G. B. YERTON.

SUBMARINE BOAT.

APPLICATION FILED JAN. 28, 1910.

994,552.

Patented June 6, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

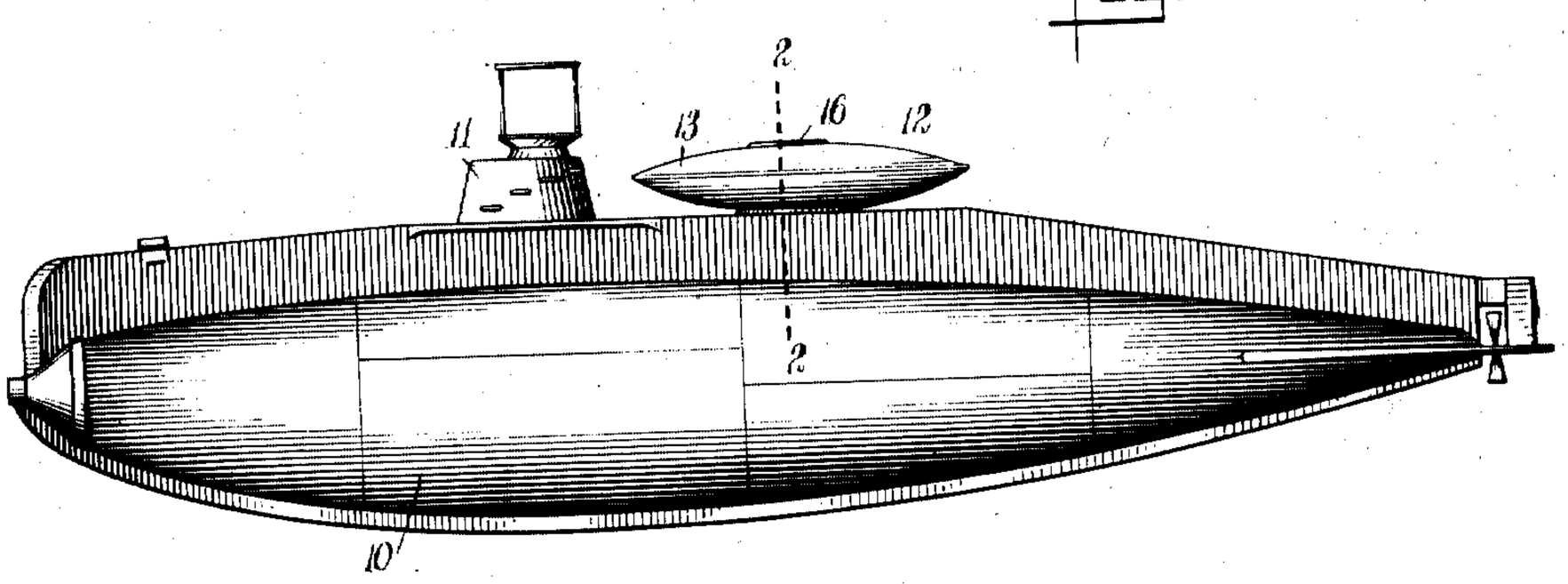

Fig. 2.

