Feb. 14, 1933. D. McEACHERN 1,897,524

MEANS FOR REMOVING WATER FROM BOATS

Filed Dec. 16, 1931

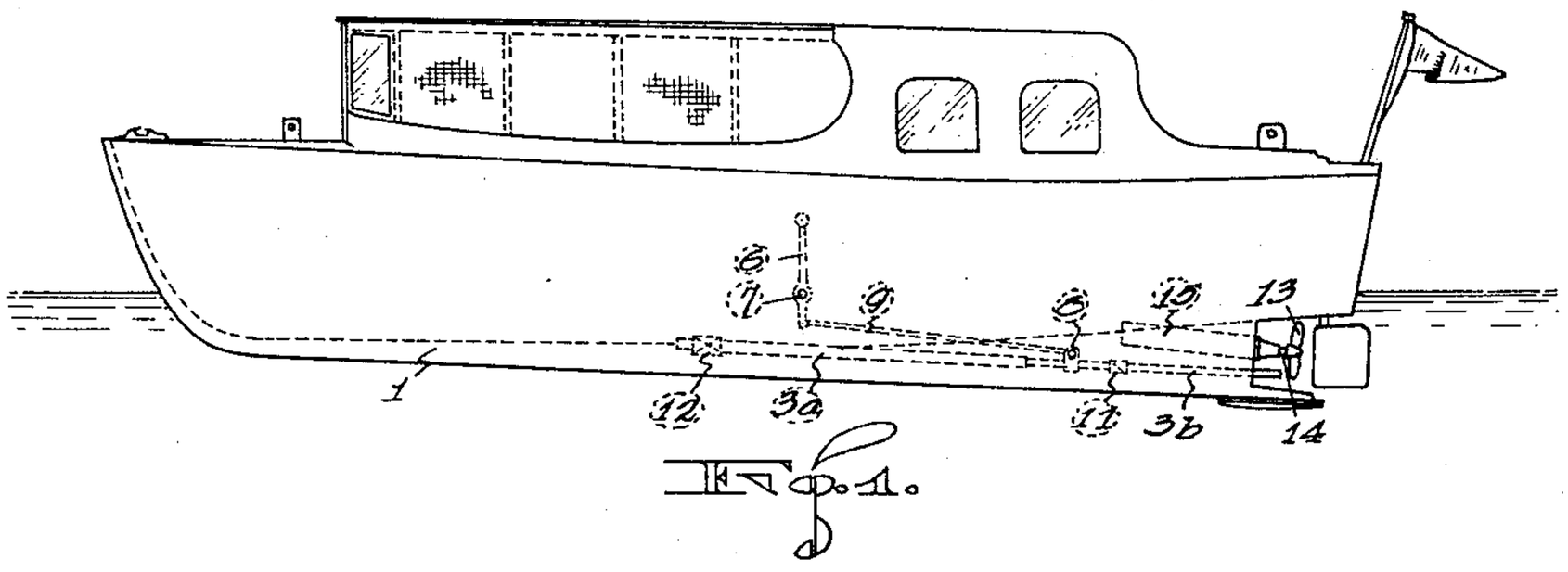

Fig. 1.

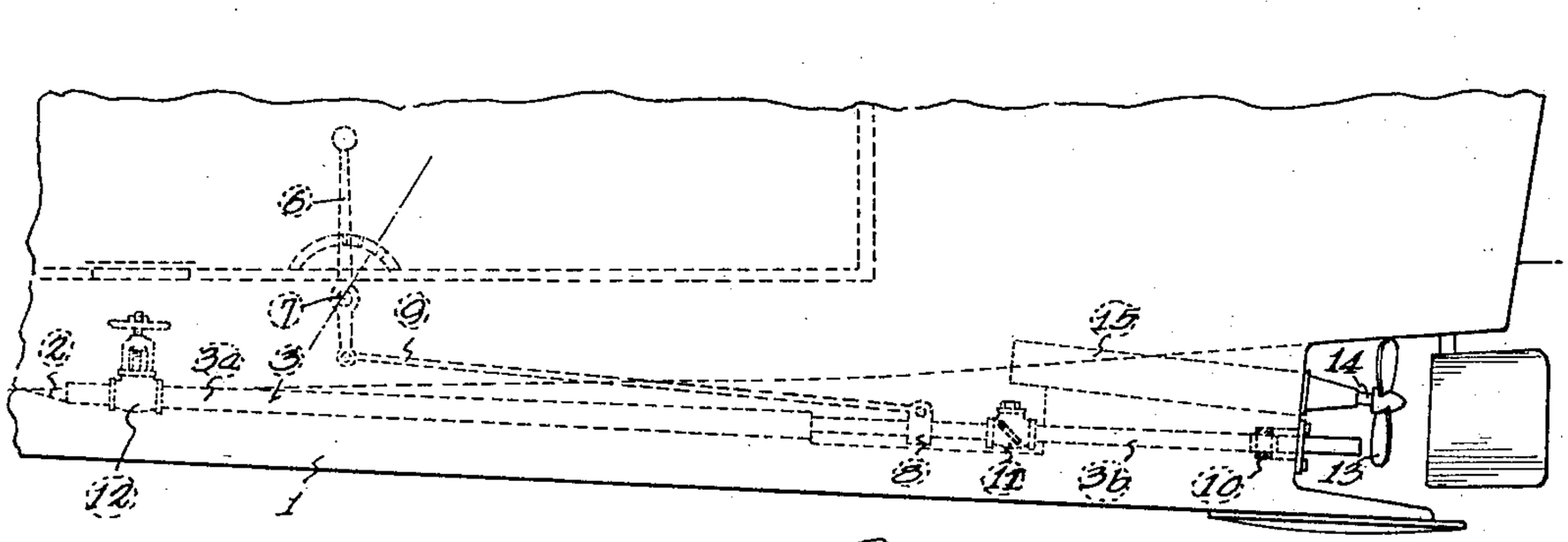

Fig. 2.

