United States Patent

Thompson

[15] **3,702,485**

[45] **Nov. 14, 1972**

[54] **OUTBOARD MOTORBOAT WITH INBOARD MOUNT**

[72] Inventor: **Theodore G. Thompson,** Homer, N.Y.

[73] Assignee: **Chris-Craft Industries, Inc.,** Pompano Beach, Fla.

[22] Filed: **Dec. 7, 1970**

[21] Appl. No.: **95,529**

[52] **U.S. Cl.** .....**9/6,** 115/41 R

[51] **Int. Cl.** **B63b 3/04**

[58] **Field of Search**.....9/6, 1 R; 115/17, 18, 41; 114/66.5 R, 66.5 P

[56] **References Cited**

UNITED STATES PATENTS

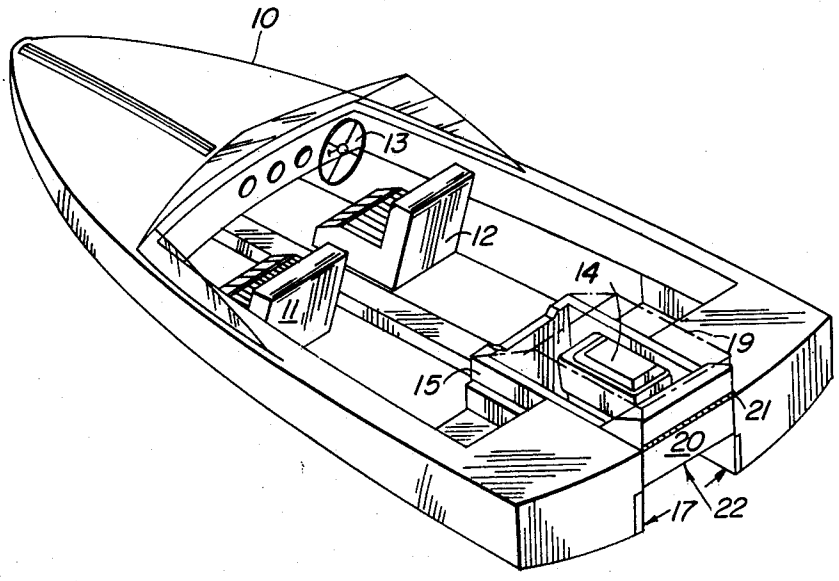
3,452,704	7/1969	Watkins	115/41 R
2,764,119	9/1956	Sigler	9/6 X
3,063,068	11/1962	Calkins	9/6
3,371,362	3/1968	Butler	9/6

Primary Examiner—Milton Buchler
Assistant Examiner—Carl A. Rutledge
Attorney—Louis Bernat

[57] **ABSTRACT**

An outboard motorboat has an inboard mounting well. A gate in the transom of the boat vents engine fumes and precludes entry of sea water when the boat motion is reversed. The well functions as a channel in the bottom of the hull for directing a stream of water through the propeller and for reducing the hull surface area in contact with the water.

