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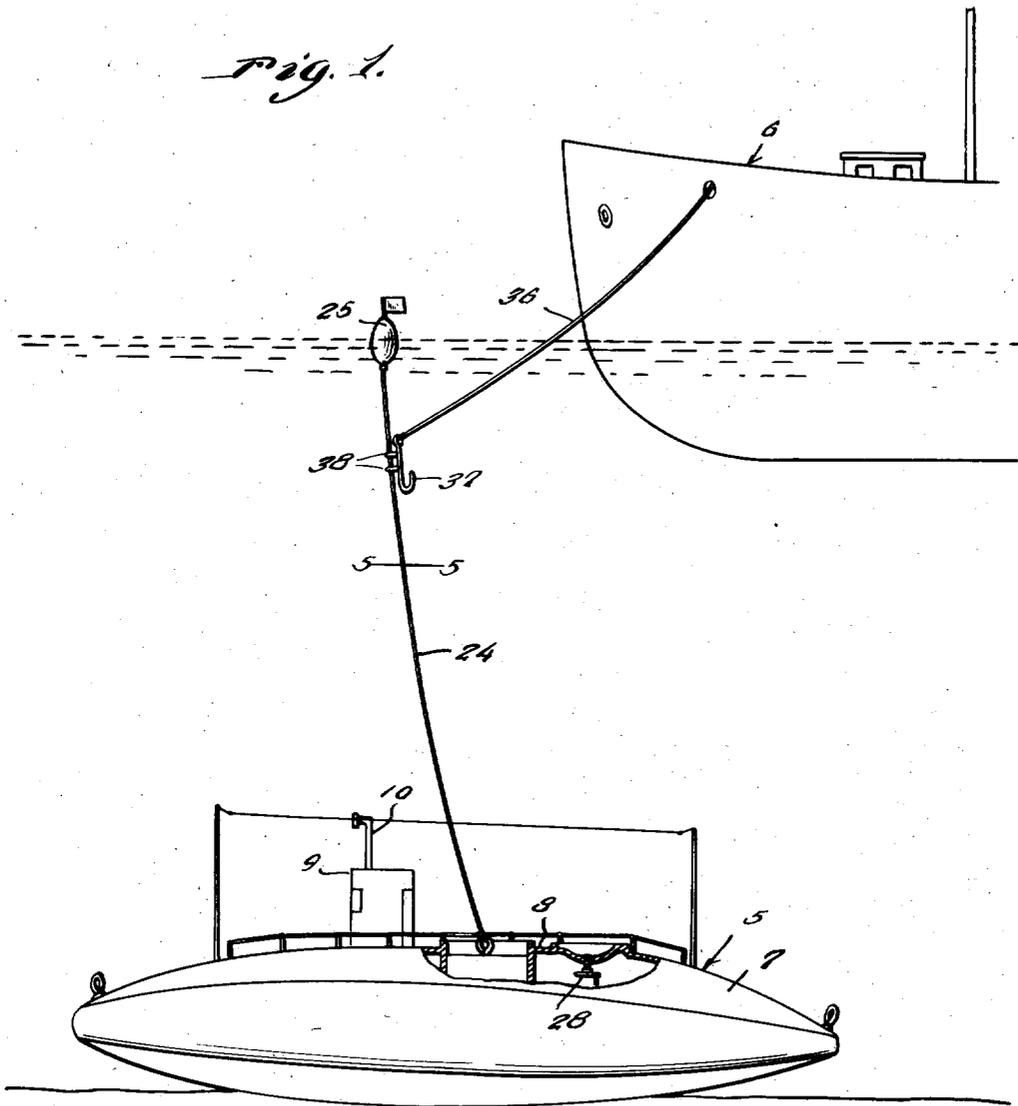
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2,030,768

