

L. EBBE.
BILGE WATER EJECTOR.
APPLICATION FILED JAN. 9, 1908.

899,248.

Patented Sept. 22, 1908.

Fig. 1.

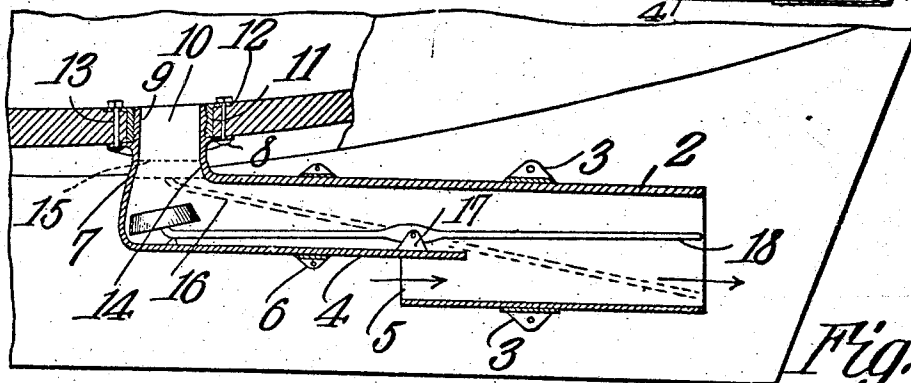


Fig. 2.

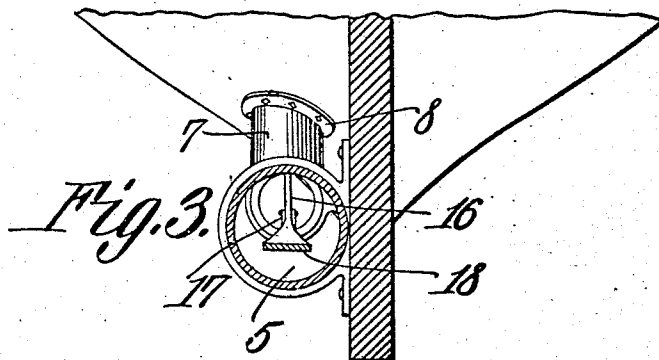


Fig. 3.

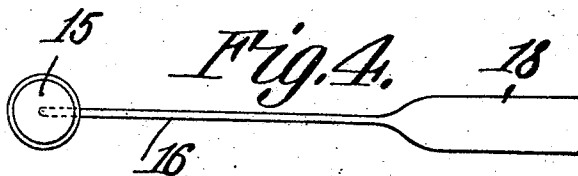


Fig. 4.

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UNITED STATES PATENT OFFICE.

LOUIS EBBE, OF BLAINE, WASHINGTON.

BILGE-WATER EJECTOR.

No. 899,248.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed January 9, 1908. Serial No. 410,053.

To all whom it may concern:

Be it known that I, LOUIS EBBE, a citizen of the United States, residing at Blaine, in the county of Whatcom and State of Washington, have invented a new and useful Bilge-Water Ejector, of which the following is a specification.

This invention relates to means for ejecting bilge water from boats while they are in motion, said means dispensing with the use of pumps or other means such as usually employed for removing the water from the hull of a boat.

The object of the invention is to provide an ejector of this character which can be readily attached to the hull of a boat, and, when in position, will not detract from the appearance of the boat or retard its movements.

A further object is to provide means of this character which will automatically operate during the movement of the boat to withdraw bilge water therefrom, the ejector being designed to close automatically when the boat is not in motion so as to prevent water from entering the boat through the ejector.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a side elevation of a portion of a boat and showing the present improvements applied thereto. Fig. 2 is an enlarged section through a portion of the boat and through the attachment. Fig. 3 is a transverse section through the rear portion of the attachment and the adjoining portions of the boat. Fig. 4 is a plan view of the valve.

