Sept. 13, 1960 E. S. MOYES 2,952,236

BOAT ANCHORING DEVICE

Filed March 24, 1958

Fig. 1

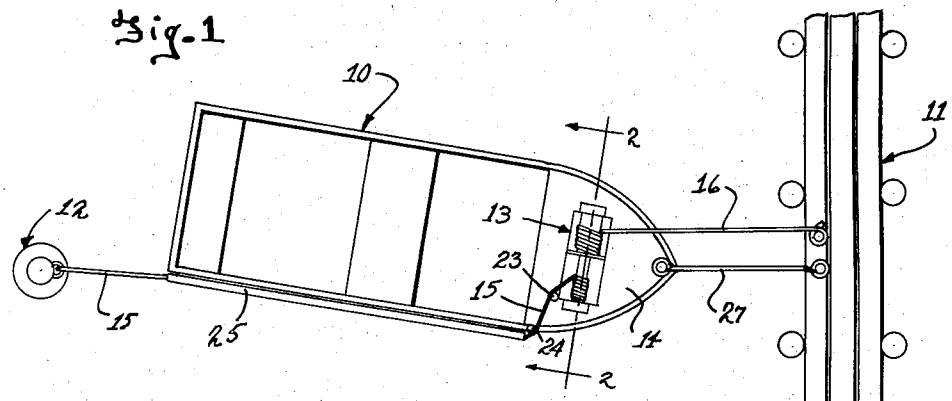


Fig. 2

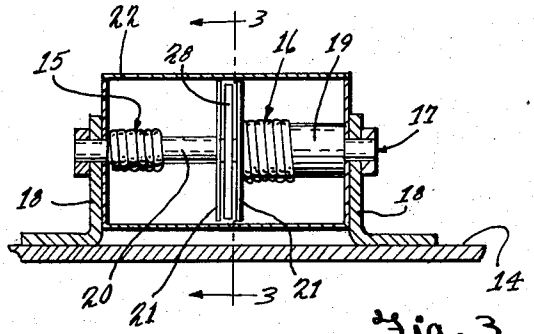


Fig. 3

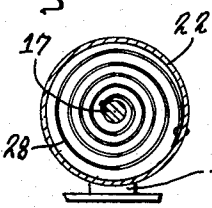


Fig. 4

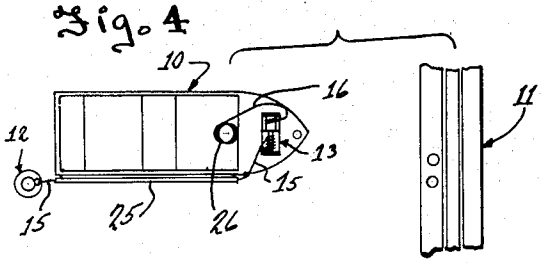


Fig. 6

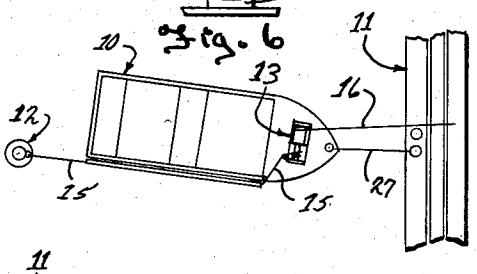
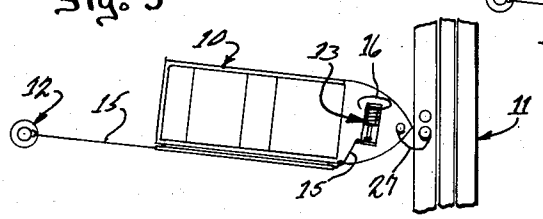


Fig. 5



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BOAT ANCHORING DEVICE

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4 Claims. (Cl. 114—230)

The present invention relates to a boat anchoring device and the principal object of the invention is to provide new and improved devices of such character.

It is common knowledge that when a boat is tied up in the usual manner to a dock or the like, it is subject to damage by being constantly bumped against the dock by the action of the waves. One solution to the problem is to tie the boat up to a buoy or the like which is anchored out in the water away from the shore or dock; however, this presents the problem of access to and egress from the boat without getting wet. Another solution is to position the boat between dock portions which extend along each side of the boat and to tie each side of the boat up to respective adjoining dock portions. While this solves the problem, it requires an elaborate dock which, in many instances, is impractical because of space limitations and cost.

The present invention permits a boat to be tied up, or anchored, well out in the water where it cannot be bumped against a solid object while at the same time it may readily be drawn to the shore or dock for ready entrance thereinto. This is accomplished without expensive docking facilities by means of a simple, low cost device which may readily be attached to any boat. Other advantages will readily become apparent from a study of the following description and from the drawing appended hereto.