LIFESAVING EQUIPMENT FOR MARINE VESSELS

Filed Feb. 14, 1935

4 Sheets-Sheet 1



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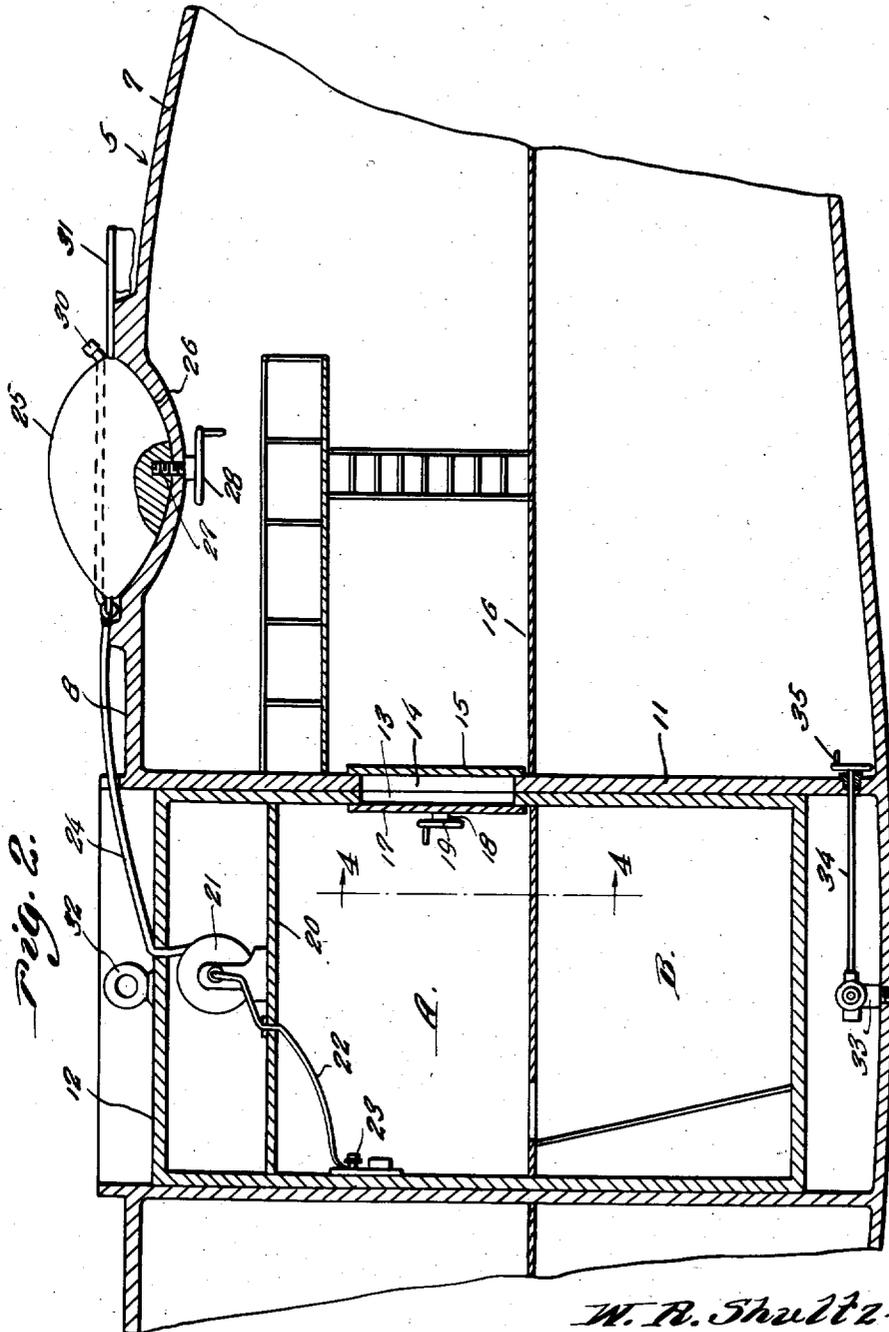
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4 Sheets-Sheet 2



