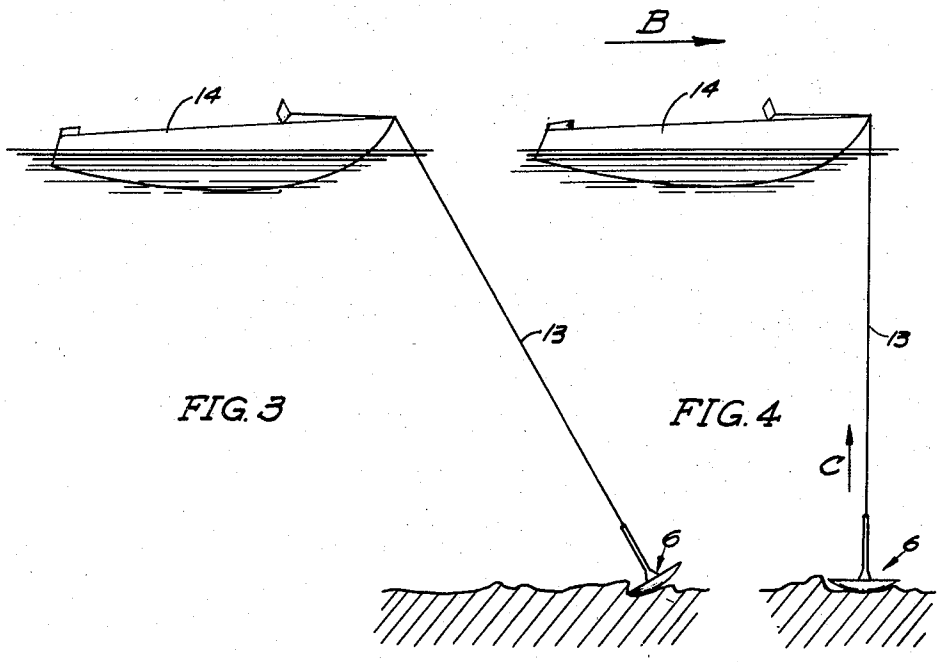


FIG. 3

FIG. 4

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2,873,711

DE-FOULING ANCHOR

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Application December 24, 1956, Serial No. 630,177

3 Claims. (Cl. 114—206)

Generally speaking, the present invention relates to the anchor art and, more particularly, relates to an improved de-fouling anchor which is cooperable for securing vessels of any size, shape, or tonnage and which is cooperable for disengagement from a fouled or hooked position.

Prior art anchor arrangements are disadvantageous for various reasons. For example, an anchor will frequently become hooked or fouled in an awkward position whereby extracting the anchor will be time consuming and, in the situation where the anchor is manually operable, usually very difficult and fatiguing. There is also the likelihood that the anchor may become so badly embroiled that extraction may be impossible, and the only alternative left may be to sever the cable and abandon the anchor. Furthermore, prior anchor arrangements are so devised that there is danger of disfiguring or gashing the hull or deck, especially if the boat is of a nonmetallic construction. In addition, the jagged edges of conventional anchors are a distinct safety hazard.

The present invention was developed primarily to overcome the above-mentioned problems and, generally speaking, can be said to consist of an anchor having a shank, usually a shank having two spaced flange portions and a central web portion therebetween, with a fluke, attached to the remote end of said shank, being cooperable for laying hold of the ocean floor, and a slidable link, cooperable for attachment to rope means and onto the shank, which is cooperable for selective movement along the shank in order to gain a desirable position adapted to facilitate extraction of the anchor from a fouled or hooked position. The slidable link is generally manipulated into the most advantageous position for defouling an anchor by maneuvering the boat. If the angle the rope means makes with the shank is less than ninety degrees, as measured by the quadrants formed by the shank and a line perpendicular to the shank, or if the cable is slackened, the link will move, under the impetus of gravity, downward until the desired angle is obtained. A modification of the present invention is possible when there is danger of damage to a fragile hull or deck, which must be avoided. A curved, disc-shaped fluke is used which has smooth edges as contrasted with the sharp, jagged edges of conventional anchor devices in order to prevent damage to the boat as well as to the person handling the anchor.

From the above description of basic and generic forms of the present invention, it will be apparent to those skilled in the art that virtually all of the hereinbefore mentioned prior art problems and/or disadvantages are substantially entirely eliminated, met and/or overcome in and through use of the present invention.

