

UNITED STATES PATENT OFFICE

WILLIAM R. MESTICE, OF NEWARK, NEW JERSEY

MARINE VESSEL

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My invention relates to improvements in marine vessels and more particularly has reference to and is illustrated in the accompanying drawings in its application to a submarine or surface type of vessel, built with both sub and super structure, so that in the event of serious mishap to either, the other will be able to navigate to safety.

Referring to said drawings, Fig. 1 illustrates in side elevation, parts being broken away, a suitable form of submarine embodying an application of my invention, and shows in dotted outline in connection therewith a surface type of craft with complete substructure for navigable and salvage purposes. Fig. 2 is a cross-section on the line 2—2 of the submarine shown in Fig. 1.

The submarine structure is preferably divided longitudinally and horizontally by the separating bulkhead or deck 3, which may if desired extend entirely from bow to stern as shown. This divides the outer shell 4, 5 into a complete superstructure and substructure each of which is preferably provided with a full equipment and machinery for separate and individual control. 5' indicates part of the mechanism in the superstructure and 6 similar mechanism in the substructure. The propeller 7, is driven by the power plant in the superstructure 4 and the propeller 8 being similarly operable by the power plant in the substructure 5. Each of these structures is of course preferably provided with the usual bulkheads, water tight compartments, ballast tanks, pumping equipment and other mechanism desirable in connection with a ship of the class described.

9 indicates a chamber provided with a door 10 or hatchway 11 or both, hermetically sealed so that in the event of injury to the upper submarine 4 by a shell from a battleship or otherwise, rendering the same partial or wholly useless, the men can enter the chamber 9, securely and hermetically locking the door or hatchway 11 after them passing down by way of the ladder 12 to the lower compartment 13 from which they may pass by way of the water tight door 14 and down the steps 15 to the lower submarine 5.

Should serious injury happen to the lower

submarine 5, the crew can ascend to the chamber 13 securely fastening the hermetical closure 14 and by passing up the ladder 12 enter the chamber 9 by the door 10 or hatchway 11, enter the upper submarine 4. Thus two complete submarine structures may be combined in one craft, either of which is adapted to take care of both in the event of serious injury to either of them. Should it be desired to gain speed in the handling of such craft, both equipments may be used simultaneously.

Where the substructure is to be used in conjunction with a surface type of craft, such as the battleship 16, shown in dotted outline in Fig. 1, the same is of course preferably built below the keel line thereof so that in the event of serious injury to the surface craft, the crew therefrom and passengers, if necessary, may pass from the surface craft to the sub craft by means of intercommunicating chambers, such as 9, 13.

Matters of displacement and details of design as well as many other problems well known to marine architects and designers will of course be adjusted and regulated according to established practice and existing knowledge. Naturally such a craft will involve greater displacement and greater cost, especially as substantially an entire duplication of equipment may be necessary. The great saving in the salvaging of such craft however, both in life and property establishes the importance of such form of construction especially in connection with the navy, where a submarine meeting with an accident practically remains under sea too long to save life before effective assistance can be brought into action. A submarine or surface craft constructed in this manner even though defeated in battle while at the surface may still escape and the property and lives of those remaining may be saved, and the same equally applies in case the damage is done to the substructure.

Of course it will be understood that various modifications may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

I claim:—

1. In combination, surface and sub-surface marine vessels, said sub-surface vessel secured below and extending the entire length of the keel of said surface vessel, and means
5 for releasing and separately operating said vessels.

2. In combination, surface and sub-surface marine vessels, said sub-surface vessel secured below and extending the entire length
10 of the keel of said surface vessel, and means for releasing and separately operating said vessels, the upper part of said sub-surface vessel constituting the lower part of said
15 surface vessel when the same are joined.

3. In combination, surface and sub-surface marine vessels, said sub-surface vessel secured below and extending the entire length of the keel of said surface vessel, and means
20 for releasing and separately operating said vessels, the upper part of said sub-surface vessel constituting the lower part of said surface vessel when the same are joined, and means for passing to and from said vessels.

25 4. In combination, surface and sub-surface marine vessels, said sub-surface vessel secured below and extending the entire length of the keel of said surface vessel, and means for releasing and separately operating said
30 vessels, said surface vessel having a flat bottom which when joined with said sub-surface vessel constitutes the meridian of the latter.

5. In a vessel of the class describer, a conventional type of sub-marine divisible longitudinally, and a surface super-structure in combination with the upper half thereof, the
35 upper and lower portions of said sub-structure completely equipped and separately operative, and in combination therewith, means for passing from one to the other when
40 joined.

In testimony whereof I hereunto affix my signature.

WILLIAM R. MESTICE.

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