

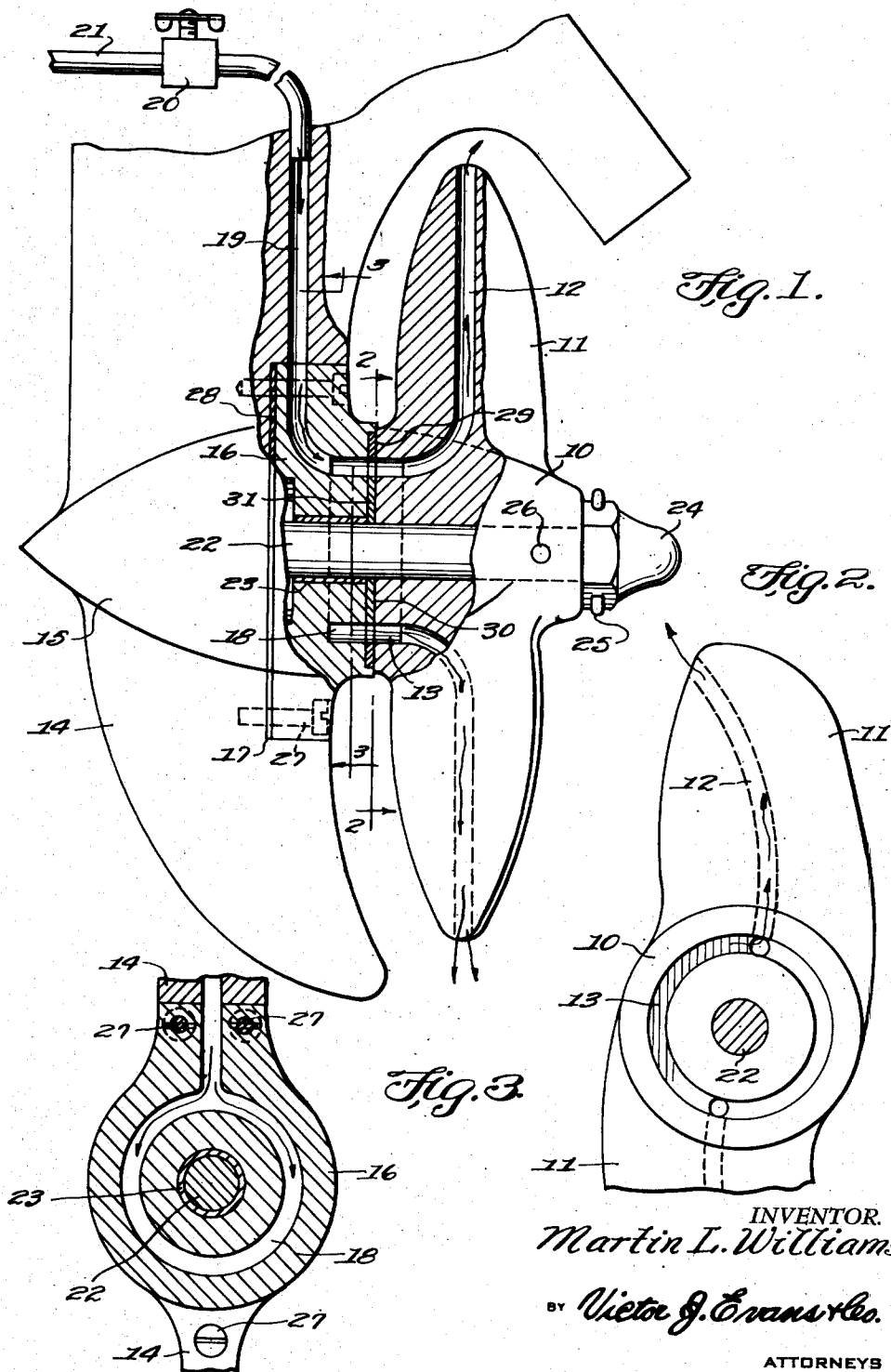
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OUTBOARD MOTOR PROPELLER AND PUMP

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OUTBOARD MOTOR PROPELLER AND PUMP

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1 Claim. (Cl. 115—17)

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This invention relates to propellers and propeller mountings of out-board motors, and in particular a propeller having radially disposed passages extended through the blades with the inner ends of the passages connected through the hub and mounting of the propeller to the interior of a boat whereby rotation of the propeller creates suction through the passages and the suction withdraws water or other fluid from a low point in the boat.