4 Claims, 7 Drawing Figures



PATENTED NOV 14 1972

3,702,485

SHEET 1 OF 2

FIG. 1

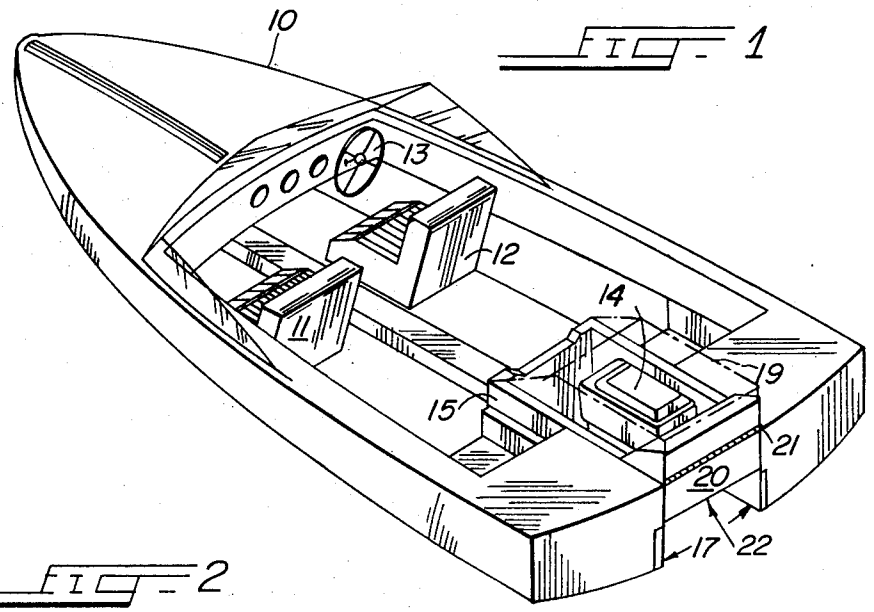


FIG. 2

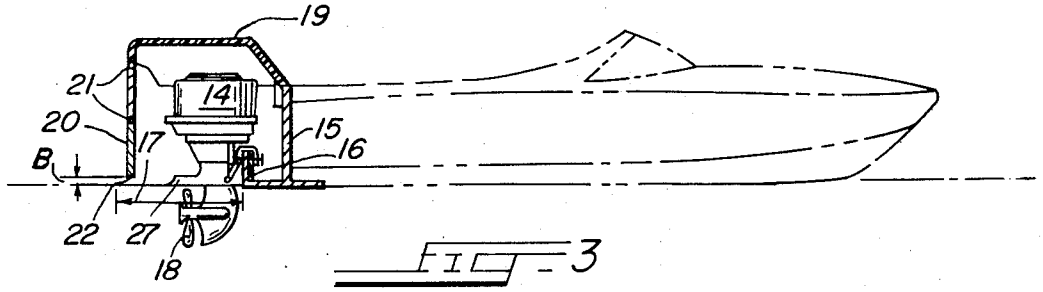
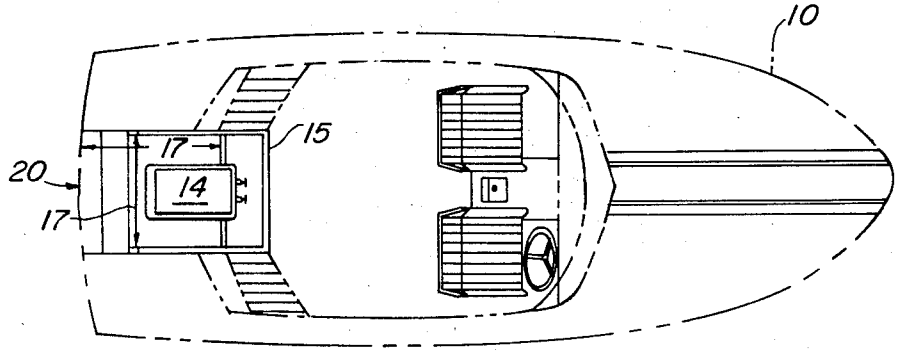


FIG. 3



INVENTOR.
THEODORE G. THOMPSON
BY Louis Bernat
Atty.

