Dec. 30, 1941. H. SCOTT-PAINE 2,268,425

MOTORBOAT

Filed April 6, 1940 2 Sheets-Sheet 1

Fig. 1.

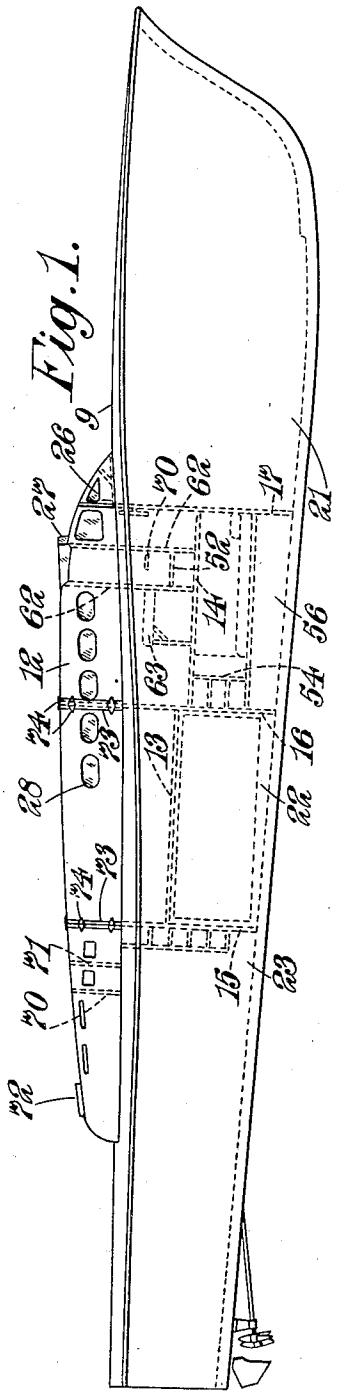
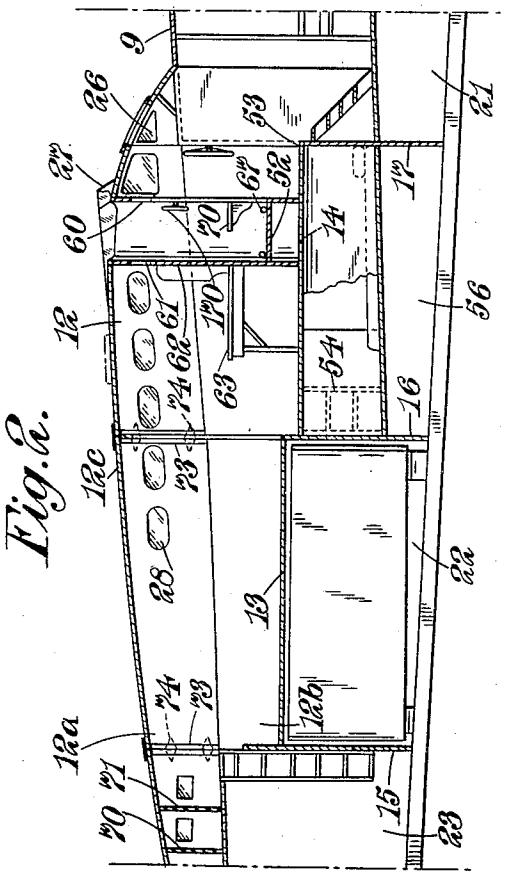


Fig. 2.



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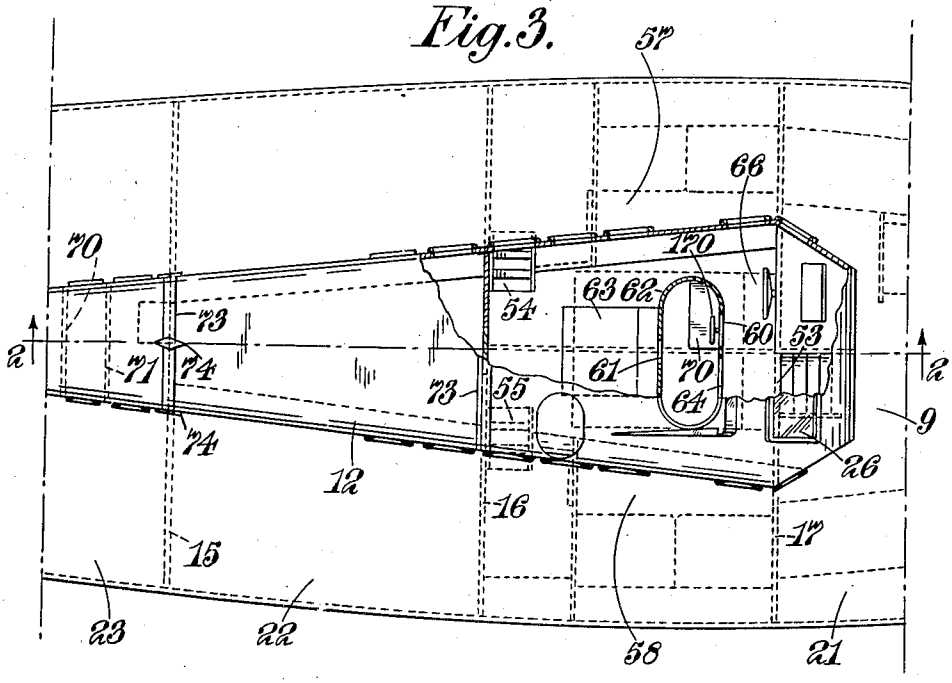
Filed April 6, 1940 2 Sheets-Sheet 2

