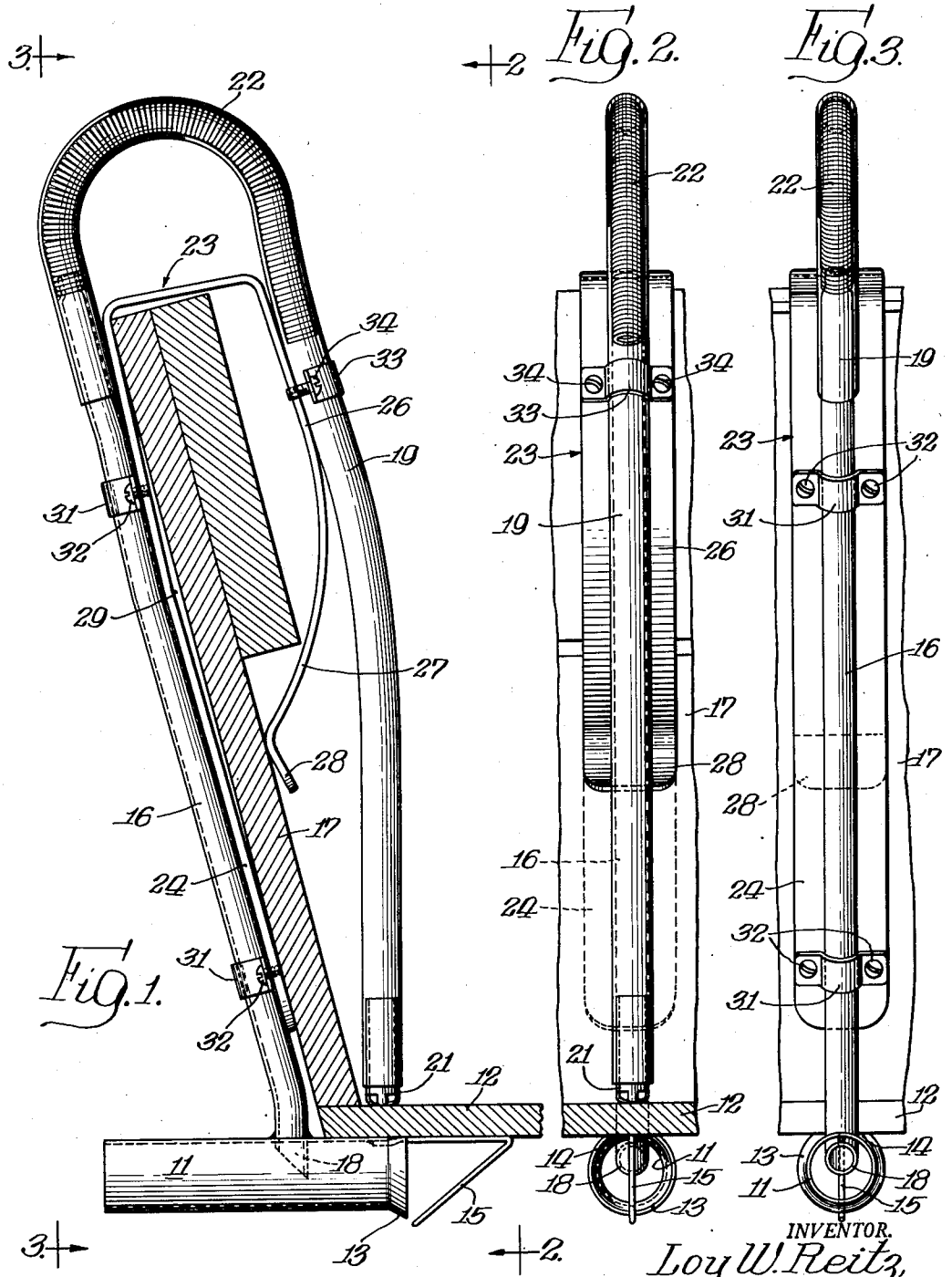
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BOAT BAILER

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BOAT BAILER

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This invention relates generally to a bailing device and more particularly to a bailing device which will automatically discharge bilge water from a boat in response to movement of the boat through the water.

Numerous devices have been proposed in the prior art for automatically bailing water from the hull of a boat as the boat moves through the water. The operating principle of such devices is based on the suction or aspirator effect produced by the rapid flow of water through a suction-inducing member extending into the water on the outside of the boat and communicating with the bilge of the boat by suitable conduits or fluid passageways. In most instances the suction-inducing member is rigidly secured by screws or like means to some portion of the boat, usually at the side or at the bottom of the hull. Thus, the bailer is a more or less permanent attachment to the boat and cannot be easily removed for use on other boats when desired. In other prior art proposals the suction-inducing member is attached to a length of flexible hose and is permitted to trail behind the boat with the result that the device is cumbersome to use and is subject to entanglement with other objects in the water.

None of the boat bailing devices heretofore suggested have been capable of rapid and easy attachment or detachment from a boat such that the device can be readily changed from one boat to another without encountering the aforementioned disadvantages. Moreover, prior to my invention no provision has been made in a device of this character for adjusting the device to permit attachment to boat hulls of varying size.