FIG. 5

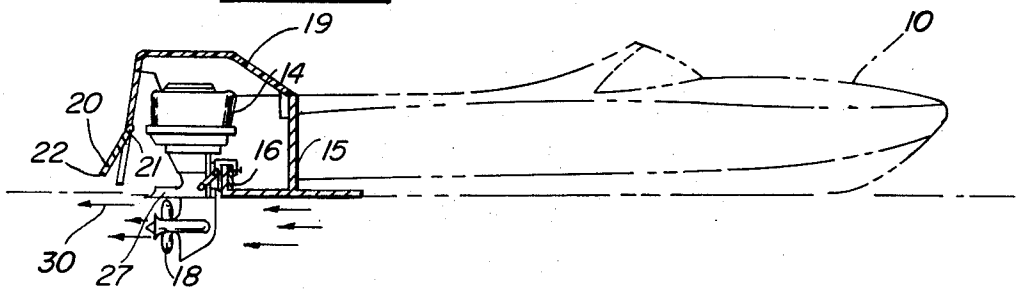


FIG. 6

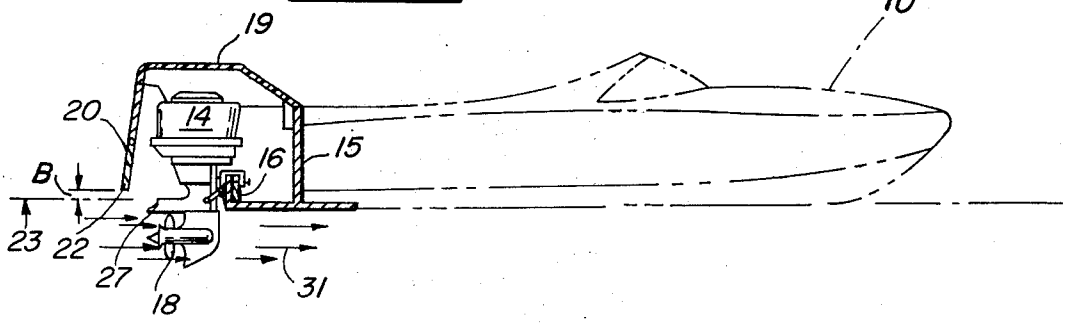


FIG. 7

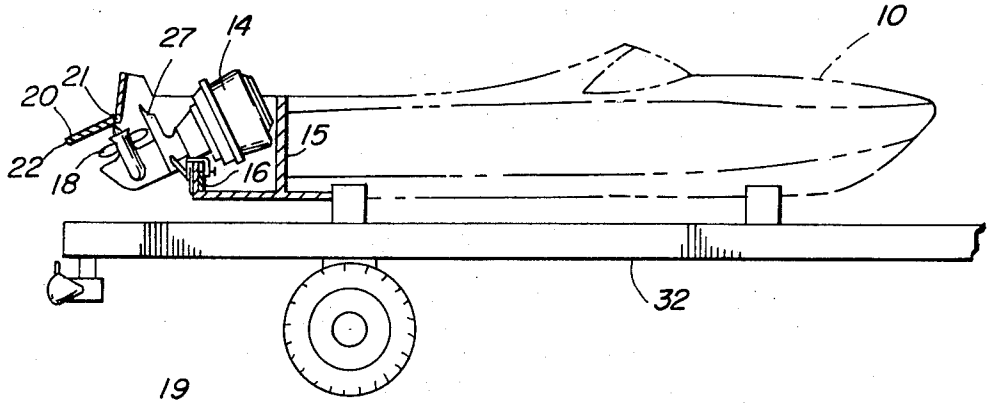
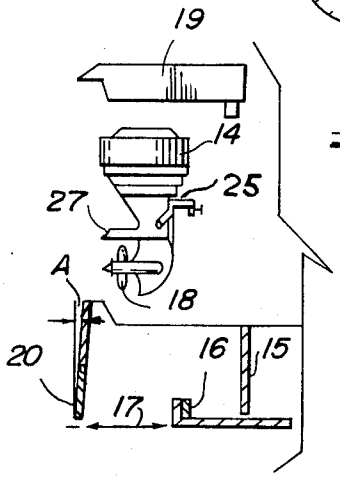


FIG. 4



INVENTOR.
THEODORE G. THOMPSON

BY Louis Bernat
Atty.

OUTBOARD MOTORBOAT WITH INBOARD MOUNT

This invention relates to outboard motorboats and more particularly to outboard motorboats which are arranged to have the appearance of an inboard motorboat with an improved tunnel drive channel in the bottom of the hull.

Outboard motorboats are very popular and well known vehicles, well adapted for popular usage. They are light, low-cost, easy to handle and transport. Modern, high power outboard motors are able to drive these boats through the water at very high speed. In most respects, an outboard motor is able to perform any task which the average owner could want.

On the other hand, inboard motorboats are in a different price class and are much more expensive than the outboard boats. However, there is not too much difference in performance between many of the smaller, modern day inboard and larger outboard motorboats. Thus, a principal reason for the continued sale of these smaller inboard boats is the "snob appeal" resulting from an appearance of a more expensive vehicle. If the outboard boats looked about the same as the inboard boats, many people would prefer to buy them.

Accordingly, an object of the invention is to provide new and improved outboard motorboats. In particular, an object is to provide outboard motorboats having the appearance of inboard motorboats. In this connection, an object is to provide boats with the low-cost appeal of outboard boats and the high-cost appearance of inboard boats. In particular, an object is to provide a hull with a channel to direct a flow of water through the propeller on the outboard motor.

Another object is to provide low-cost boats which are rugged and can be hauled about on a trailer. Here an object is to provide the ease and convenience of an outboard boat with the sales appeal of an inboard boat.

In keeping with an aspect of the invention, these and other objects are accomplished by an outboard boat having a well therein for receiving an outboard motor. The well forms a channel in the bottom of the hull for directing water through the propeller on the outboard motor and for reducing the area of the hull in contact with the water. When the well is normally covered by a suitable hatch cover, the motor cannot be seen at the back of the boat. A gate or door is cut into the transom and hinged to hang down and close an exit tunnel from the well which receives the outboard motor. When the boat is under way, water resistance pushes against the transom gate and causes it to open slightly to eliminate fumes in the well. The water resistance also causes the transom gate to close when the boat is reversed, thus preventing the sea water from backing into the well.

The nature of a preferred embodiment for accomplishing these and other objects will become more apparent from a study of the attached drawings, in which:

FIG. 1 is a perspective view of the back of the inventive boat with the hatch cover shown in phantom over an outboard motor mounted well;

FIG. 2 is a side elevation view of the outboard motor mounted in a cross section of the well, with the boat shown in phantom;

FIG. 3 is a top plan view of the outboard motor mounted in the well, with the hatch cover removed and the boat again shown in phantom;

FIG. 4 is an exploded view showing the rear end of the hull with the outboard motor well, the motor, and the hatch cover; and

FIGS. 5, 6, and 7 are schematic side views with the transom gate open when the boat is in forward motion, closed when the boat is in reverse motion, and swung up while the boat is being hauled on a trailer.