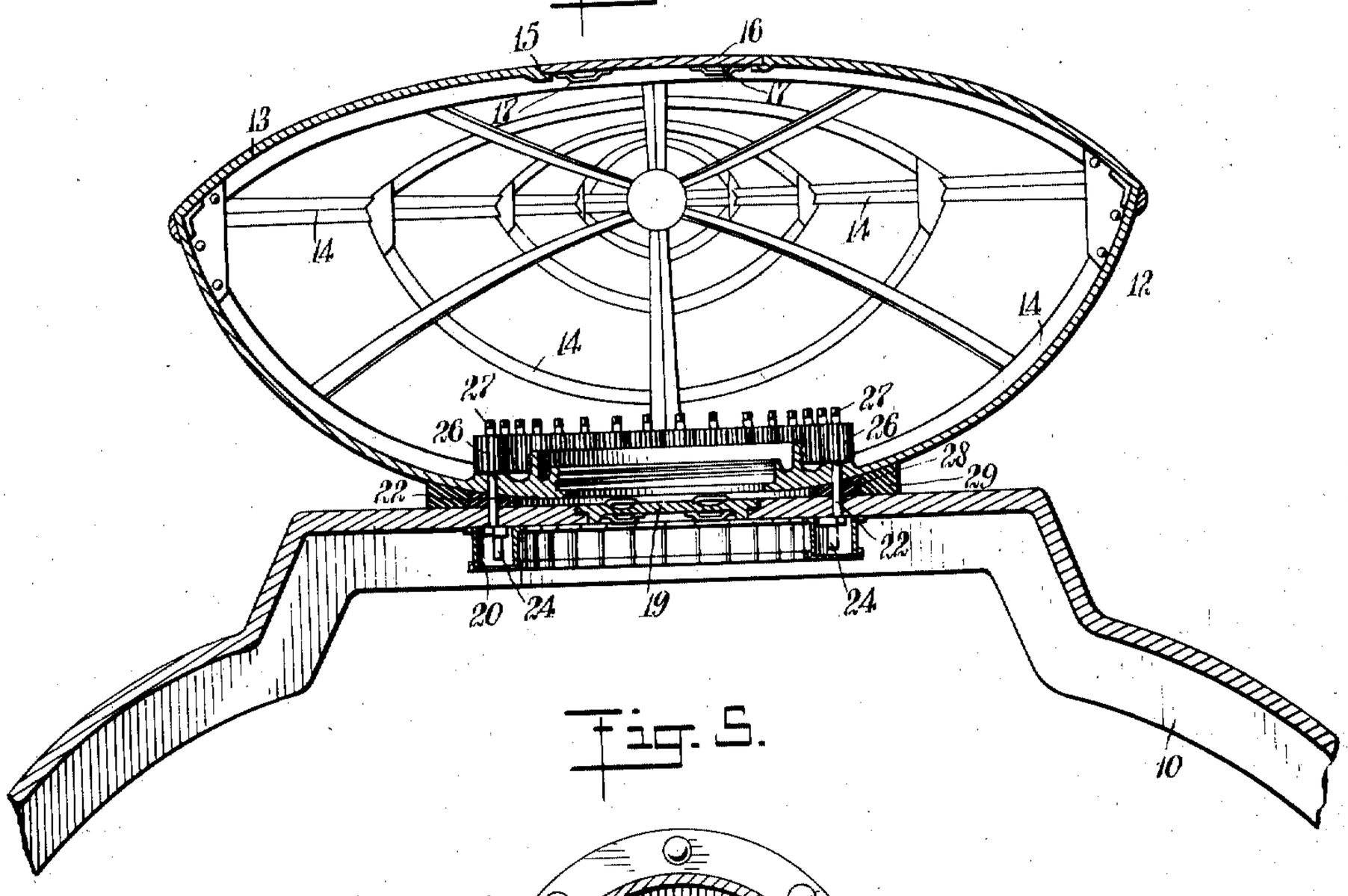

Fig. 3.

