June 21, 1955 R. L. SHOEMAKER 2,711,151

WATER REMOVING SYSTEM FOR BOATS

Filed June 6, 1952

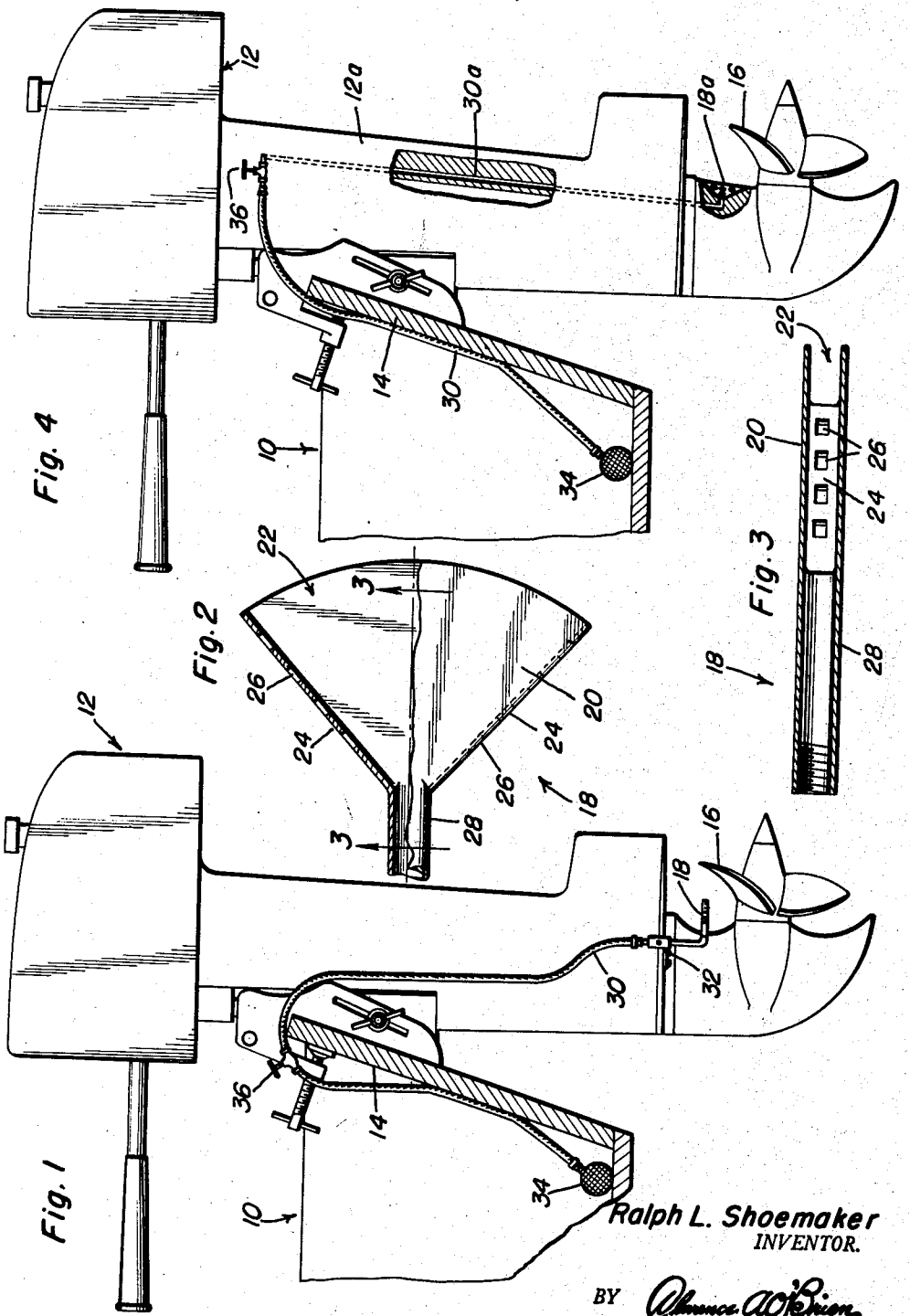


Fig. 4

Fig. 2

Fig. 3

Fig. 1

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United States Patent Office 2,711,151
Patented June 21, 1955

2,711,151

WATER REMOVING SYSTEM FOR BOATS

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Application June 6, 1952, Serial No. 292,169

1 Claim. (Cl. 115—0.5)

This invention relates to new and useful improvements and structural refinements in water removing systems for boats, particularly small boats, and the principal object of the invention is to provide an apparatus whereby boats of that nature may be greatly and efficiently "bailed out" by the operation of the usual outboard motor.