Fig. 3.



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UNITED STATES PATENT OFFICE

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MOTORBOAT

Hubert Scott-Paine, Hythe, Southampton, England

Application April 6, 1940, Serial No. 328,170
In Great Britain March 30, 1939

1 Claim. (Cl. 114—78)

This invention is for improvements in or relating to motor-boats and has for its object to provide an improved construction and arrangement of wheelhouse or superstructure which provides the maximum accommodation and utility in service within the minimum overall dimensions so that the boat has a low silhouette and is inconspicuous as a target.

This invention comprises, in a motor-boat, a construction of wheelhouse in which the floor and walls, or a part of the walls, are below the deck level, and the roof with or without a part of the walls is a streamlined water-tight structure above deck level, and in which a conning bridge is provided constituted by a cockpit in the form of a well which opens through the roof of the wheelhouse so as to provide a conning position which commands the whole of the boat, from which navigation, offensive and defensive action can be directed and the ship manoeuvred.

The wheelhouse can be entered directly by means of a companion in the side or hatch in its top, but when at sea it will normally be closed. The conning bridge is provided at its bottom or floor with scuppers leading to outside the wheelhouse, so that it can be cleared of water, and although the conning bridge is left open, the watertight closing of the wheelhouse and vessel is not impaired because access to the conning bridge is attained from inside the wheelhouse through a water-tight door. If desired, small openings may be provided in the upper part of the wall of the conning bridge for oral communication with the interior of the wheelhouse.

Preferably the floor of the conning bridge is somewhat higher than the floor of the wheelhouse so that a view is obtained over the roof of the wheelhouse and the command position above referred to is at a suitable elevation. Glazed or other transparent screens may be provided around the upper edge of the conning bridge.

One example of the invention is illustrated in the accompanying drawings in which:

Figure 1 is a side elevation of a boat in accordance with the invention;

Figure 2 is a view on an enlarged scale of the wheelhouse and central part of the boat, taken on the line 2—2 of Figure 3; and

Figure 3 is a plan view of Figure 2 with part of the roof of the wheelhouse removed.

The boat shown is constructed so that the maximum headroom below the deck 9 is not substantially greater than the height of a man.

The wheelhouse 12 consists of a roof 12c and walls 12a, 12b (Figure 2) together with a floor 13 and 14. The floor 13 and 14 and the part 12b of the walls are below the level of the deck 9, and the roof 12c with the part 12a of the walls forms a streamlined structure above deck level. The wheelhouse thus projects above the deck about half of its internal height.

The wheelhouse has a conning bridge which is constituted by a cockpit 62 in the form of a well which opens through the roof of the wheelhouse so as to provide a conning position which commands the whole of the boat. The conning bridge is provided with a floor 52 which is above the level of the floor 14 of the wheelhouse and scuppers 67 in the floor 52 lead outside the wheelhouse so that the cockpit can be cleared of water and although the conning bridge is left open, the water-tight closing of the wheelhouse of the vessel is not impaired.

Access to the conning bridge is attained from inside the wheelhouse through a watertight door 64 (Figure 3). If desired, small openings may be provided in the upper part of the wall of the conning bridge for oral communication with the interior of the wheelhouse and in this example openings 60 and 61, which will be referred to below, are provided respectively in the forward and aft walls of the cockpit.

Above the elevated floor 52 of the conning bridge is a step 70 from which a command position is obtained with a view over the roof of the wheelhouse in all directions, but at the same time, the low contour of the boat is retained. Glazed or other transparent screens 27 may be provided around the upper edge of the conning bridge.