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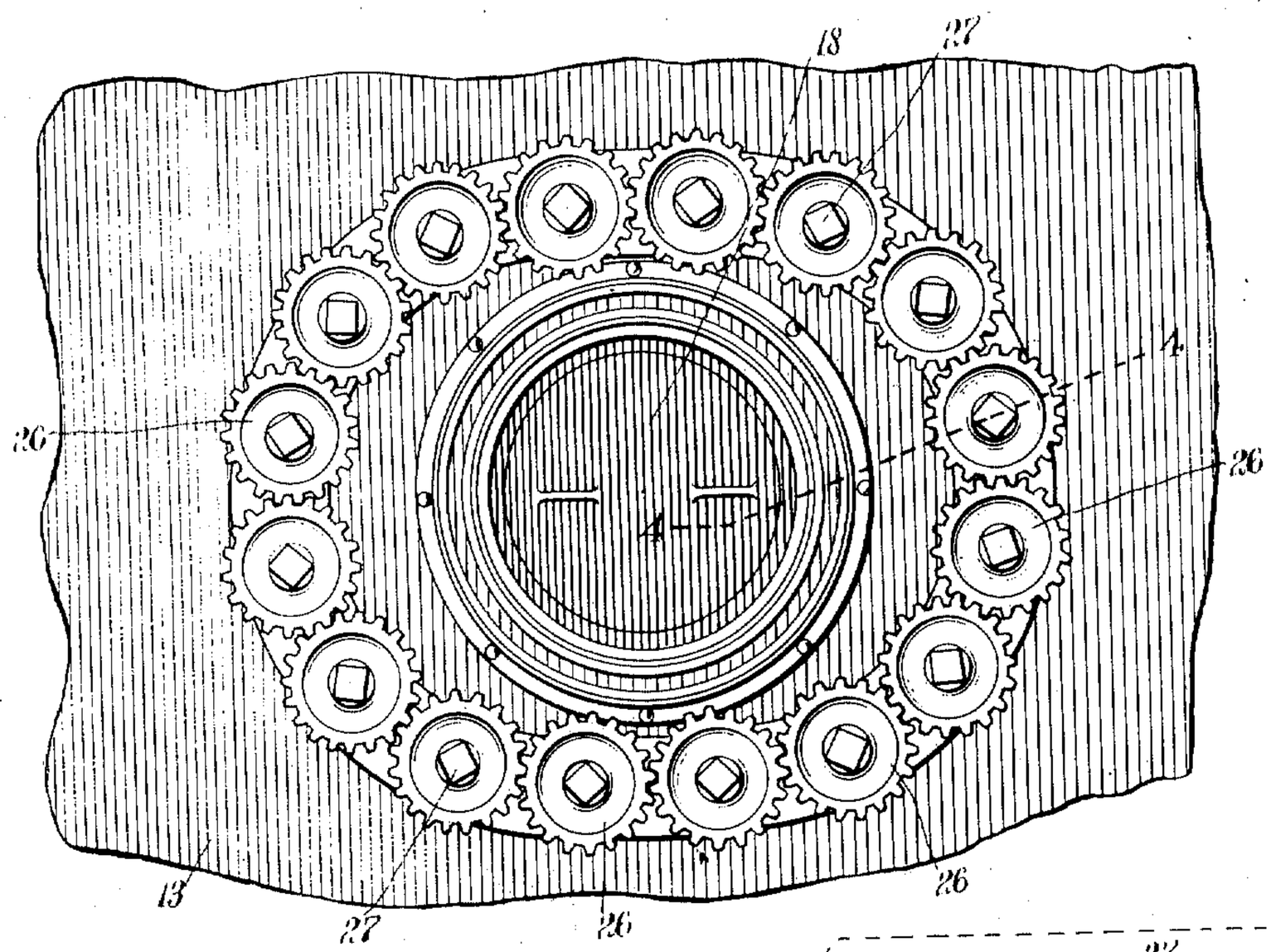

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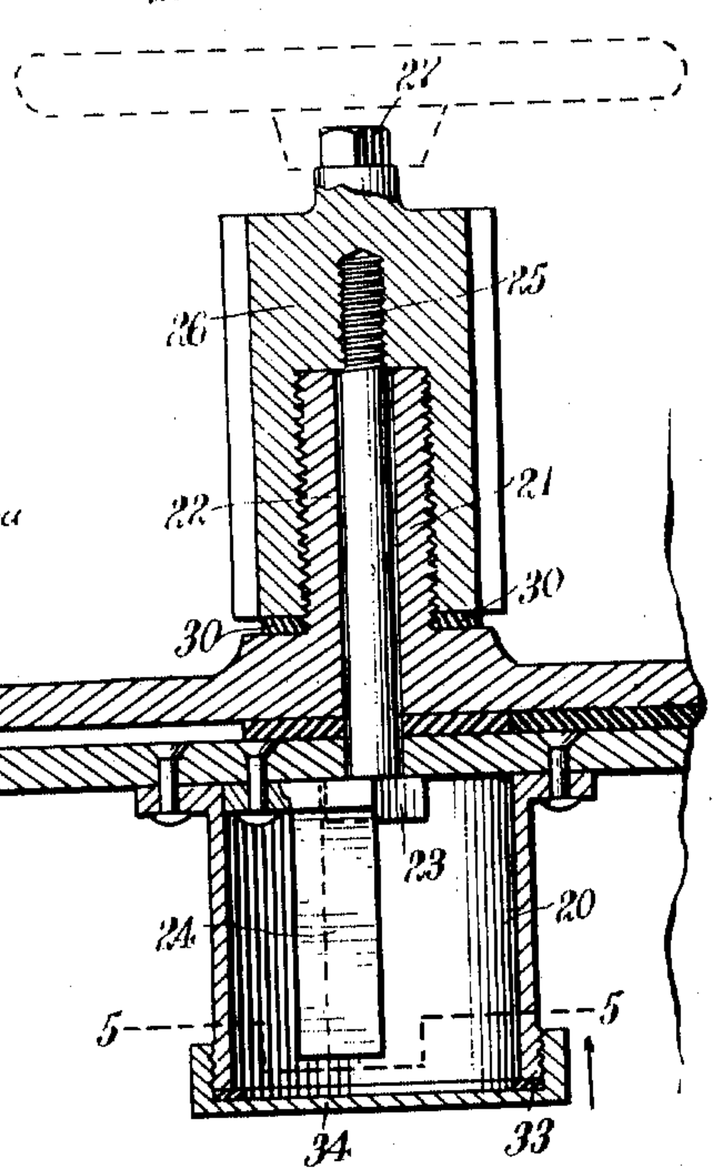

Fig. 4

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GEORGE B. YERTON, OF NEW YORK, N. Y.

