

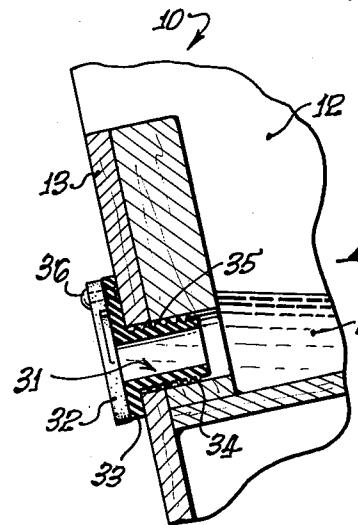
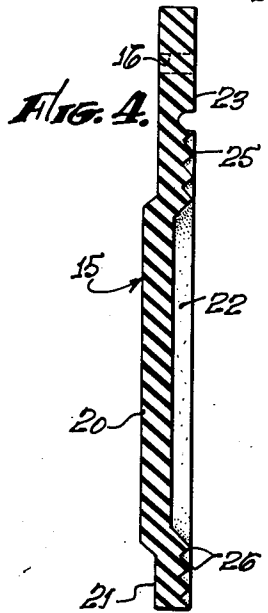
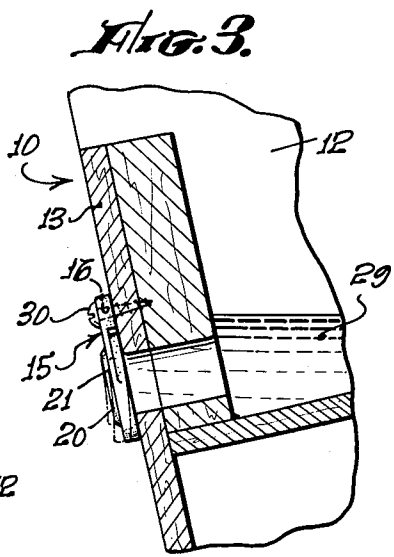
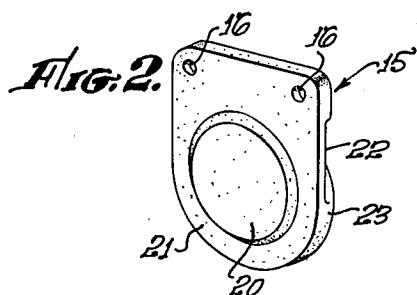
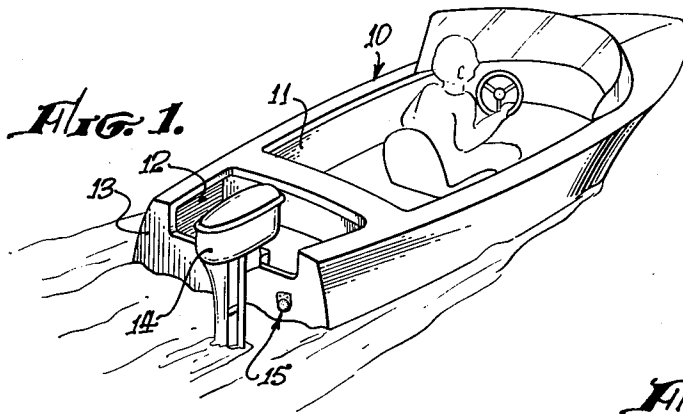
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MOTORWELL VALVE

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3,011,468

**MOTORWELL VALVE**

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4 Claims. (Cl. 114-185)

This invention relates to outboard motor boats and more particularly to a motor well valve associated with such boats.

Boats driven by outboard motors generally have the motor mounted upon the transom which defines the rear wall of the motor well. The motor well is typically located off of the cockpit and is in the shape of a hollow section absent a top or cover. The bottom or floor of the well is typically below the waterline. One or more drain holes are usually provided through the transom communicating with the motor well in order to permit water which accumulates therein to be drained out. When the boat is anchored, especially in a relatively busy harbor, there is a substantial buffeting and splashing of the water surrounding the boat. Water thus has a tendency to enter the well through the drain hole or holes normally provided, as these holes are located just above the waterline.

It is a primary object of the present invention to provide a one way valve which while permitting water to escape from the well through the drain hole will not permit water to enter therethrough.

Another object of the present invention is to provide a novel, one way valve to be inserted within the drain hole in the transom of an outboard motor boat.

Yet another object of the present invention is to provide a one way valve of the character described which may be mounted in the transom of the boat without permanently defacing any part of the transom.

The novel features which are believed to be characteristic of the invention, both as to its organization and method of operation, together with further objects and advantages thereof, will be better understood from the following description considered in connection with the accompanying drawing in which the presently preferred embodiment of the present invention is illustrated by way of example. It is to be expressly understood, however, that the drawing is for the purpose of illustration and description only, and is not intended as a definition of the limits of the invention.

In the drawing:

FIGURE 1 is a perspective view of one outboard motor boat showing a valve in accordance with the present invention mounted in the transom drain hole;

FIGURE 2 is an enlarged view, in perspective, of a valve in accordance with the presently preferred embodiment of this invention;

FIGURE 3 is a view partly in section showing how the valve of FIGURE 2 appears when mounted in the drain hole;

FIGURE 4 is a greatly enlarged end view of the valve of FIGURE 2; and

FIGURE 5 is a view similar to that of FIGURE 3 showing an alternative form of a valve in accordance with the present invention.

Referring now to the drawing and more particularly to FIGURE 1 there is shown an outboard motor boat 10 including a cockpit 11. To the rear of the cockpit is the motorwell 12 which includes a rear wall or transom 13. Mounted at the center of the transom is an outboard motor 14. To the right of the motor and just above the waterline is a drain hole. Mounted on the transom 13 over the drain hole is a one way valve 15 in accordance with the present invention.