Accordingly, a primary object of my invention is to provide a boat bailing device which is detachably securable to the boat and which may be quickly and easily removed when desired.

Another object of the invention is to provide an automatic boat bailer which is detachably mountable in a rapid and simple manner and which has an adjustable construction to fit boats of varying size.

A further object of the invention is to provide a boat bailing device in which the structural relationship of the parts of the device is such that the device closely conforms to the hull contour and grips the same for frictionally and detachably retaining the device in place without the need for screws or other additional fastening means.

An additional object of the invention is to provide a bailing device of the character described

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which is of simple, rugged, and inexpensive construction and which can be readily manipulated with ordinary skill and without special tools.

Other objects and advantages of the invention will become evident from the subsequent detailed description taken in connection with the accompanying drawing wherein:

Fig. 1 is a side elevational view of a boat bailing device comprising one specific embodiment of my invention, the device being shown in place on the transom of a boat;

Fig. 2 is a front elevational view of the device as seen along the line 2—2 of Fig. 1; and

Fig. 3 is a rear elevational view of the device as seen along the line 3—3 of Fig. 1.

Broadly speaking, my device comprises an assembly of a suction-inducing member and a tubular means adapted to extend into the bilge of a boat, the entire assembly being adjustably secured to a mounting element adapted to fit over and to be retained on the hull of the boat, particularly at the stern thereof. Preferably, the mounting element is in the form of a spring or resilient clip for frictionally gripping the hull.

Referring now to the drawing, wherein one specific structural embodiment of the invention is shown merely by way of illustration, a tubular suction-inducing member 11, preferably of metal, is provided adjacent the stern of the boat and extends forwardly a slight distance below the flat bottom 12 of the boat. The forward end of the tube 11 is flared outwardly, as at 13, to increase the suction-producing effect as the boat moves through the water, and a top portion of the flared rim 13 is cut away to permit the tube 11 to fit flatwise against the bottom of the boat, as best seen at 14 in Figs. 2 and 3. A weedless attachment comprising a length of bent wire 15 is secured to the forward end of the tube 11 and slants downwardly at its forward end for engaging and diverting weeds and the like to prevent entry of the same into the suction-inducing tube 11.

An elongated rigid tubular member 16 preferably of metal and comprising the outer leg of a U-tube arrangement is rigidly fastened, as by welding or brazing, to the suction-inducing tube 11 and extends upwardly and rearwardly therefrom at substantially the same angle of inclination as the rear portion or transom 17 of the boat. The lower end of the tube 16 is cut off in a slanted manner and extends into the suction-inducing tube 11, as seen at 18, so that a suction or aspirator effect is produced in the tube 16 as water flows rapidly through the tube 11 during

forward movement of the boat. Attached to the upper end of the tube 16 is a length of flexible tubing or hose 19 which extends over the top of the transom 17 and downwardly into the bilge of the boat to provide the inner leg of the U-tube arrangement. A screen or strainer element 21 is fitted into the lower end of the tube 19 to prevent clogging or obstruction of the device by foreign solid matter which may be present in the bilge water. A coil spring 22 is disposed internally within the flexible hose 19 at the U-bend portion thereof and serves to prevent collapse and excessive restriction of this portion of the hose.

Although any suitable flexible material such as rubber, plastic, or the like may be used for the tube 19, I have found that a transparent plastic composition is especially desirable since it permits the user of the device to observe the flow of bilge water in the U-tube and thereby check on the operation of the device from time to time.

For mounting the U-tube and suction-inducing element on the boat, an attaching member is provided in the form of a bent clamp or clip, indicated generally at 23. The member 23 is preferably formed from a flat spring metal strap of substantially greater width than the diameter of the tubes 16 and 19. The strap is bent in a generally U-shaped configuration to provide a mounting clip having an outer leg 24 adapted to extend adjacent the outer surface of the transom 17 and an inner leg 26 which is bowed or curved inwardly, as at 27, for engaging the inner surface of the transom 17 and thereby providing a resilient clamping action. The end portion of the leg 26 is bent outwardly, as indicated at 28, in order to permit easy manipulation of the device during attachment and detachment thereof. The outer leg 24 of the clip 23 is prefereably bent outwardly to a slight extent at its intermediate portion so that when the leg 24 is disposed adjacent the outside of the transom 17 there is a slight clearance, as indicated at 29 in Fig. 1, between the transom 17 and the leg 24 over a substantial portion of the length of the latter. Thus, the leg 24 is in contact with the transom 17 at essentially two points whereby to insure a tight firm fit of the clip 23 on the transom 17 even though the outer surface of the transom may be warped or out of alignment.

The rigid tubular member 16 is firmly but adjustably secured to the outer leg 24 of the clip 23 by means of a pair of clamps or retainers 31 which are fitted over the tube 16 and screwed to the leg 24 by means of a plurality of screws 32. In addition, a similar clamp or retainer 33 is attached to the leg 26 of the clip 23 by means of a pair of screws 34 for loosely and movably holding the flexible tubing 19 in place, as hereinafter described.

