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AUXILIARY FUEL TANK FOR MOTOR BOATS

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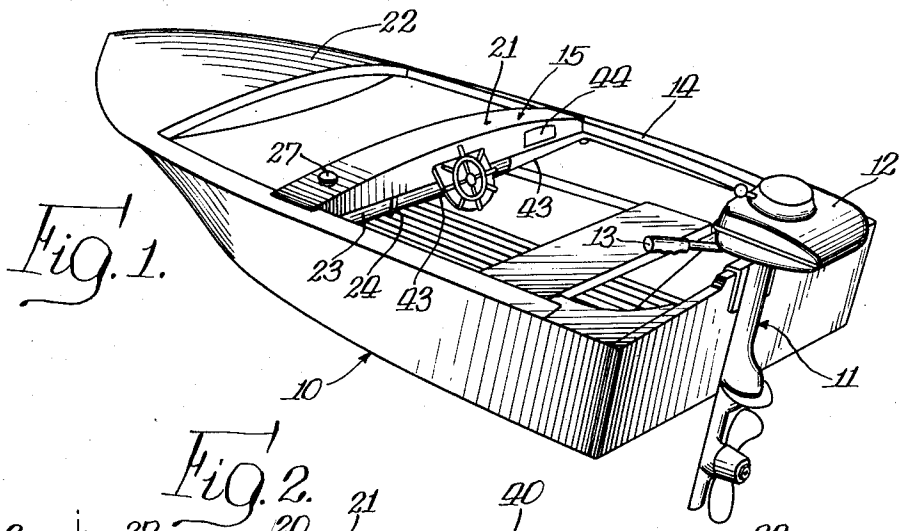


Fig. 1.

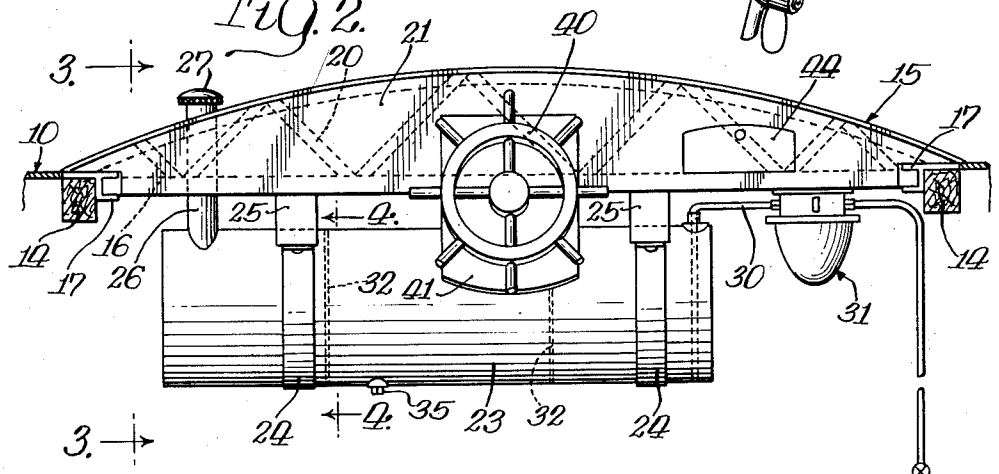


Fig. 2.

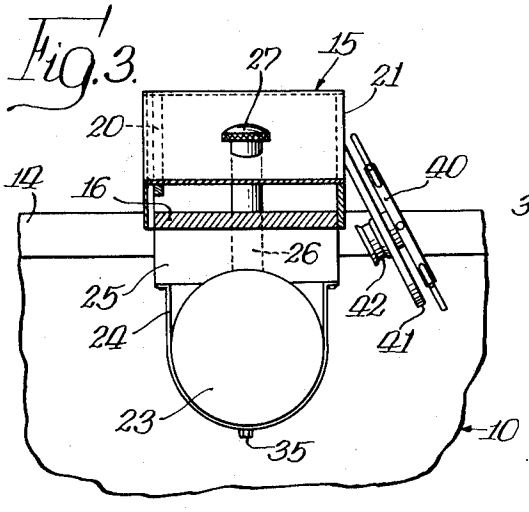


Fig. 3.