Referring to the figures by characters of reference, 1 designates the hull of a boat which may be of any suitable size and proportions and secured to the rear portion of the bilge is the attachment embodying the present improvements. This attachment consists of a tubular body 2 fastened preferably to the rear portion of the keel, there being suitable brackets 3 provided for this purpose and the ends of the body are open. Projecting into the forward end of the body and formed integral therewith is an outlet tube 4 eccentrically located in relation to the body

so as to form a crescent-like inlet 5 therebelow and opening into the body 2. If desired, suitable brackets 6 may extend from the tube 4, these brackets being fastened to the keel. The forward end of tube 4 is extended upwardly in the form of an ell as indicated at 7 and has an annular collar 8 designed to bear against the outer surface of the bilge while the terminal portion of the tube is screw threaded as indicated at 9 and designed to project into an opening 10 formed within the bilge. This threaded end may be fastened in place in any preferred manner as by utilizing a threaded sleeve 11 which is insertible into the opening and has a collar 12 designed to bear upon the inner or upper surface of the bilge. The two collars 8 and 12 may be firmly clamped upon the bilge by means of bolts 13. It is of course to be understood that if desired other means for fastening the ell 7 to the boat may be utilized. That portion 7 of the tube 4 which extends upwardly to the bilge is slightly reduced in size so as to form a seat 14 for a valve 15 located at one end of a lever 16. This lever 16 extends throughout the length of the tube 4 and is pivoted adjacent the rear end of the tube between ears 17. That portion of the lever projecting into the body 2 is broadened to form a blade 18 and this blade is designed, when the valve 15 is upon its seat, to extend downward diagonally across the body 2 and in rear of the crescent-shaped inlet 5.

The normal positions of the valve 15, lever 16, and blade 18 has been indicated by dotted lines in Fig. 2. The valve is held normally seated in this manner by reason of the fact that the blade 18 acts as a weight to hold the valve raised. These positions of the parts are assumed when the boat is at a standstill. When the boat is propelled forward by any suitable means the water will pass through the inlet 5 as indicated by arrows in Fig. 2 and will strike against the blade 18, thus elevating it and causing the valve 15 to swing downward. The water will pass entirely through the body 2 and will create a partial vacuum within said body and the tube 4 and cause any bilge water to flow downward into the tube 4 and outward with the current. Should the movement of the boat be stopped the pressure against the blade 18 will be removed and the valve will thus be free to swing into closed position.

It will be understood that the movement

of the valve will be in proportion to the speed of the boat and consequently the extent of the vacuum produced so that there is absolutely no danger of the valve being opened to such an extent as to allow water to enter the boat through the opening 10

It will be seen that the device is very simple, durable, and efficient and can be applied to the hull of a boat with little trouble. Although only one of these attachments has been illustrated in connection with a boat it is to be understood that two or more may be employed, if desired, according to the size of the hull and to the taste of the user.

The parts 2 and 4 can be of any desired cross sectional contour so as to fit snugly against the boat.

The attachment is designed to be used in connection with various forms of boats such as scows, or large ships as well as small row-boats and the like.

What is claimed is:

1. An attachment of the character described comprising an outlet tube, a tubular body extending beyond one end of said tube and having an outlet at one end and a reduced inlet opening at its other end and below the tube, said tube being disposed to be connected to the bilge of a boat, a valve, and a gravity operated member for holding the valve normally upon its seat to close the inlet of the tube, said gravity operated member being disposed within the body and between the reduced inlet and the outlet thereof.
2. An attachment of the character described comprising an outlet tube, a tubular body extending beyond one end of said tube and having an outlet at one end and a reduced inlet opening at its other end and below the tube, said tube being disposed to be connected to and to communicate with the interior of the hull of a boat, a valve for closing the inlets of said tube, a lever extending therefrom and fulcrumed within the tube, and a combined blade and weight at one end of the lever and extending into the body and

between the reduced inlet and the outlet thereof.

3. An attachment of the character described comprising an outlet tube, a tubular body at the discharge end of said tube, said body having a reduced inlet adjacent the discharge end of the tube and an outlet, a valve, and means operated by the passage of water through the body for opening the valve.

4. An attachment of the character described comprising an outlet tube, a body extending therebeyond and having an outlet at one end and a reduced inlet at the other end and adjacent the discharge end of the tube, a valve normally closing the inlet end of the tube, and means operated by the pressure of water passing through the body for opening the valve.

5. The combination with the hull of a boat; of an outlet tube extending rearwardly therefrom, a tubular body partly surrounding the discharge end of said tube and having an outlet at its rear end and a reduced inlet adjacent the discharge end of the tube, a valve normally seated in the inlet portion of the tube, and a combined weight and blade movable with the valve and disposed within the body, said blade being normally interposed between the inlet and outlet of the body.

6. An attachment of the character described comprising an outlet tube, a valve within the tube and normally closed by gravity, and means connected to the valve and mounted to move within the tube for opening the valve during the movement of the attachment in one direction through a body of water.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LOUIS EBBE.

Witnesses:

J. S. CRILLY,
JOHN F. CHURCH.