In the drawing accompanying this specification and forming a part of this application there is shown, for purpose of illustration, an embodiment which the invention may assume, and in this drawing:

Figure 1 is a generally diagrammatic plan view of a boat anchored in position to a dock by means of a preferred embodiment of the invention,

Figure 2 is an enlarged sectional view of a portion of the invention generally corresponding to the line 2—2 of Figure 1,

Figure 3 is a fragmentary sectional view generally corresponding to the line 3—3 of Figure 2, and

Figures 4, 5 and 6 are reduced size, generally diagrammatic plan views illustrating various stages of operation in use of the device to anchor a boat.

As best seen in Figure 1, the invention is shown employed to anchor, or tie up, a boat **10** in spaced relation to a pair of spaced-apart supports such as, for example, a dock **11** and a buoy **12**. It will readily be apparent, however, that other spaced-apart, fixed-in-position supports could as well be employed instead of the dock and buoy herein shown.

As best seen in Figure 1, the device illustrating the present invention has its outer housing omitted in the interest of clarity and is shown to comprise a drum like device **13** secured to the deck **14** of the boat and upon which a pair of cables **15**, **16** are wound. In its simplest form (see Figure 2), the device may comprise an elongated shaft **17** rotatably supported by suitable brackets **18** which are secured to the deck **14**. One shaft portion

19 is of a larger diameter than an adjoining shaft portion **20** to provide drums of different diameter upon which the cables are wound in opposite directions for a purpose to be seen. To insure separation of respective cables **15**, **16** when they are wound upon the shaft, respective shaft portions **19**, **20** are separated by pair of spaced-apart, radially extending flanges **21**. Enclosing portions **19**, **20** of shaft **17** for the purpose of protecting the respective cable portions wound thereon is a housing **22** which is apertured at suitable places (not shown) to pass the cables.

With particular reference to Figure 1, it will be noted that cable **15** extends from device **13**, about a pair of pulleys **23**, **24**, and along one side of the boat to the rear thereof. In order to protect this cable against damage and the like, it may be desirable to pass it through a tube **25** which acts as a protective guide therefor.

During normal operation of the boat, cable **15** will be wound up on the drum provided by shaft portion **20** preferably so that the extreme end of the cable lies closely against the rear of the boat. If desired, this end of the cable may carry a suitable abutment (not shown) which prevents this cable end from being pulled into tube **25**. The major portion of cable **16** will, at this time, be unwound from its drum and this unwound portion may be stowed in any suitable manner such as by coiling it up in the boat as shown at **26** in Figure 4.

When the boat is to be anchored, or tied up, it will be driven to buoy **12** where the end of cable **15** will be secured thereto (see Figure 4). With cable **15** thus secured, the boat will then be driven forward to the dock (see Figure 5) to permit disembarkation. As the boat moves forward from the position shown in Figure 4 to the position shown in Figure 5, cable **15** will be pulled from its drum to thus cause rotation of shaft **17**. Since cable **16** is wound upon its drum in the opposite direction from that in which cable **15** is wound, the aforesaid rotation of shaft **17** will cause cable **16** to be wound upon its drum.

After the boat has been unloaded, the front of the boat will be tied to the dock by means of a cable **27** whose length is sufficient to permit the boat to be moved some little distance from the dock. The free end of cable **16** will then be grasped and pulled toward the dock. This will unwind cable **16** from its drum and cause rotation of shaft **17** in the opposite direction from that heretofore described. Rotation of the shaft in this direction will cause cable **15** to be wound upon its drum and since the end of this cable is secured to the buoy, the boat will be drawn away from the dock (see Figure 6) and toward the buoy to the extent permitted by cable **27**. It will be noted that the greater the pull on cable **16**, the greater will be the tension exerted on cables **27** and **15**. When the last mentioned cables are tensioned to the desired degree, although some slack is usually left therein to permit the boat to rise and fall with changes in the water level, the free end of cable **16** will be tied to the dock to complete the anchoring operation of which time the boat and the various cables will be disposed as seen in Figure 1.

It is to be noted that cable **27** limits movement of the boat in a direction away from the dock. It is also to be noted that with cable **16** tied to the dock, cable **15** limits movement of the boat in a direction away from the buoy to thus secure the boat in position between the buoy and the dock. The manner in which cable **15** limits movement of the boat is as follows:

It will be recalled that the drum provided shaft portion **19** upon which cable **16** is wound is of larger diameter than the drum provided by shaft portion **20** upon which cable **15** is wound. Accordingly, and with cable

16 tied to the dock, movement of the boat in a direction away from the buoy will tend to withdraw cable 15 from its drum and cause rotation of the device shaft in one direction. Rotation of the device shaft in such direction, however, will tend to wind cable 16 thereon and since a given amount rotation of shaft 17 in the direction aforesaid (caused by movement of the boat in a direction away from the buoy) will wind up cable 16 at a greater rate than the rate at which cable 15 will unwind, the net result will be to tension the cables 15, 16. With these cables tensioned, further rotation of the shaft in the direction aforesaid will be prevented and with the shaft thus held against rotation in this direction, further unwinding of cable 15 will be prevented to thus limit movement of the boat in a direction away from the buoy.