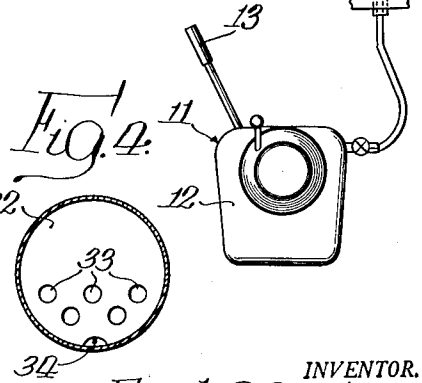


Fig. 4.

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AUXILIARY FUEL TANK FOR MOTOR BOATS

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3 Claims. (Cl. 114—0.5)

1

The invention relates generally to an auxiliary fuel tank for a power-driven boat and more particularly for a boat utilizing an outboard motor.

In an outboard motor, particularly one of high-powered type, the fuel tank does not have sufficient capacity to carry enough fuel for operating the motor for any long period of time. To enlarge the tank, which is included as part of the motor, would, of course, make the motor exceedingly ungainly. Furthermore, since the fuel tank on an outboard motor is usually located at the top of the motor and the motor is located at the stern of the boat, the weight of a larger tank and the increased quantity of fuel would tend to disturb the balance of the craft.

The general object of the invention is therefore to provide a novel auxiliary fuel tank construction particularly adapted for use with a boat powered by an outboard motor, although equally usable with a boat having an inboard type of motor, which provides a large increase in fuel carrying capacity, which may be so positioned in the boat that it will have no material adverse effect on the balance of the craft, and which provides for easy transfer of the fuel therefrom to the motor.

Another object is to provide a tank of the foregoing character, which is located so that the weight thereof, together with the fuel contained therein, is held at a low point in the hull of the boat and substantially at the longitudinal center of balance of the boat, so that such balance will not be materially affected by the presence of the tank or by varying quantities of fuel contained therein, the tank also being constructed so that the fuel therein cannot rapidly shift when the boat tips.

Other objects and advantages will become apparent from the following description taken in connection with the accompanying drawings, in which:

Figure 1 is a perspective view of a motor boat of the outboard type provided with an auxiliary fuel tank embodying the features of the invention.

Fig. 2 is an elevational view of the auxiliary fuel tank, looking forward from the stern of the boat and showing fragmentary portions of the boat in section and the connection to the outboard motor diagrammatically.

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a fragmentary sectional view taken on the line 4—4 of Fig. 2.

In the drawings, I have shown a boat, indicated

2

generally at 10, of a type frequently used with outboard motors, the outboard motor in this instance being indicated at 11. The outboard motor, as is usual, is clamped onto the transom of the boat and includes a fuel tank 12 constructed as part of the motor and detachable therewith. The motor 11 is also shown as including a steering handle 13 by which the motor may be shifted about a substantially vertical axis to steer the boat.

As heretofore mentioned, the tank 12 is of limited capacity and, in the case of a high-powered motor, such capacity is insufficient to operate the motor for a long period of time. To increase the capacity of the tank 12 would be disadvantageous for the reason that the motor is mounted at the stern of the boat and the tank is positioned at the top of the motor, so that the increased weight of the tank and fuel contained therein would materially alter the balance of the boat. Furthermore, consumption of the fuel would alter such balance during operation.

It is, therefore, desirable to provide additional fuel capacity and to place the container therefor in such position with regard to the hull of the boat that the increased weight of the tank and fuel will not materially affect the balance of the boat. To this end, I provide a support preferably extending crosswise of the boat at the longitudinal center balance of the boat so that, although the total weight of the boat will thereby be increased to some extent, the balance will not be adversely affected. The auxiliary tank is preferably located within the hull so as to place the weight thereof at a relatively low point, and extends crosswise with means for preventing the fuel in the tank from shifting rapidly. Thus, tipping movement of the boat will not be exaggerated by rapid shifting of the fuel within the auxiliary tank.

In the construction illustrated in the drawing, the auxiliary tank is preferably supported from the gunwales of the boat, such gunwales being indicated at 14. Extending crosswise between the gunwales is a support, indicated generally at 15. The support in the present instance is shown as comprising a bottom board 16 provided with brackets 17 at its ends for rigidly securing the bottom board to the gunwales 14. The bottom board 16 is preferably stiffened by means of a truss structure 20 inclosed within a casing 21. The top of the casing 21 is preferably rounded to conform to the curvature of the front deck or cowling 22 of the boat.