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The valve 15 may be more clearly seen in FIGURE 2 and comprises a sheet of elastomeric material having a cross-sectional configuration as shown and described hereinafter. The valve is generally rectangular with a rounded bottom edge. Two holes 16 extending through the valve are provided near the opposite sides and upper edge thereof. A circular protrusion 20 in the front surface 21 of the valve is provided in order to lend greater rigidity to the valve. A circular opening 22 in the back surface 23 coincident with the protrusion 20 is also provided for a like purpose, and to more easily allow water entrapped within the motorwell to force the valve open and allow escape of the water. Serrations at 25 and 26 are provided on either side of the opening 22 as may best be seen in FIGURE 2. The serrations provide a series of circular sealing edges with the smallest diameter serration being slightly greater than the diameter of the drain hole. These serrations serve to insure a better seal between the surface 23 of the valve against the rear wall of transom 13.

Referring now to FIGURE 3 there is shown a side elevation of valve 15 as it would appear when attached to the transom over the drain hole. The fragmentary cross-section of the boat shows it in its normal position, namely somewhat tilted, with the rear of the boat being further in the water than the bow. In this view the valve is shown to be attached by means of wood screws 30 which extend through the holes 16 and into the transom 13 which is usually made of fiberglass formed upon plywood.

Water 31 which may collect in the well 12 thus is free to exit through the drain hole or holes in the transom as the weight of the water will force the valve 15 to swing open about the screws 30 as a fulcrum. The valve 15 will thus assume the position as indicated by the phantom lines in FIGURE 3. Water seeking admittance to the motorwell through the drain hole will be shut out since the water attempting to enter the hole will force the valve closed.

In FIGURE 5 there is shown an alternative embodiment of a valve in accordance with the present invention. The valve of FIGURE 5 consists of two separate parts, namely insert 31 and the valve proper 32. This valve is constructed in two parts in order to permit installation on a boat without the necessity of having any screws piercing the transom as is required with the hereinabove described embodiment. The insert 31 is constructed of rubber or some other resilient water proof material and includes a flange section 33 and an extending nipple section 34. The flange sections may have a front elevation of any desired slope, including that of valve 15. The nipple 34 has an outside diameter which is slightly larger than the inside diameter of the drain hole. Serrations are provided at 35 over the entire length of the nipple 34 in order to secure the insert 31 within the hole. The valve proper 32 may be similar to valve 15 except that the serrations at 25 and 26 can be omitted. A pair of rivets 35 attach the valve 32 to the flange 33. In order to install a valve according to this embodiment into an existing drain hole, the nipple 34 is forced into the drain hole until the flange abuts the transom. The operation in all respects, of this valve is similar to that explained hereinabove in connection with the valve of FIGURES 2, 3, and 4.

There has thus been described a new and improved one way valve for the drain hole of an outboard motor boat.

What is claimed is:

1. A motorwell valve for boats having a motorwell and a transom at the after end thereof and a drain hole opening through said transom proximate to and above the water line at said transom, said valve comprising: a drain

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hole insert including a cylindrical nipple having a series of serrations on the outer surface thereof, the outer diameter of said serrations being substantially equal to but greater than the diameter of said drain hole, a flange at one end of said nipple, and a valve section including a sheet of elastomeric material affixed to said flange above said opening through said nipple.

2. A motorwell valve for boats having a motorwell and a transom at the after end thereof and a drain hole opening through said transom proximate to and above the water line at said transom, said valve comprising: a drain hole insert including a cylindrical nipple having a series of serrations on the outer surface thereof, the outer diameter of said serrations being substantially equal to but greater than the diameter of said drain hole; a flange at one end of said nipple, said insert being formed of elastomeric material; and a valve section including a sheet of elastomeric material affixed to said flange above said opening through said nipple.

3. A motorwell valve for boats having a motorwell and a transom at the after end thereof and a drain hole opening through said transom proximate to and above the water line at said transom, said valve comprising: a drain hole insert including a cylindrical nipple having a series of serrations on the outer surface thereof, the outer diameter of said serrations being substantially equal to but greater than the diameter of said drain hole; a flange at one end of said nipple, said insert being formed of elastomeric material; and a valve section including a sheet of elastomeric material of generally rectangular configuration having a concentric series of circular serrations with an outside diameter greater than the diameter of the opening through said nipple for sealing contact with said flange, said valve section being affixed to said flange above said opening through said nipple.

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4. In combination with a motorboat, means for permitting the continual egress of water from the hull while preventing the ingress of water thereto comprising: a transom forming the after end of said hull, said transom being normally inclined rearwardly at an acute angle with the water line, said transom defining a drain hole therethrough proximate to and above the normal water line of said hull; a sheet of elastomeric material of generally rectangular configuration substantially greater than the configuration of said drain hole, a plurality of circular concentric serrations formed on one surface of said sheet, said circular protrusions being greater in diameter than the diameter of said drain hole, said sheet defining an indentation in said one face within the diameter of said innermost serration and a protrusion at the opposite face thereof so constructed and arranged that said serrations and protrusion rigidify said sheet; fastening means affixing said sheet to said transom at the outer surface thereof along a line proximate to and above said drain hole, said fastening means normally urging said sheet into contact with the exterior surface of said transom whereby said serrations are in contact with said transom to form a series of concentric seals surrounding said drain hole; said sheet being sufficiently resilient to bend outwardly along said fastening line under the weight of water passing through said drain hole from the interior surface of said transom.

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