

[54] **BAILER FOR BOATS**

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[51] Int. Cl. **B63b 13/00**

[58] Field of Search 114/183, 184, 185, 197, 114/198, 127-143; 220/38.5

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[57]

ABSTRACT

An integral fish shaped fairing blister is formed on the outside bottom surface of the boat about the dagger-board opening. The tail fin is hollow and has a rear facing exit opening. Another exit opening is formed in the inside bottom surface of the boat above the hollow tail fin. Either one of these exit openings is provided with a manually or automatically operable closure to bail the boat when under way.

1 Claim, 7 Drawing Figures

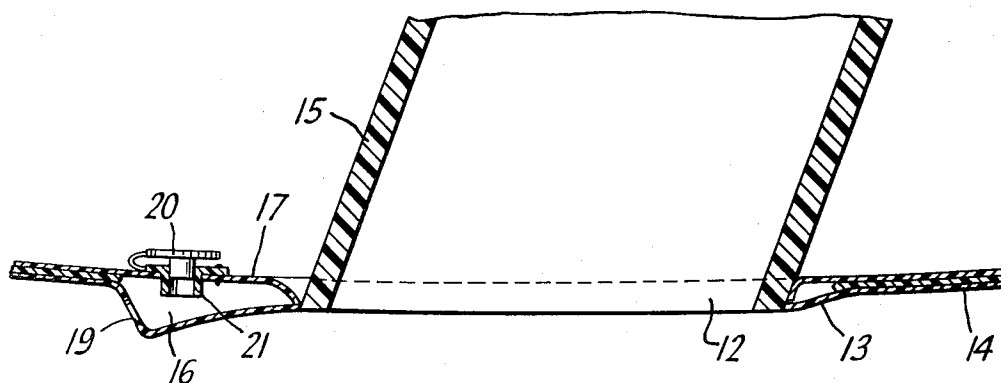


FIG. 1

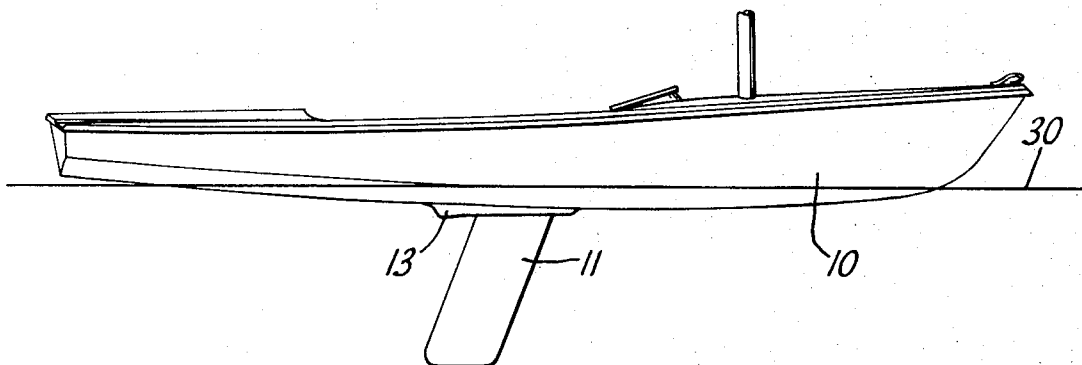


FIG. 2

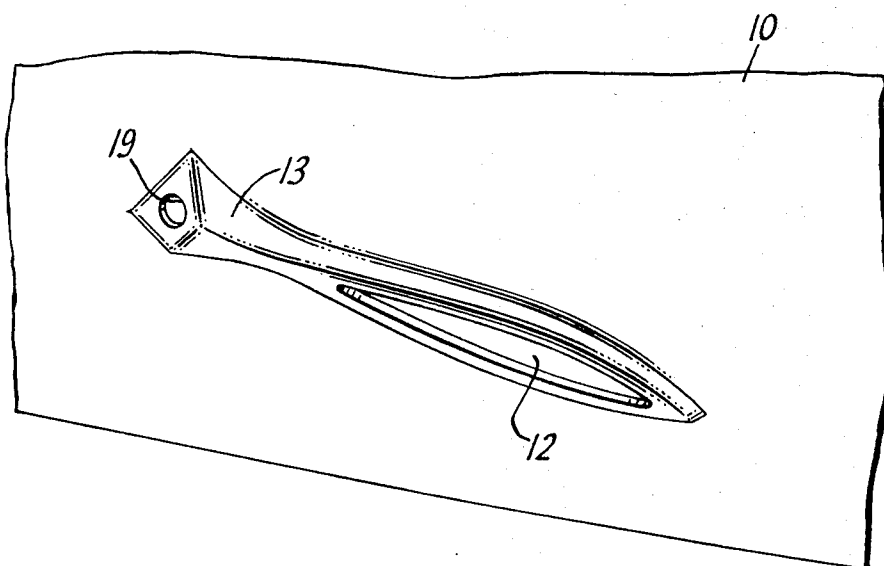


FIG. 3

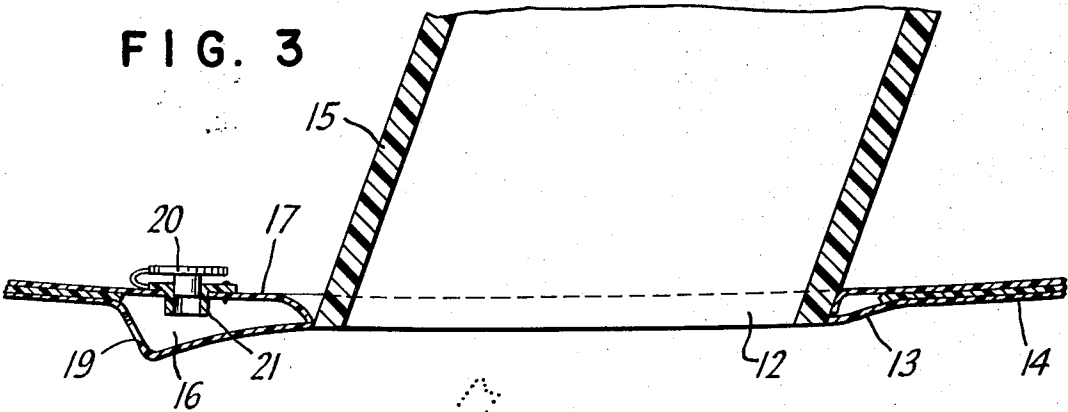


FIG. 4

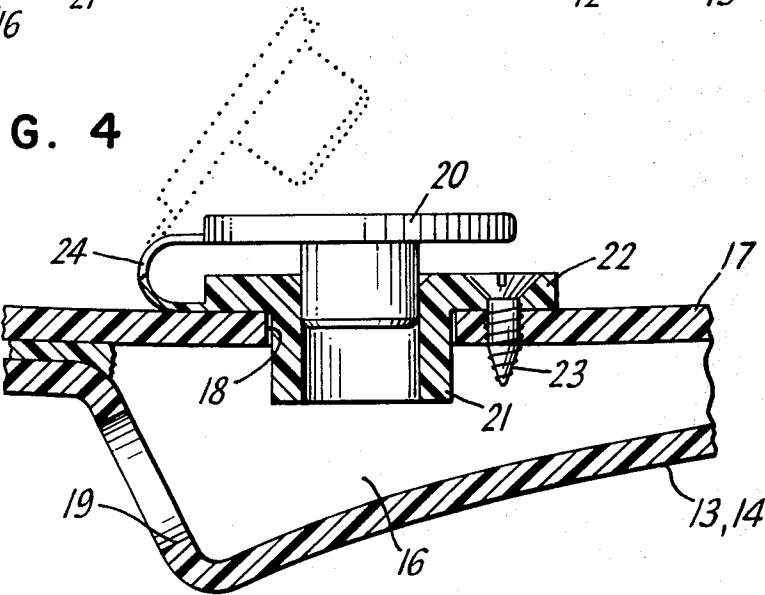


FIG. 5

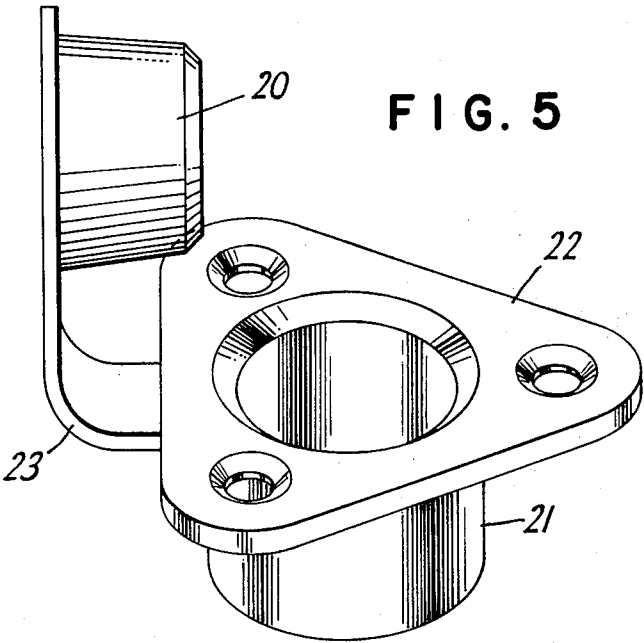