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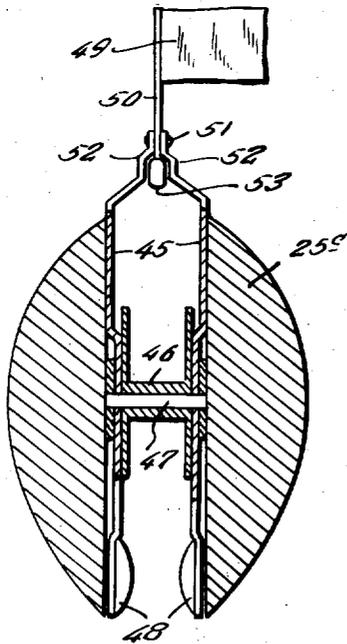
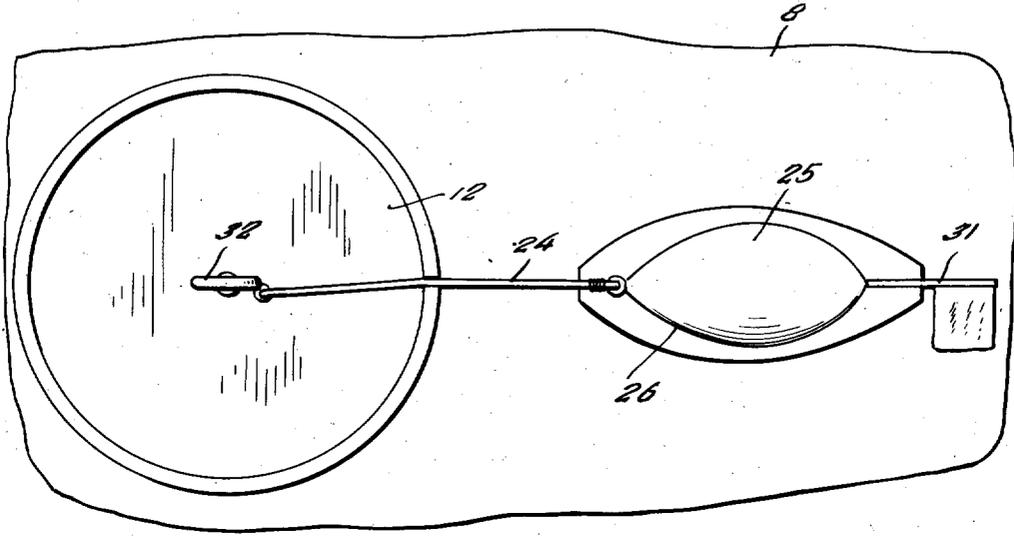
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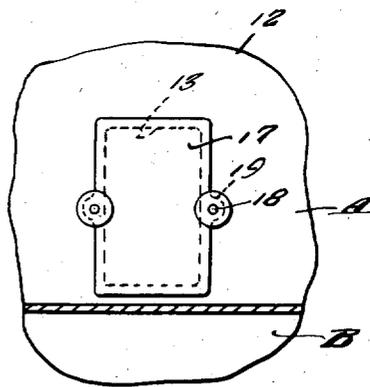
4 Sheets-Sheet 3