When the boat is to be used once again, cable 16 will be untied from the dock and the boat then drawn to the dock by pulling on cable 27. After the boat is loaded, cable 27 will be cast off from the dock and the boat then backed up to the buoy to permit cable 15 to be disconnected therefrom. As the boat is being backed up to the buoy, cable 16 will be unwound from its drum and this unwound cable may be stowed in the boat as previously mentioned and as illustrated in Figure 4.

To provide for the winding up of cable 15 on its drum as the boat is backed up to the buoy, device 13 is preferably provided with a spring 28 (see Figure 2) which is located between the flanges 21 and which resiliently urges rotation of shaft 17 in a direction to wind cable 15 on its drum. Obviously, the tensioning of spring 28 will be effectuated as cable 15 is pulled from its drum during movement of the boat from the position shown in Figure 4 toward the dock.

In view of the foregoing, it will be apparent to those skilled in the art that I have accomplished at least the principal object of my invention and it will also be apparent to those skilled in the art that the embodiment herein described may be variously changed and modified without departing from the spirit of the invention, and that the invention is capable of uses and has advantages not herein specifically described, hence it will be appreciated that the herein disclosed embodiment is illustrative only, and that my invention is not limited thereto.

I claim:

1. A device for anchoring a boat in spaced relation between a pair of spaced-apart supports, comprising a first cable extending between and connecting the boat with one of the supports, a second cable connected to said boat and adapted to extend to the other support, means connecting said cables together at said boat to provide for a reduction in the effective length of said first cable when said second cable is pulled toward said other support to thereby draw said boat toward said one support, said second cable being securable to said other support to maintain said first cable at a generally predetermined effective length to thereby limit movement of said boat in a direction away from said one support, and a third cable extending between and connecting said boat with said other support and limiting movement of said boat in a direction away from said other support.

2. A device for anchoring a boat in spaced relation between a pair of spaced-apart supports, comprising a first cable extending between and connecting the boat with one of the supports, a second cable connected to said boat and adapted to extend to the other support, drum means rotatably carried by said boat and providing a pair of simultaneously rotatable drums upon which respective cables are adapted to be wound, the drum for one of said cables operating to wind and unwind its cable at a different rate than the rate at which said other drum winds and unwinds its cable, said drum means providing for winding up said first cable as said second cable is unwound to thereby decrease the effective length of said first cable and thus draw said boat toward said one support and said drum means providing for unwinding of said first cable and winding up of said second cable upon movement of said boat in a direction away from said one support, said second cable being securable to said other support and said drum means providing for the winding up of said second cable at a greater rate than the unwinding of said first cable upon movement of said boat in a direction away from said one support to thereby tension said cables and prevent any substantial increase in length of said first cable to thus limit movement of said boat in said last named direction, and a third cable extending between and connecting said boat with said other support and limiting movement of said boat in a direction away from said other support.

3. A device for anchoring a boat in spaced relation between a pair of spaced-apart supports, comprising a first cable extending between and connecting the boat with one of the supports, a second cable connected to said boat and adapted to extend to the other support, drum means rotatably carried by said boat and providing a pair of simultaneously rotatable drums upon which respective cables are adapted to be wound, the drum for one of said cables being of a greater effective diameter than that of the other drum to provide for winding and unwinding of said one cable at a greater rate than the rate at which said other drum winds and unwinds its cable, said second cable being securable to said other support and said drum means providing for the winding up of said second cable at a greater rate than the unwinding of said first cable upon movement of said boat in a direction away from said one support to thereby tension said cables and prevent any substantial increase in length of said first cable to thus limit movement of said boat in said last named direction, and a third cable extending between and connecting said boat with said other support and limiting movement of said boat in a direction away from said other support.

4. A device for anchoring a boat in spaced relation between a pair of spaced-apart supports, comprising a first cable extending between and connecting the boat with one of the supports, a second cable connected to said boat and adapted to extend to the other support, drum means rotatably carried by said boat and providing a pair of simultaneously rotatable drums upon which respective cables are adapted to be wound, the drum for one of said cables being of a greater effective diameter than that of the other drum to provide for winding and unwinding of said one cable at a greater rate than the rate at which said other drum winds and unwinds its cable, said second cable being securable to said other support and said drum means providing for the winding up of said second cable at a greater rate than the unwinding of said first cable upon movement of said boat in a direction away from said one support to thereby tension said cables and prevent any substantial increase in length of said first cable to thus limit movement of said boat in said last named direction, means for resiliently urging rotation of said drum means in a direction to wind up said first cable on its drum, and a third cable extending between and connecting said boat with said other support and limiting movement of said boat in a direction away from said other support.

References Cited in the file of this patent

UNITED STATES PATENTS

653,475 Howe ---------- July 10, 1900