SUBMARINE BOAT.

994,552. Specification of Letters Patent. Patented June 6, 1911.

Application filed January 28, 1910. Serial No. 540,506.

To all whom it may concern:

Be it known that I, GEORGE B. YERTON, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented new and useful Improvements in Submarine Boats, of which the following is a full, clear, and exact description.

My invention relates to improvements in submarine boats, and more particularly embodies a life-boat for attachment to a submarine craft, for rescuing the crew of the said craft should the same sink or in any manner become dangerously disabled when beneath the surface of the water.

An object of my invention is to provide a life-boat for removable attachment to a submarine craft, the said life-boat being secured in such a manner that the same can be released by the crew or one of the crew, in a very short space of time.

A further object of my invention is to provide a life-boat removably secured to a submarine, and adapted to be released from the submarine from the interior of the life-boat after the crew have entered the same; and a still further object is to provide means whereby both the submarine and the life-boat are left absolutely water-tight, at the point of connection of the two boats, after the life-boat has been released from the submarine.

Reference is to be had to the accompanying drawings forming a part of this specification, and in which similar characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a side elevation of a modern submarine boat equipped with my life-boat; Fig. 2 is a sectional view taken on the line 2—2 in Fig. 1; Fig. 3 is a fragmentary plan view of the floor of the life-boat, showing the closed passageway or man-hole for entering the life-boat from the submarine and the means for releasing the life-boat from the submarine; Fig. 4 is a sectional elevation taken on the line 4—4 in Fig. 3; and Fig. 5 is a sectional view taken on the line 5—5 in Fig. 4, looking in the direction of the arrow.

Before proceeding with a more detailed description of my invention, it will be well to state that my device can be attached to all forms and kinds of submarine craft, and is particularly designed and adapted for use on submarine boats in warfare, where great dangers from disability are ofttimes encountered. In previous devices for attachment to submarine craft for the purpose of rescuing the crew should any danger occur, the rescuing means are operated from the interior of the submarine, thereby necessitating leaving one of the crew in the submarine to operate the rescue means to release the remainder of the crew. Furthermore, many types of lifeboats for the purpose mentioned are insecure, faulty in construction and difficult to operate. In my device is embodied a safe, reliable, easily operated lifeboat, removably secured to the submarine and adapted to be speedily released from the submarine.

Among other features of my invention are the means on the submarine for keeping the same intact and free from water, at the point of connection of the lifeboat and submarine, after the lifeboat has been released from the submarine.

Referring to the various figures, I employ a submarine boat 10, provided with the usual turret 11, adjacent to which is removably secured a lifeboat 12. My lifeboat is preferably oval-shaped and consists of a shell 13, having suitable longitudinally and transversely secured braces 14. In the upper side of the shell 10 is located a manhole 15, closed by a removable cover 16, provided with handles 17. Opposite the manhole 15, in the floor of the shell 10, is a second manhole leading into the submarine boat 10, and closed by removable safety plates 18 and 18ª, secured to the shell 13, and a removable cover plate 19, secured to the submarine 10.

Secured to the plating of the submarine 10 is an annular chamber 20, independent of the main chamber of the submarine. In the shell 13, screw threaded lugs 21 are provided, each having a hole longitudinally therethrough and adapted to receive a bolt 22, passed through the plating of the submarine and lifeboat before the chamber 20 is secured to the submarine, as will be easily seen by referring to Fig. 4. The head 23 of the bolt, in the chamber 20, is adapted to slide in a grooved member 24, so that should the bolt drop downward it will at all times remain in a vertical position, owing to the grooved member 24. This construction can

be most easily discerned by reference to Fig. 5. Now when the bolt 22 has been passed through the plating and lug 21, as described, the screw threaded portion of the bolt projects upwardly beyond the edge of the lug 21. The proportion between the number of threads on the lug 21 and the number of threads 25 of the bolt 22, is calculated, so that when a cap cover 26 in the form of a gear or pinion is screw-threadedly secured to the lug 21, as shown in Fig. 4, the gear 26 will be secured to the lug 21 half-way before the gear 26 engages the screw threaded portion 25 of the bolt 22, the reason for this construction being more fully explained hereinafter.