*Fig. 3.*



*Fig. 9.*

*Fig. 4.*



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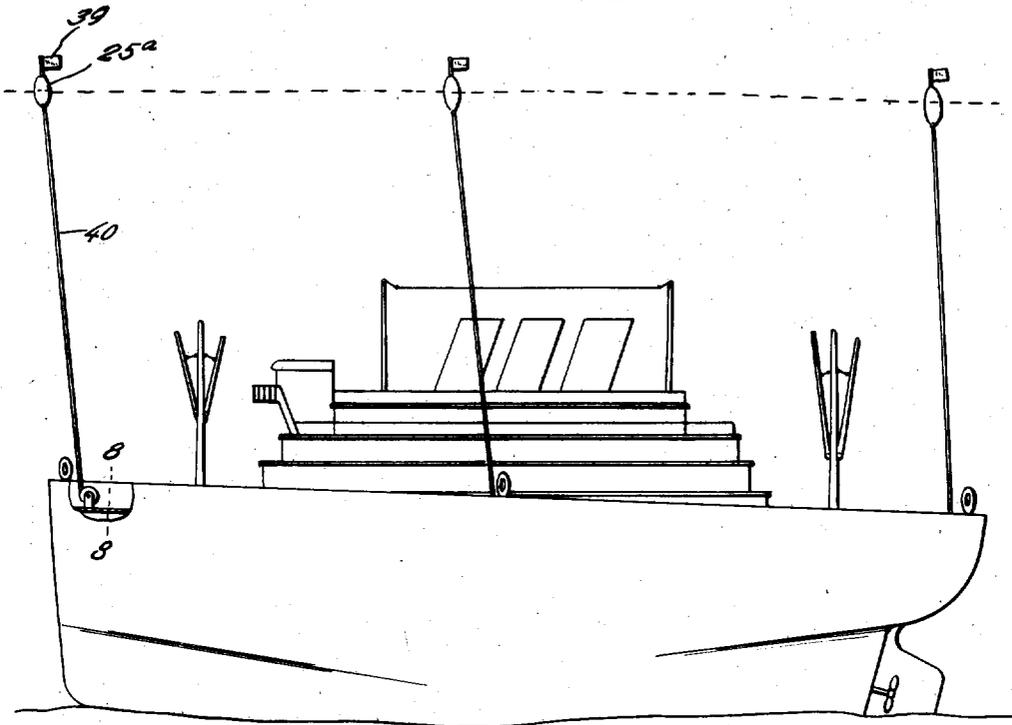
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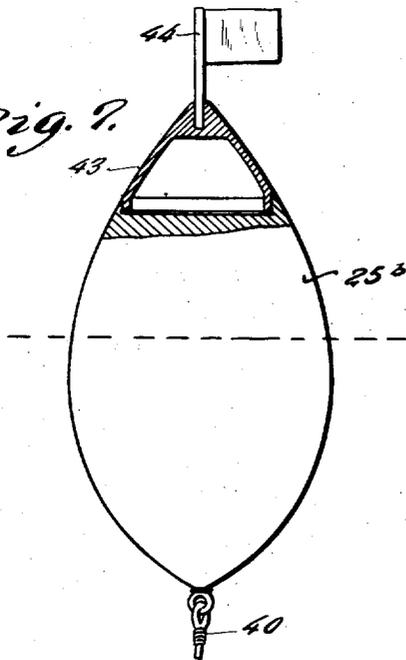
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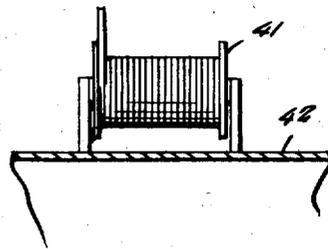
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



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# UNITED STATES PATENT OFFICE

2,030,768

## LIFESAVING EQUIPMENT FOR MARINE VESSELS

William R. Shultz, Lewisburg, Pa.

Application February 14, 1935, Serial No. 6,542

2 Claims. (Cl. 114—16.5)

This invention relates to new and useful improvements in the general art of ships and more particularly to life saving apparatus for sunken submarines.

5 The principal object of the present invention is to provide a life saving apparatus for submarines wherein the occupants of the submarines can get into a container and signal at the surface of the water their location.

10 Another important object of the invention is to provide indicating buoys for sunken vessels which can be conveniently released for use.

15 During the course of the following specification and claims other important objects and advantages of the invention will become apparent to the reader.

In the drawings:

20 Figure 1 represents a side elevational view of a salvaged boat on the surface and a sunken submarine partly in section.

Figure 2 represents a fragmentary vertical sectional view through the improved submarine.

25 Figure 3 represents a fragmentary top plan view of the submarine showing the rescue tank and associated buoy.

Figure 4 represents a fragmentary sectional view taken substantially on line 4—4 of Figure 2.

30 Figure 5 represents a cross sectional view of the buoy cable taken substantially on the line 5—5 of Figure 1.

Figure 6 represents a side elevational view of a sunken merchant ship with float buoys.

Figure 7 represents a side elevational view partly in section showing a modified form of buoy.

35 Figure 8 represents a sectional view taken substantially on line 8—8 of Figure 6 showing the cable reel.

40 Figure 9 represents a vertical sectional view through another form of buoy of the reel carrying type.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the numeral 5 generally refers to a sunken submarine while numeral 6 generally refers to a salvage 45 boat.

The sunken submarine as shown consists in the construction of the hull 7 provided with the deck 8, the conning tower 9 with the periscope 10 mounted thereon.

50 In carrying out the present invention, the submarine is provided with a vertically extending cylindrical compartment 11 which extends from the bottom of the submarine through the deck 8.

55 Within this chamber 11 is a cylinder 12, the same being closed at the top and bottom and pro-

vided with an opening 13 in the side thereof normally registering with the opening 14 in the wall of the chamber 11. The wall of the chamber 11 has a hinged door 15 opening into the interior of the submarine above the sub-deck 16, while the cylinder 12 at the inner side thereof is provided with a closure 17 which can be secured to the side wall of the cylinder 12 by screws 18 equipped with hand wheels 19.