The purpose of this invention is to provide means for automatically removing water from the interior of a boat as the propeller of the boat is in operation.

Various devices have been provided for bailing out ships, boat hulls and the like, however, where an out-board motor boat is used in rough weather and where the only motive power is that used for driving the propeller, it is difficult to remove water accumulations in the hull.

With this thought in mind this invention contemplates the method of utilizing a driving propeller of a boat as a centrifugal rotor for creating suction that may be used for continuously bailing out the boat.

The object of this invention is, therefore, to provide means for constructing a propeller and a mounting therefor whereby the rotary motion of the propeller creates suction through the mounting and wherein the suction created by the propeller may be used for removing water accumulating in the boat.

Another object of the invention is to provide means for converting the propeller of an out-board motor into a rotary pump without changing the size or general design and arrangement of the parts.

A further object of the invention is to provide an out-board motor and propeller mounting with suction passages extending therethrough, which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a propeller housing or mounting in the form of a propeller mounting having a passage extended therethrough with propeller driving means therein, and a propeller having radially disposed passages extended through the blades, with the passages positioned to communicate with the passages in the propeller mounting and wherein the propeller is adapted to be carried by a shaft extended from the driving means of the housing or propeller mounting.

Other features and advantages of the invention will appear from the following description

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taken in connection with the drawings wherein:

Figure 1 is a side elevational view of the lower end of a propeller boot of an out-board motor mounting with parts broken away and shown in section.

Figure 2 is an end elevational view taken on line 2—2 of Figure 1 showing the inner face of the hub of the propeller.

Figure 3 is a cross section taken on line 3—3 of Figure 1 showing the suction passages in the boot or propeller mounting housing.

Referring now to the drawing wherein like reference characters denote corresponding parts the improved out-board motor propeller mounting of this invention includes a propeller having a hub 10 with blades 11 extended therefrom and having passages 12 extended radially through the blades and communicating with an annular passage 13 in the face of the hub 10, a propeller mounting or boot 14 having a hub 15, and an insert 16 positioned in a recess 17 in the face of the hub of the boot and having an annular recess 18 registering with the recess 13 and communicating with a suction passage 19 that may be connected by a coupling 20 through a tube 21 extended into a boat upon which the propeller mounting is positioned.

The boot 14 is provided with conventional driving means for the propeller and the transmission of the driving means includes a shaft 22 that is journaled in the insert 16 with a bearing sleeve 23. The shaft extends from the insert to provide a mounting for the propeller. The hub 10 of the propeller is positioned on the extended end of the shaft 22 and secured in position with a lock nut 24 having a cotter pin 25 therethrough. The hub is also provided with a shear pin 26.

The insert 16 is secured in the recess 17 with bolts 27 and the inner end of the insert is sealed with a gasket 28. Gaskets 29 and 30 are also provided in a recess 31 in the outer face of the insert 16 whereby the connection between the propeller and insert is sealed.

With the parts arranged in this manner, and with the end of the tube 21 extended to a low point in the boat, rotation of the propeller provides centrifugal motion which creates suction in the annular recess 13, and with the parts sealed, the suction draws from the passage 19 and the tube 21 whereby water accumulating in the low point of the boat is drawn through and discharged by the propeller.

By this means a continuously operating bilge pump is provided in an out-board motor pro-

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propeller mounting. By using an insert and a recess, it is possible to cut out or machine out bodies to fit applicant's insert, and to facilitate conversion of existing units.

It will be understood that modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

In an out-board motor propeller housing, the combination which comprises a propeller mounting having a propeller shaft extended therefrom and having a recess in the face of the trailing side and positioned around the said shaft, an insert having an annular recess in the outer face thereof and a passage extended from the recess through the insert, said insert being positioned in the recess of the propeller mounting and around the said propeller shaft, said propeller mounting having a passage with a tube connection on the outer end and positioned to

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register with the passage extended from the recess of the insert, and a propeller having a hub with radially disposed blades extended therefrom with a recess in the face of the hub positioned to register with the annular recess of the insert and with radially disposed passages extended from said recess in the face of the hub through the said blades.

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