Throughout the various figures the same reference characters identify with same parts. More particularly, a motor boat hull **10** has the lines generally considered to be those of an inboard motorboat. There are conventional seats **11**, **12**, and a steering wheel **13**. The steering wheel may be connected to an outboard motor **14** by any suitable cables. Therefore, as the wheel **13** is turned, the outboard motor **14** turns to steer the boat.

In keeping with an aspect of the invention, a box-like well **15** is formed in the boat near the stern. Preferably, the front panel of the well **15** is reinforced, as at **16** (FIG. 4) to form a strong support for the motor. The outboard motor **14** clamps on the member **16** in a normal manner.

The bottom of the well forms a channel **17** at the bottom and stern end of the hull. This way, the well forms a channel **17** for directing a stream of water through the propeller **18** on the outboard motor. It also reduces the area of the hull in contact with the water.

The top of the well **15** is covered by a hatch cover **19** which completely conceals the outboard motor **14** from view. To reveal the arrangement of the outboard motor and the mounting arrangement, FIG. 1 shows the boat with the hatch cover **19** in phantom lines.

This arrangement presents two problems. FIrst, fumes and exhaust tend to accumulate in the well. Second, the sea water tends to back up into the well when the boat is reversed. To overcome preclude these and other problems, the invention provides a transom gate **20** hinged at the top and hanging down under gravity to close the back of the well **15** while the boat is standing motionless or reversing, and opens when the boat is in forward motion.

More particularly, the transom gate **20** is hinged to the hull at **21**. Preferably, the transom is set slightly off plumb, as indicated by the angle A in FIG. 4. Therefore, gravity causes the transom gate **20** to rest, in a closed position, against the transom, when the boat is stopped. As best seen in FIG. 6, the bottom edge **22** of the transom gate **20** is a distance B in the range of about three-quarters of an inch to about two and one-half inches, with a preferred distance B of about one and one-half inches above the waterlire **23** at all times, even when the boat may be fully loaded. This dimension provides adequate ventilation space for motor fumes to escape from the well.

As shown in FIG. 4, the motor **14** is installed in the boat by first removing the hatch cover **19**. Then, the motor **14** is placed in the well **15**. The usual motor clamp **25** is fitted over the reinforced panel **16** and fastened in position. The motor is in proper position when the anticavitation plate **27** is in approximately a horizontal line which is an extension of the bottom of the hull. The propeller **18** is suspended below the hull line when the motor is in operating position.

As best seen in FIG. 5, the forward motion of the boat causes water to be discharged behind the boat. As the boat moves forward through the water, the sea **30**

tends to push the transom gate **20** outwardly. This allows free passage of water and motor fumes out of the tunnel formed by the well **15**.

When the boat is reversed, the water tends to pile up and push against the transom gate **20**, as indicated by the arrows **31**. Thus, the boat may be driven backward through the water without any pile up of sea water inside the well **15**.

Likewise, if the boat is standing in water, any waves lapping against the transom will tend to push the transom gate **20** toward its shut position. When the boat is standing still with the motor idling, the sea gate **20** may be pulled up to an open position by any suitable means, such as a lever or cable. This enables engine fumes inside the well to escape.

When the boat **10** is loaded onto a trailer **32** (Fig. 7) the motor **14** may be tipped up in a conventional manner. The hatch cover **19** may be removed to allow the motor to tip upward. However, this is not necessary if adequate space is provided under the hatch cover. The transom gate **20** is raised by the outboard motor propeller and guard assembly. Alternatively, the same latching mechanism may be used to hold the gate **20** in an open position while the motor is idling and while the motor is tipped in the hauling position.

A further requirement may be to place a sound insulating material in the walls of the well **15** to help reduce motor noise. Still other refinements will readily occur to those who are skilled in the art. Therefore, the appended claims are to be construed to cover all equivalent structures.

We claim:

1. An outboard motorboat comprising a well formed in the bottom of the hull near the stern of the boat, means for mounting an outboard motor in said well, the back wall of said well being at the transom of said boat, control means in said transom for enabling sea water to leave said well when said boat is under way in a forward direction and for preventing sea water from entering said well when said boat is under way in a reversed direction wherein said control means comprises a gate, hinged at its top to an opening in said transom, said gate hanging down and closing said well to preclude an entry of sea water into said well while said boat is reversed, and opening responsive to water resistance when said boat is in forward motion.

2. The boat of claim **1** wherein the bottom of said gate terminates slightly above the waterline when said boat is in the water.

3. The boat of claim **1** wherein said control means further comprises a tunnel cut into said transom, said gate being hinged at its top to the bottom edge of the tunnel in said transom and hanging down under gravity toward the waterline, said hinge being high enough to permit the propeller of said motor to tip upwardly when said boat is being hauled, and said gate hanging downwardly to about one inch above the waterline.

4. The boat of claim **3** wherein said well forms a channel for directing water toward said propeller.

* * * * *