For example, it is obvious that the de-fouling anchor of the presenti nvention is easily launchable and retrievable, and that, when the boat is at anchorage, it is very firmly secured.

With the above points in mind, it is an object of the present invention to provide an improved anchor which is easily and rapidly disengageable from a hooked or fouled position on the ocean floor.

A further object of the present invention is to provide a blunt anchor that will not readily mar or gash a boat.

It is a further object of the present invention to provide a device of the character set forth in the preceding object, which is cheap, simple, easy to operate and of virtually foolproof construction.

Other and allied objects will be apparent to those skilled in the art after a careful perusal, examination and study of the accompanying illustrations, the present specification, and the appended claims.

To facilitate understanding, reference will be made to the hereinbelow described figures, in which:

Fig. 1 is a perspective view of an illustrative anchor;

Fig. 2 is a fragmentary view of the slidable link attached onto the shank and coupled to a cable;

Fig. 3 is a front elevational view of a boat at anchorage;

Fig. 4 is a front elevational view of a boat in the process of de-anchoring with the boat directly over the anchor;

Fig. 5 is a front elevational view of the anchor being maneuvered out of a common fouled position on the ocean floor and showing how the sliding link changes the direction of force from an awkward, unmanageable position, as indicated by the dotted line, to a retrievable position, as indicated by the solid cable line.

Generally speaking, the de-fouling anchor, indicated generally at **6**, which in the specific example illustrated in Figs. 1–5, consists of a shank including spaced flange portions **7**, separated by a central web-portion **8** therebetween, and flaring out at the bottom, as indicated by the arrows at A, and has a curved, disc-shaped fluke **9** having apertures **10** thereon at the bottom, as shown in Fig. 1. A slidable link, which in the specific example illustrated is a substantially U-shaped link, indicated generally at **11**, has two opposed laterally spaced engaging members having oppositely inwardly directed lower end portions **12** which slidably attach said link **11** onto the shank **7**, as best shown in Fig. 2, for longitudinal slidable movement along the shank **7** from one extreme end thereof to the other extreme end thereof and vice versa. The anchor **6** is easily retrievable from anchorage, as shown in Fig. 3, by reeling the cable **13** in and moving the boat **14**, in the direction indicated by the arrow B in Fig. 4, until the boat **14** is substantially over the anchor **6** and then pulling the anchor **6** upward into the boat **14**, as indicated by the arrow C in Fig. 4. The anchoring and deanchoring illustrated in Figs. 3 and 4 is shown without any complicating circumstances or encumbrances that might foul the anchor **6**. The advantages of the present invention are clearly shown in Fig. 5 wherein an anchor **6** has been anchored in such an awkward position that it looks practically impossible to extract it with normal de-anchoring procedure. However, by maneuvering the sliding link **11** and the cable **13** from the position, as indicated by the dotted rope line **13**, to a retrievable position, as indicated by the solid cable line **13**, whereby the direction of force applied is changed from the one indicated by the arrow D to the direction of force indicated by the arrow E thereby making it possible to extract the anchor **6** from the impediments, which in the example illustrated takes the form of large, heavy rocks **15**. The slidable link **11** by selective longitudinal movement and limited lateral movement along the shank **7** is thus able to gain the proper position to extract a fouled or hooked anchor **6**, as shown in Fig. 5. Retaining means, which in the specific example illustrated takes the form of apertures **16** on the shank **7**, are cooperable with anchor retaining means

(not shown since it is usually located on the boat **14** and is not part of the present invention) for securing the anchor **6** to the boat **14**.

It should be understood that the term fluke is to be interpreted broadly and refers to the end which lays hold of the earth and includes the bill, fluke, arm, throat, and crown. Furthermore, it should also be noted that the present invention is not to be limited to the curved, disc-shaped fluke that is specifically illustrated and described herein and is meant to include anchors having conventional flukes.

It should be pointed out that this patent application is directed to "A De-Fouling Anchor," and that my copending patent application, entitled "A Combination Anchor, Reel, and Housing for Small Boats," Serial No. 638,166, filed December 24, 1956, is directed to an anchoring system and with the present invention an integral part of the aforementioned combination.