Carried by the support 15 is the auxiliary fuel

tank 23 which, in this instance, is illustrated as being cylindrical and extending crosswise of the boat. In order to place the fuel tank at a relatively low point in the hull, it is suspended from the support by means of brackets 24 in the form of straps encircling the tank and secured at their ends to blocks 25 mounted on the lower face of the bottom board 16. To provide for filling the tank, a filling spout 26 extends upwardly from one end of the tank 23 through the support 15 and is provided with a removable cap 27 at its top. To conduct fuel from the tank 23 to the motor 11, a pipe line 30 is provided, the line extending from one end of the tank 23 sidewardly under the support 15 and thence rearwardly along the gunwale 14 for connection with the motor. The fuel is adapted to be withdrawn from the tank 23 through the line 30 by means of a pump, indicated generally at 31, for pumping the fuel or for creating air pressure within the tank. Such pump may be either power operated or a hand pump. In the present instance, the pump 31 is shown as being suspended from the under face of the bottom board 16 of the support.

Fuel in the tank 23, if unrestricted, would tend to rapidly shift from one end of the tank to the other, when the tank is partially filled, unless provision were made to prevent such shift. In the present instance, one or more baffles 32 are provided. Such baffles preferably are in the form of circular plates mounted at spaced points within the tank and provided with apertures 33 therein (see Fig. 4). The apertures, of course, permit flow of fuel from one part of the tank to another but prevent rapid shifting of the fuel. Each baffle plate 32 is preferably notched as at 34 at its lowest point so that fuel can be completely drained from all portions of the tank, a drain plug 35 being provided for this purpose.

The support 15 may also serve for other functions in the boat. Thus, on its rear side there may be mounted a steering wheel 40, the steering wheel being shown herein as carried on a board 41 secured on the rear face of the frame 15 centrally between the ends thereof. The steering wheel carries a reel 42 on the underside of the board 41, and wrapped about such reel is a rope 43 extending in both directions from the wheel to pulleys at the sides of the boat and thence rearwardly over other pulleys for connection with the steering handle 13 of the motor. The space within the support 15 may also be utilized to some extent by providing a drawer 44 therein for tools.

From the foregoing, it will be apparent that I have provided a novel auxiliary fuel tank for a motor boat of the character shown. The tank, by being located at the longitudinal center of balance of the boat and at a relatively low point in the hull, will not disturb the normal balance of the craft. Furthermore, by so positioning the tank, variations in the quantity of fuel contained therein will not materially affect such balance. The baffle plates within the tank further prevent rapid shifting of fuel therein so that any tipping of the boat will not be exaggerated by the shifting of fuel.

I claim:

1. An auxiliary fuel tank apparatus for a boat having a cowling, said apparatus comprising an elongated bottom member adapted to extend transversely of the hull of the boat, bracket means at opposite ends of said member for seating the latter on the gunwales of the boat, bracing structure extending upwardly from said bottom member, a casing enclosing said bracing structure and having a configuration adapted to conform generally to the cowling of the boat, and a fuel tank supported from said bottom member.

2. An auxiliary fuel tank apparatus for a boat having a cowling, said apparatus comprising an elongated bottom member, bracket elements at the ends of said member adapted to support the latter on the gunwales of the boat, a truss structure extending upwardly from said bottom member and having a casing adapted to conform generally to the shape of the cowling of the boat, and an elongated fuel tank suspended below said bottom member and extending lengthwise thereof.

3. An auxiliary fuel tank apparatus for a boat having a cowling, said apparatus comprising an elongated bottom board adapted to extend transversely of the hull of the boat, a pair of bracket elements secured at opposite ends of said bottom board and adapted to support the latter on the gunwales of the boat, a truss structure extending upwardly from said bottom board, a casing enclosing said truss structure and having its upper surface adapted to conform substantially to the contour of the cowling of the boat, a fuel tank disposed below said bottom board, supporting straps secured to said bottom board for suspending said tank therefrom, and an inlet communicating with said tank and extending upwardly through said truss structure and said casing.

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