This object is achieved by the provision of an aspirating nozzle which is mounted adjacent the propeller of the outboard motor and is connected to a tube which leads to the bottom portion of the boat, so that when the motor is in operation, suction is created within the tube and any water such as may be present in the boat is efficiently withdrawn.

Needless to say, although the invention is primarily intended for use with small boats, it may also be installed and effectively employed on comparatively larger vessels, if so desired.

With the above more important objects and features in view and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a side elevational view of the invention;

Figure 2 is a horizontal cross-sectional view of the aspirating nozzle used in the invention;

Figure 3 is a vertical sectional view, taken substantially in the plane of the line 3—3 in Figure 2, and

Figure 4 is a side elevational view, similar to that shown in Figure 1, but illustrating a modified embodiment of the invention.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, more particularly to Figures 1–3 inclusive, the general reference character **10** designates a conventional boat having a suitable outboard motor **12** mounted on the stern **14** thereof, the motor **12** including the usual propeller **16**, as will be readily apparent.

The instant invention contemplates the provision of an aspirating nozzle which is designated generally by the reference character **18** and embodies in its construction a substantially flat, hollow and triangular body **20** which is provided at the rear edge thereof with a transversely elongated opening **22**, while the two side edge walls **24** of the body are formed with rows of apertures **26**, which apertures cause water to flow rearwardly through the nozzle at a greatly increased rate of flow over the actual speed at which the boat is propelled thereby increasing the suction within the suction passage **30***a* or tube **30**. Further, this increased rate of flow causes the turbulence that would ordinarily occur at the mouth of the nozzle to occur at a point remote from the mouth of the nozzle

to permit the free discharge of water therefrom. A tubular duct **28** is secured to the body **20** at the point of convergence or apex of the edge walls **24**, and a suitable suction tube **30** is connected to this duct. A bracket **32**, provided on the tube **30**, is secured to the motor **12** so that the aspirating nozzle **18** is disposed somewhat above and forwardly of the propeller **16**, and the tube **30** is led over the top edge of the stern **14** and downwardly into the boat, its free end being provided with an intake screen **34** which rests on the bottom of the boat, as shown.

It will be apparent from the foregoing that when the motor **12** is in operation, the rotation of the propeller **16** will create an aspirating action in the nozzle **18** which, in turn, will create suction within the tube **30**, so that any water such as may be present in the boat **10** will be effectively evacuated. A suitable shut-off valve **36** is provided on the hose **30** for the purpose of preventing air being drawn through the hose when the water from the boat has been emptied.

The modified embodiment of the invention shown in Figure 4 is substantially the same as the embodiment already described, with the exception that a portion **30***a* of the suction tube **30** is built in the usual housing **12***a* of the motor **12**, which arrangement eliminates the use of the bracket **32** and renders the tube portion **30***a* as well as the nozzle **18***a* an integral part of the outboard motor.

It is believed that the advantages and use of the invention will be readily understood from the foregoing disclosure and accordingly, further description thereof at this point is deemed unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

A bailing device for boats having an outboard motor propeller shaft casing carrying a propeller at the lower end thereof, said device comprising a suction passage extending longitudinally through said casing with a lower end opening rearwardly adjacent said propeller and an upper end opening adjacent the upper end of said casing, a flexible tube having one end communicating with the upper end of said passage and its other end adapted to rest on the bottom of a boat, and a nozzle on said casing directly in front of said propeller and communicating with the lower end of said passage for creating suction within said tube and passage as the motor is propelled, said nozzle comprising a flat sided triangular body having a tubular duct projecting from the apex thereof and seating within said passage, said nozzle having side edges provided with rows of apertures therein for increasing the rate of flow of water through the nozzle and thereby increasing the suction in the passage as the boat is propelled forwardly.

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