Numerous modifications and variations of the present invention will occur to those skilled in the art after a careful study hereof. All such properly within the basic spirit, scope and/or teachings of the present invention are intended to be included and comprehended herein as fully as if specifically described, illustrated and claimed.

The exact compositions, configurations, constructions, relative positionings, and cooperative relationships of the various component parts of the present invention are not critical, and can be modified substantially within the spirit of the present invention.

The embodiments of the present invention specifically described and illustrated herein are exemplary only, and are not intended to limit the scope of the present invention, which is to be interpreted in the light of the prior art and the appended claims only, with due consideration for the doctrine of equivalents.

I claim:

1. An anchor for securing vessels of any shape or size and adapted for controllable disengagement from a fouled or hooked position, comprising: a longitudinal shank consisting of a central longitudinal web portion and two spaced longitudinal flange portions carried by opposite longitudinal edges of said web portion; each of said flange portions having side edges extending, transversely to the longitudinal direction of said shank, beyond said web portion; said web portion being provided with transversely directed stop means at a first end of said longitudinal shank; the spaced flanges at a second end of said shank being divergingly outwardly flared with respect to each other and the web portion therebetween being correspondingly divergingly outwardly flared in a manner providing a flared shank end; an earth-penetrable anchor fluke affixed to said flared shank end; and a slidable link adapted for attachment to a tensile member and including two opposed laterally spaced engaging members having similar oppositely inwardly directed lower end portions, said opposed laterally spaced engaging members being slidably removably positioned on each side of one of said flange portions and said similar oppositely inwardly directed lower end portions slidably underlying said flange portion and mounting said link for slidable movement along said flange portion from said stop means at said first end of said shank to said flared end of said shank immediately adjacent said anchor fluke for extracting said anchor from a fouled position.

2. An anchor for securing vessels of any shape or size and adapted for controllable disengagement from a fouled or hooked position, comprising: a longitudinal

shank consisting of a central longitudinal web portion and two spaced longitudinal flange portions carried by opposite longitudinal edges of said web portion; each of said flange portions having side edges extending, transversely to the longitudinal direction of said shank, beyond said web portion; said flange portions being joined together at a first end of said longitudinal shank; the spaced flanges at a second end of said shank being divergingly outwardly flared with respect to each other and the web portion therebetween being correspondingly divergingly outwardly flared in a manner providing a flared shank end; an earth-penetrable substantially disc-shaped anchor fluke affixed to said flared shank end; and a slidable link adapted for attachment to a tensile member and including two opposed laterally spaced engaging members having similar oppositely inwardly directed lower end portions, said opposed laterally spaced engaging members being slidably removably positioned on each side of either of the flange portions and said similar oppositely inwardly directed lower end portions slidably underlying said flange portion and mounting said link for slidable movement along either of said flange portions from said joined flange portions at said first end of said shank to said flared end of said shank immediately adjacent said anchor fluke for extracting said anchor from a fouled position.

3. An anchor for securing vessels of any shape or size and adapted for controllable disengagement from a fouled or hooked position, comprising: a longitudinal shank consisting of a central longitudinal web portion and two spaced longitudinal flange portions carried by opposite longitudinal edges of said web portion; each of said flange portions having side edges extending, transversely to the longitudinal direction of said shank, beyond said web portion symmetrically on each side of said web portion; said flange portions being joined together at a first end of said longitudinal shank with a part of said web portion adjacent thereto removed; the spaced flanges at a second end of said shank being divergingly outwardly flared with respect to each other and the web portion therebetween being correspondingly divergingly outwardly flared in a manner providing a flared shank end; an earth-penetrable curvedly substantially disc-shaped anchor fluke having a plurality of apertures therethrough and being affixed to said flared shank end in substantially transverse relationship with respect thereto; and a slidable link adapted for attachment to an anchor cable and being substantially U-shaped including two opposed laterally spaced engaging members having similar oppositely inwardly directed lower end portions, said opposed laterally spaced engaging members being slidably removably positioned on each side of either of the flange portions and said similar oppositely inwardly directed lower end portions slidably underlying said flange portion and mounting said link for slidable movement along either of said flange portions from said joint flange portions at said first end of said shank to said flared end of said shank immediately adjacent said anchor fluke for extracting said anchor from a fouled position.

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