The interior of the cylinder 12 is provided with a partition 20 adjacent the top thereof upon which is mounted a reel 21. Telephone cable 22 extends from the telephone apparatus 23 located within the cylinder 12 below the partition 20, to connect up with the cable 24 which connects to 15 the buoy 25, the latter being seated within the pocket 26 in the deck 8 and retained in this position by the screw 27 which extends up through the bottom of the pocket from the interior of the submarine to screw into the buoy to retain the same against displacement from the pocket. This screw 27 is provided with a hand grip 28 to facilitate detachment of the screw from the buoy.

The telephone wires 29 in the cable 24 extend through the buoy and terminate in a socket 30 at 25 the top of the buoy where connection can be made with telephone equipment on the salvage ship 6. The top of the buoy carries a signal flag 31, while the top of the container or cylinder 12 has a large eye 32 thereon.

A valve 33 is provided in the bottom of the boat and this can be controlled by the shaft 34 and hand wheel 35 to permit water to enter the chamber 11 so that there will be no vacuum created in the chamber as it is being drawn out by the rescue 35 ship.

In rescuing the occupants of the submarine, the salvage ship puts over the line 36 with a hook 37 on the end thereof, this hook being provided with collars 38 for engaging around the buoy cable 40 24 in the manner substantially shown in Figure 1. Obviously the hook 37 can be lowered to a position immediately above the chamber 11, at which point some fishing with the hook 37 will undoubtedly result in the engagement of the hook 45 with the eye 32, after which the cylinder 12 can be drawn to the surface and the occupants removed.

As is shown in Figure 2, the interior of the cylinder 12 can be divided into an upper story A 50 and a lower story B.

When a merchant ship has sunk and it is desired to mark the location of the same similar buoys 25a are used. These buoys 25a are 55 equipped with eyes 39 and the cables leading

therefrom extend to the reels 41 located on the deck 42 of the ship. Obviously when a ship is about to sink, these reels can be released, and of course the buoys being free rise to the surface.

5 It is preferable that one buoy is located at the bow, another at the stern and two amidship, one on the port side and one on the starboard side and with this arrangement the exact lay of the ship can be determined.

10 Figure 7 shows a form of buoy, the floatable part being denoted by reference character 25b, the same being provided with a threaded depression in the top thereof to receive the insertable and externally threaded dome 43 which carries

15 a flag 44 at its apex. The depression along with the dome 43 which is hollow forms a compartment in which valuable records of the ship can be placed, especially when the crew has no provision available for saving the same otherwise.

20 Another form of buoy is shown in Figure 9 wherein the buoy proper denoted by reference character 25c is divided axially to accommodate the pair of side plates 45—45 between which the cable reel 46 is mounted, this cable reel 46 being

25 rotatable on the shaft 47 which has its ends journaled in the plate 45—45. The lower ends of the plate 45—45 are provided with weights 48 so as to maintain the buoy in the upright position shown in Figure 9 so that the flag 49 will remain

30 upright. This flag 49 has its shaft 50 swingably mounted as at 51 between the upstanding portion 52 of the side plate 45—45, the lower end of the shaft 50 below the pivot 51 being provided with a weight 53. Thus, with the flag mounted

in this manner there will be a waving motion of the flag as the buoy rocks upon the surface of the water.

When using this type of buoy, the cable 40 is of course wound on the reel 46 while the ship is in normal use. The outer end of the cable is attached to the ship in some way so that when the ship sinks, the buoy will float away from the ship and unreel itself until it rises to the surface of the water.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit or scope of the invention as claimed hereinafter.

Having thus described my invention, what I claim as new is:

1. A buoy comprising a floatable body, a reel mounted in the body, a frame in the body for supporting the wheel, said frame being provided with a weight at one end, and a rockable flagstaff provided with a flag at the opposite end of the frame.

2. A buoy comprising a floatable body, a reel mounted in the body, a frame in the body for supporting the wheel, said body being constructed of a pair of hemi-ovoid shaped members, said frame serving to space the hemi-ovoid shaped members apart and means on the frame for maintaining the body in a definite upright position.

WILLIAM R. SHULTZ.