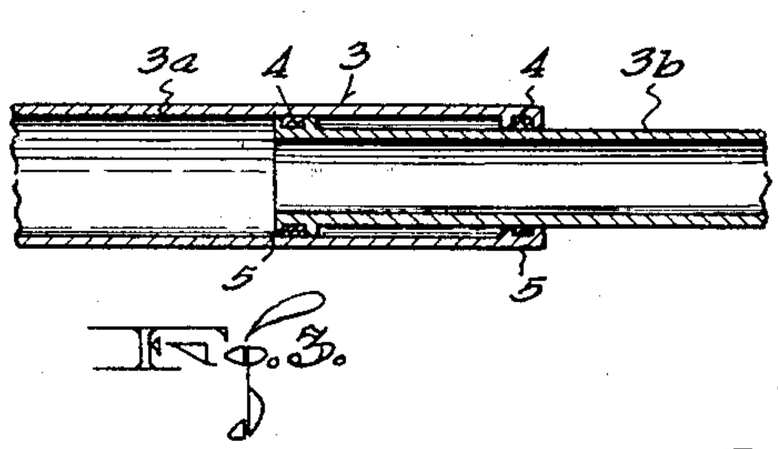

Fig. 3.

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UNITED STATES PATENT OFFICE

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MEANS FOR REMOVING WATER FROM BOATS

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My invention relates to improvements in means for removing water from boats, and it consists of the combinations, constructions and arrangements hereinafter described and claimed.

An object of my invention is to provide a means for removing water from boats, which provides a sump into which water within the boat can drain, and a passageway leading from the sump to a position adjacent the propeller, whereby the suction created by the rotating propeller and the suction created by the boat moving through the water will entrain water from the passageway and thus automatically remove water from the boat. A part of the water passageway constitutes a pipe that is movable from an operative position adjacent to the propeller into an inoperative position, where the pipe will be flush with the exterior surface of the boat. This prevents the pipe from catching foreign matter when not in use and also eliminates the water resistance of the pipe.

A check valve is placed in the water passageway and prevents the back flow of water into the interior of the boat.

Other objects and advantages will appear in the following specification, and the novel features of the device will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawing forming a part of this application, in which

Figure 1 is a side elevation of a boat showing the device operatively applied;

Figure 2 is an enlarged view of the device; and

Figure 3 is an enlarged sectional view of a part of the device.

In carrying out my invention, I make use of a boat, indicated generally at 1. Figure 2 shows how a sump 2 is provided in the lowermost portion of the boat and further shows a pipe 3 leading from the sump toward the stern of the boat. The pipe 3 is made up of any number of sections, which may telescope one within another. I have shown two sections 3*a* and 3*b*. Figure 3 shows the section 3*b* sliding within the section 3*a* and further shows how the ends of the sections are provided with packing rings 4 for preventing leakage. The rings 4 are received in flanges 5, and the latter abut each other when the section 3*b* is fully extended and act as a stop. It is obvious that other means for limiting the movement of the section 3*b* in both directions can be employed.

In small boats, manually-controlled means may be used for moving the pipe section 3*b*, while in larger boats, hydraulic means can be used. Figure 2 shows a manually-actuated lever 6 pivoted at 7 and connected to the pipe section 3*b* by a collar 8 and a link 9. A movement of the lever 6 in one direction will cause the pipe section 3*b* to project into the full-line position, shown in Figure 2. The lever 6 may be moved for causing the end of the section 3*b* to be retracted until it lies flush with the stern of the boat. A packing gland 10 is placed at the stern and surrounds the pipe section 3*b*. A check valve 11 is placed in the pipe section 3*b* and permits water to flow only in one direction, and that is toward the outlet end of the section 3*b*. A manually-controlled valve 12 may also be placed in the pipe section 3*a* and may be closed when the device is not in use.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

Figure 2 shows a boat propeller 13 mounted on a propeller shaft 14, and the shaft extends through a housing 15 and is connected to the power plant of the boat, not shown. When the device is in use, the pipe section 3*b* is extended so as to dispose the outlet end adjacent to the propeller 13. The rotation of the propeller and the movement of the boat through the water will create suction, which will entrain any water in the pipe sections 3*a* and 3*b*. In this way, the water is automatically removed from the sump 2. The check valve 11 functions to prevent the back flow of water into the sump 2.

When the device is not in use, the pipe section 3*b* is moved so that its outlet end is flush with the stern of the boat, and, if desired, the valve 12 may be closed.

While I have shown only the preferred form of my invention, it should be under-

stood that various changes or modifications may be made within the scope of the appended claims without departing from the spirit of the invention.

I claim:

1. A boat having a pipe leading from the lowermost interior part of the boat to the exterior thereof, and means for creating a suction in the pipe for conveying water out of the boat, the pipe including a rear section adapted to telescope into the adjacent front section, means for actuating the rear section and means for limiting rearward movement of said section.

2. The combination with a boat having a propeller, of a water-conveying conduit leading from an interior part of the boat to the stern and having a rear end of uniform cross-section, and means for extending the rear end of the conduit from a position flush with the outer surface of the boat into one adjacent to the propeller, whereby suction created by the propeller and the moving boat will entrain water from the conduit.

DOUGALD McEACHERN.