In the use of the device, the legs 24 and 26 of the clip 23 are spread apart manually to permit the clip to be fitted over the transom 17 of the boat and the forwardly extending portion of the suction-inducing tube 11 is fitted into place beneath the bottom 12 of the boat. The device is thus rigidly attached to the transom of the boat as a result of the tight frictional and resilient gripping action of the legs 24 and 26 at the outside and inside, respectively, of the transom 17 and the interlocking fit of the tube 11 in cooperating engagement with the bottom of the boat. Because of the width of the spring metal strap from which the clip 23 is formed there is no substantial tendency for the device to rock or wobble when in place on the transom of the boat. Rocking movement is further prevented by the outwardly bent construction of the leg 24 whereby to insure two-point contact of the leg 24 against the outside of the transom 17. It will be evident that if the leg 24 were in the form of a straight flat strip, the outer surface of the transom 17 would have to be absolutely flat and level to insure a tight non-wobbling fit.

To detach the device from the transom of the boat it is only necessary to grasp the end portion 28 of the leg 26 and thereby spread the legs of the clip 23 sufficiently to permit the tube 11 to be disengaged from its normal position beneath the bottom of the boat whereupon the entire device can be lifted upwardly from the transom. Inasmuch as my boat bailing device can be attached and detached from the transom of a boat by rapid and simple manipulations requiring neither special tools nor more than average skill, it will be apparent that the bailing device can be easily transferred from one boat to another thereby providing substantial advantage over the bailing devices heretofore proposed in the art.

By varying the position of the rigid tubular member 16 relative to the outer leg 24 of the clip 23, it will be seen that the device can be adjusted to accommodate different transom heights while at the same time insuring that the forwardly extending portion of the tube 11 will be in close fitting engagement with the bottom of the boat. In addition, the flexible hose 19 which is loosely and movably held by the retainer 33 may be raised or lowered as desired in order to position the inlet end of the hose at any desired point in the bilge of the boat.

Although the invention has been described in connection with a single structural embodiment, it will be understood that various modifications and alternative constructions may be resorted to without departing from the scope of the invention as defined in the appended claims.

I claim:

1. A bailing device for a boat comprising a U-tube adapted to fit over the transom of a boat and having an inner leg adapted to extend into the bilge of the boat and an outer leg adapted to extend into the water outside the boat, a suction-inducing member at the end of said outer leg having a portion adapted to extend forwardly beneath the bottom of the boat in cooperating engagement therewith, a mounting clip adapted to fit over the upper edge of the transom and having said U-tube adjustably mounted thereon for accommodating transoms of varying height, and means for rigidly securing said U-tube in predetermined adjusted position on said clip whereby to retain the forwardly extending portion of said suction-inducing member in engagement with the bottom of the boat and thereby retain the clip in place on the transom.

2. A bailing device for a boat comprising U-tube means adapted to fit over the transom of a boat and having an inner leg adapted to extend into the bilge of the boat and an outer leg adapted to extend into the water outside the boat, a suction-inducing member at the end of said outer leg having a portion adapted to extend forwardly beneath the bottom of the boat in engagement therewith, a generally U-shaped resilient clip member adapted to fit over the transom and having a pair of depending legs adapted to frictionally and resiliently engage the transom on opposite sides thereof and having

a connecting portion adapted to extend over the upper edge of the transom, said U-tube means being adjustably attached to said clip member for relative movement therebetween whereby to permit mounting the the device on transoms of different heights, and fastening means for rigidly securing said U-tube means in predetermined adjusted position on said clip member whereby to hold said forwardly extending portion of said suction-inducing member in engagement with the bottom of the body and thereby retain said clip member against upward displacement.

3. A bailing device for a boat comprising U-tube means including an elongated rigid tubular member adapted to extend adjacent the outside of the transom of a boat, a suction-inducing member at the lower end of said rigid tubular member having a forwardly extending portion adapted to fit under the bottom of the boat in engagement therewith, a flexible tubular member attached to the upper end of said rigid tubular member and adapted to extend over the transom of the boat and downwardly into the bilge of the boat, a resilient generally U-shaped mounting clip adapted to be fitted over the transom of the boat, said clip having inner and outer leg portions for resiliently gripping the transom therebetween and a connecting portion adapted to extend over the upper edge of the transom, said rigid tubular member being adjustably fastened to the outer leg of said clip for relative

longitudinal movement therebetween whereby the forwardly extending portion of said suction-inducing member may be positioned in engagement with the bottom of the boat for varying transom heights, and fastening means for rigidly securing said rigid tubular member in predetermined adjusted position on said outer leg whereby to retain the forwardly extending portion of said suction-inducing member in said engagement and thereby prevent upward displacement of said clip, said flexible tubular member being loosely and movably retained on the inner leg of said clip member whereby to permit the inlet end of said flexible tubular member to be positioned at the desired location in the bilge of the boat.

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