FIG. 6

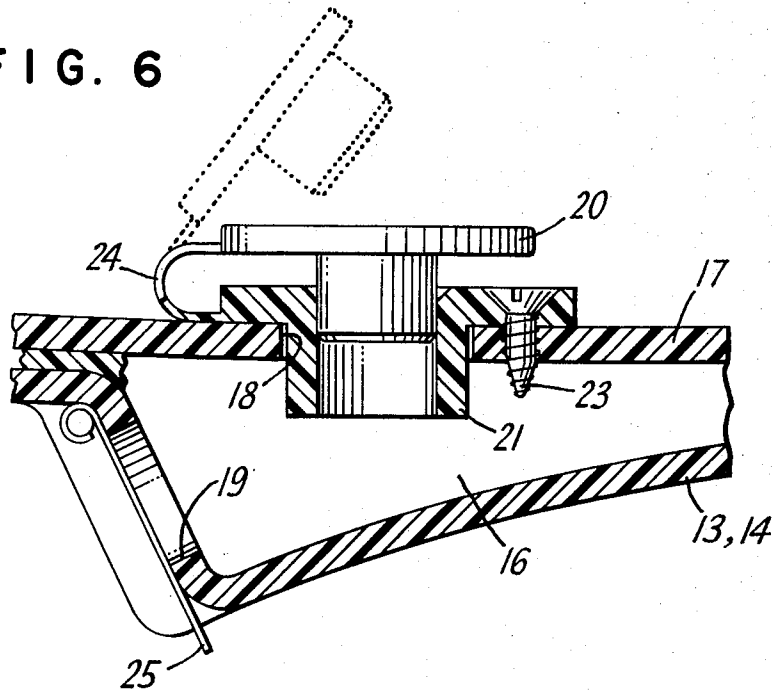
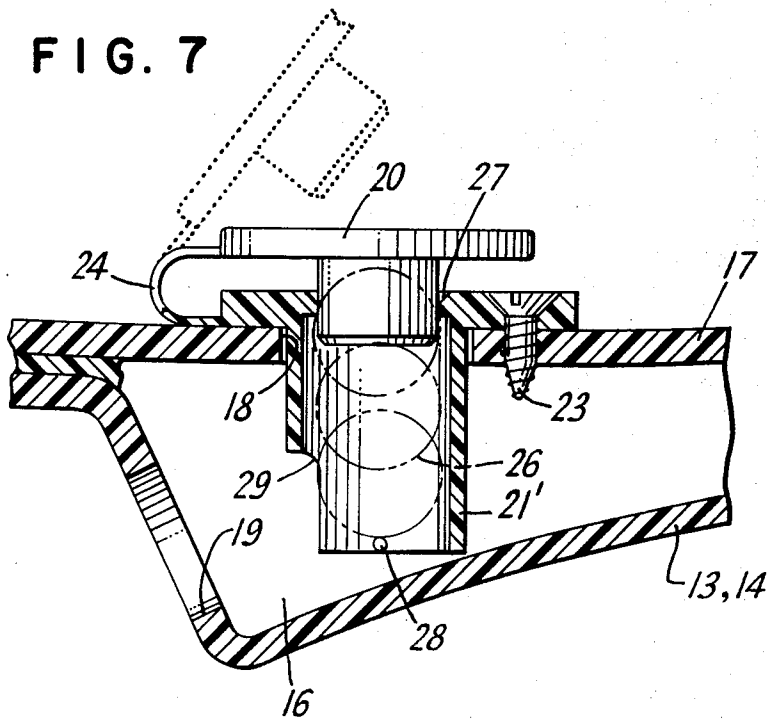


FIG. 7



BAILER FOR BOATS

This invention relates to a bailer, and more particularly, to a self-bailer for boats.

It is an object to this invention to provide a low cost and uncomplicated self-bailer for boats.

Briefly, in the preferred form of the invention, the above object is obtained in a fiberglass reinforced plastic hull by utilizing integral portions of the hull for the bailer.