A hexagonal top 27 is provided on the gears 26, for more easily gripping the gear 26 with a wrench or like member, shown in dotted lines in Fig. 4. A complete interconnected series of bolts and gears, such as has been above described, and as shown in Fig. 4, are provided, as will be most clearly seen by referring to Figs. 2 and 3. A large, circular gasket 28 is provided intermediate the lifeboat 12 and the submarine 10, and is pierced by the bolts 22, and adjacent the said gasket a second solid circular gasket 29, is provided, as will be clearly discerned in Fig. 2. Suitable smaller gaskets 30, 31, 32 and 33 are employed to prevent any leakage of water, and disposed between various joints, as shown. The chamber 20 has a removable end 34, provided to enable easy access to the chamber 20. It will be distinctly understood that the covers 18 and 18ª are not secured to the floor of the life boat until the life boat is ready to be released from the submarine.

Now should the submarine 10, equipped with the life boat 12, become disabled and sink, the crew can immediately remove the cover plate 19, crawl into the life boat 12 and replace the cover plate 19. This prevents the submarine from filling with water at this point. The safety covers 18 and 18ª are then secured in place and then by turning the gears 26 the bolts 22 holding the life boat to the submarine will be released from connection with the life boat and the life boat will rapidly rise to the surface, where the upper cover 16 can be removed, enabling the crew to get fresh air and to signal to a larger craft to rescue them. Suitable oar locks can be provided on the outside of the life boat, and a supply of food and oars can at all times be stored in the life boat. Then when the surface of the water is reached in the life boat, the crew need have no fears if a vessel is not in sight, as the life boat can be propelled through the water by means of the oars. Referring again to the bolt 22 in Fig. 4, when the gears 26 are turned to release the same from the lug 21, it will be seen that owing to the proportion of the number of threads as heretofore described, on the lug and the bolt, the bolt will drop or be disconnected from the gear 26 when the gear is half disconnected from the lug 21. Now by employing the grooved member 24, the bolt is held vertical after disengagement with the gear 26, and in being so held has a tendency to prevent an excess of water from trickling through the bolt hole in the plating into the chamber 20, and after the bolt is disengaged as heretofore mentioned, the gears 26 are rescrewed on the lugs 21 and thereby prevent any water from getting into the lifeboat through the bolt holes in the lugs 21.

Although I have described my invention as shown, it will be understood that I do not limit myself to the construction shown, the scope of my invention being fully disclosed in the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A life boat for submarine craft, comprising a shell provided with a man-hole in the floor of the shell, said shell being adapted to be removably secured to the submarine provided with a man-hole in the upper part of the same, a removable and replaceable cover for the said man-hole, to enter the said shell from the said submarine, a safety cover adapted to removably close the man-hole in the said shell, an annular chamber in the said submarine encircling the man-hole of the submarine, and inter-connected gears in the said shell engaging the said chamber for disconnecting the said shell from the said submarine.

2. A life boat for submarine craft, comprising a shell provided with a manhole in the floor of the shell, the said shell being adapted to be removably secured to the submarine, the said submarine having a manhole in the upper part of the same and adapted to aline with the man-hole in the said shell, a removable cover secured to the upper part of the said shell for covering a second man-hole in the upper part of the shell, a safety cover removably engaging the said shell for closing the first mentioned man-hole, a second safety cover removably engaging the said shell over the first mentioned safety cover, a removable and releasable cover engaging the said submarine for closing the man-hole of the submarine, an annular chamber in the submarine encircling the said man-hole of the submarine, and a series of interconnected gears in the shell and engaging the said chamber for disconnecting the said shell from the said submarine.

3. In a life-boat for submarine craft, a shell releasably engaging the submarine, a chamber on the submarine, fastening members disposed in the chamber and engaging

upwardly projecting exteriorly screw-threaded lugs, toothed wheels screw-threadedly engaging the lug and the said fastening members to release the toothed wheels and lugs from the fastening members when the toothed wheels are operated, and guides disposed in the said chamber and adapted to guide and secure the said fastening members in an upright position after the said toothed wheels and said lugs have been released therefrom.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE B. YERTON.

Witnesses:

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PHILIP D. ROLLHAUS.