The conning bridge is situated slightly aft of the forward end of the wheelhouse and the navigation and control instruments are situated in the part of the wheelhouse forward of the conning bridge. The coxswain is normally stationed at 66 (Figure 3) with the steering wheel on the port side of the wheelhouse forward of the conning bridge. A remote steering control 170 may be provided in the conning bridge.

A stairway is provided on the starboard side at the forward end giving access through the door 53 with the crew's quarters which are below deck level in the space 21 forward of the bulkhead 17.

The roof of the wheelhouse slopes down at the forward end of the bridge and the sloping face is formed with windows 26. The cockpit has windows, or openings such as 60, of a height

such that, from the floor **52**, an alternative view to that through the screen **27** is afforded directly forward through the windows **26**; this forward view is free from the glare of overhead searchlights and is more protected against air currents than the normal view from the conning bridge.

The remaining space between the conning bridge and the forward end of the wheelhouse may be used for storage of charts and instruments.

A chart table **63** is situated within the wheelhouse immediately aft of the conning bridge and communication is established by the opening **61** in the rear wall of the conning bridge.

The wheelhouse is of substantially less width than that of the vessel, so as to provide below-deck accommodation which, whilst partly of reduced headroom under the floors **13**, **14**, is also partly of the full available headroom in the parts **57**, **58**.

Aft of the chart table, doorways and steps **54**, **55** lead to the officers' accommodation **57** on one side and with the wireless operator's cabin **58** on the other side. Thus, the navigating officer sitting at the chart table has immediate access and direct communication both with the wireless operator and with the command in the conning bridge.

Three watertight bulkheads **15**, **16**, **17** are preferably provided below deck within the part of the boat which is covered by the wheelhouse. There are no watertight doors in these bulkheads and access to each of the compartments **21**, **56**, **22** and **23** of the lower deck is possible through the wheelhouse. Access to the engine room **23** situated aft of the bulkhead **15** is obtained from the interior of the wheelhouse by an opening **56** formed partly in the bulkhead **15** and partly in a continuation of the deck extending from the bulkhead **15** to an instrument panel **70** mounted in the aft part of the wheelhouse. Immediately behind the opening **56** is a soundproof bulkhead **71**. The aft part of the wheelhouse provides lighting and additional headroom in the engine room. A hatch **72** for access to the engine room directly from the after part of the deck may also be provided. If the compartment **22** is wholly utilised for fuel tanks no means of entry will normally be required, but if it should be desired to use this space for accommodation or stores, suitable steps may be provided as for the spaces **57**, **58**. It will be appreciated, therefore, that access to any of the compartments **21**, **22**, **23** or **56** may be obtained under cover without the necessity of going out on deck.

The forward part of the wheelhouse may be protected by an armour plate covering which extends the whole width of the wheelhouse aft beyond the after end of the conning bridge and a sliding roof may be arranged to cover the conning bridge if desired.

The conning bridge is preferably made of light metal sheet, but it may be easily detached and replaced by one of thicker armour-plate and may form an entirely enclosed citadel.

In transverse section the wheelhouse has well rounded corners above deck level and is preferably built with spaced laminated beams and with inner and outer skins of synthetic-glued plywood between which, in the spaces between the beams, a suitably stiff but light material of cellular constitution having good heat and sound insulating properties is used. This results in a structure having the maximum useful internal space coupled with great strength and lightness, and the well rounded corners also ensure that the rearward vision from the conning position is restricted to the least possible extent. The radius of the rounded corner may be greater on the port side immediately aft of the conning bridge than elsewhere with the same object in view.

The structure of the wheelhouse above deck is made in three separate pieces, joined at the bulkheads **15** and **16**; the two after parts are detachable separately to enable the engines to be lifted out of the engine room **23** or the fuel tanks out of the compartment **22**. The separate parts may be butted one against the other and connected inside and outside by strips of fabric **73** and spaced gusset plates **74**. To avoid disturbing the wiring and other instrument connections the instrument panel **70** is preferably arranged to remain in position on the boat's structure when the aftermost part of the wheelhouse is lifted off.

I claim:

In a motor boat, a hull having a deck provided amidships with an elongated opening which is wider at the forward end than at the after end, a water-tight deck-house covering the said elongated opening, a floor within the hull conforming generally to the shape of said elongated opening and located below the deck at a distance about equal to the height of the deck-house above the deck, walls extending from the deck at the boundaries of said opening to the edges of said floor, and an open cockpit in the form of a well arranged in the forward part of said deck-house and opening through the roof thereof, the bottom of said well being higher than said floor, and means for steering said boat from within the cockpit and from within the deck-house.

HUBERT SCOTT-PAINE.