In the accompanying drawings FIG. 1 is a side elevation view of a sailboat incorporating the invention;

FIG. 2 is an enlarged perspective view of the integral fairing on the bottom of the hull surrounding the daggerboard opening;

FIG. 3 is an enlarged longitudinal sectional view through the central portion of the hull;

FIG. 4 is a further enlargement of the bailer;

FIG. 5 is an enlarged perspective view of the bailer closure cap;

FIG. 6 is a modification of the bailer; and

FIG. 7 is another embodiment of the bailer.

Referring now particularly to FIG. 1, illustrated therein is a sailboat hull 10 having a daggerboard 11. The daggerboard opening 12 is surrounded by fairing 13, see FIG. 2. This fairing 13 has the shape of a fish, and is integral with the outer bottom surface 14 of the molded fiberglass reinforced plastic hull, see FIG. 3.

Just behind the daggerboard trunk 15 the fairing 13 is hollow to define a well 16. This well is positioned in the tail fin part of the fish shaped fairing 13. It is covered by the inner bottom surface 17 of the molded fiberglass reinforced plastic hull. The inner bottom surface 17 has an exit opening 18 formed therein over the well 16, and a rear facing exit opening 19 is also formed in the fairing 13 at well 16, see FIG. 4. Opening 18 is adapted to be opened and closed by a closure cap 20. Closure cap 20 has a tight fit in a collar 21 which is provided with a flange 22. Collar 21 is seal clamped in opening 18 by means such as screws 23 passing through the flange 22 into the inner bottom surface 17. The cap 20 fits in the collar 21 and is integrally connected thereto by a flexible strap 24, the parts 20, 22, 24 being constructed from plastic.

As will be obvious to those skilled in the art, when the sailboat is moving forward and the cap 20 is opened any water which has accumulated in the hull or is splashing therein will be self-bailed via the collar 21, well 16 and rear facing exit opening 19. When the boat isn't making headway then the cap 20 is closed to prevent water from coming back into the hull via exit opening 19, well 16 and collar 21.

In the FIG. 6 form of the invention it is not necessary to immediately close the cap 20 the instant the boat stops in order to prevent water from coming back into the hull inasmuch as the exit opening 19 is provided with a closure flap 25 which automatically operates to open and close position when cap 20 is open.

The FIG. 7 form of the invention also automatically operates to open and closed position when cap 20 is open. However, rather than a closure flap 25 for the exit opening 19, an automatic check valve is provided for the other exit opening 18. This is accomplished by increasing the length of collar 21' over that of collar 21 and mounting a ball valve 26 therein. When water tries to enter the hull via opening 19 and well 16, the ball rises and closes the lip 27 at the flange end of the collar 21'. However, when bailing, the ball bottoms on a pin 28 at the lower end of the collar 21'. The collar 21' has a notch 29 at its lower rear portion and ball 26 is also undersize with respect to the inner diameter of collar 21 so that water can flow by the ball into well 16 and out through opening 19.

It will now be seen that the invention provides a low cost and uncomplicated self-bailer. A minimum of parts are utilized, and in a sense the main portion thereof is obtained at no additional cost since the bailer well 16 and exit openings 18 and 19 are provided from existing integral portions 14, 17 of the hull. No special hardware needs to be installed, and if desired the flanged collar 21 and screws 23 could be omitted in FIGS. 4 and 6 to further reduce costs and just the cap 20 used to close the exit opening 18, and even the cap could be omitted in FIG. 7 to still further reduce costs.

The invention is a venturi suction type bailer which offers minimal resistance to forward movement of the boat. The fish shaped embossment 13 is positioned below the water line 30. It has a venturi shape which imposes no drag and is conducive to minimal resistance of water flow in a rearward pattern past the well 16 so as to create a suction at the exit opening 19 to cause water in the hull to be bailed by suction at very low boat speed. The device is easy to operate merely by manually opening or closing the cap 20, and the device presents no sharp edges or other hazards to the bare feet of sailors.

I claim:

1. In a sailboat hull having molded plastic inner and outer bottom surfaces and a daggerboard trunk opening extending through said bottom surfaces, a fairing blister formed in the outer bottom surface about the trunk opening, said bottom surfaces at said blister being spaced from each other to define a closed chamber therebetween, an access opening to said chamber formed in each of said bottom surfaces behind said trunk opening, and manually operable closure means for either one of said access openings, said blister being venturi shaped and aligned lengthwise of said trunk opening and the access opening in the outer bottom surface at said blister being located in the aft end of said venturi shaped blister whereby water is self-bailed from inside said hull through said blister upon opening of said closure means when said hull is moving forward.

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