June 21, 1927. 1,633,484

O. GUIDOTTI

BUOY

Filed Dec. 9, 1925

Fig. 1.

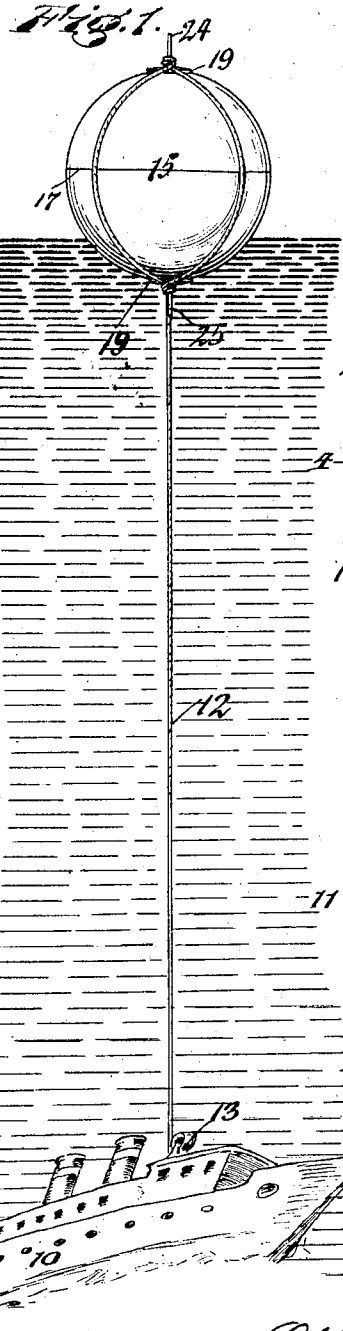


Fig. 2.

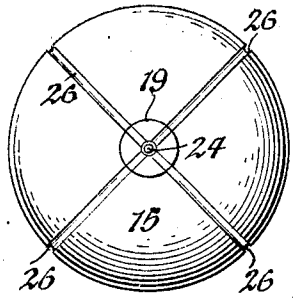


Fig. 3.

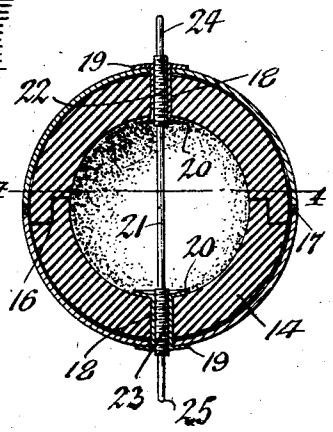
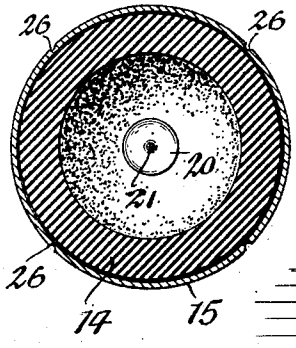


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BUOY.

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This invention relates to a buoy for marking the location of objects under water, such for example as a sunken ship, and it is the object of this invention to provide a buoy which is strong and durable and not liable to get out of order under severe usage and which permits of easily and readily attaching a stay line thereto which connects with the sunken or submerged object so as to definitely determine its location.

In the accompanying drawings:—

Figure 1 is a side elevation of the buoy constructed in accordance with my invention and showing the same attached by a stay line to a sunken ship for locating the latter

Figure 2 is a top plan view thereof.

Figure 3 is a vertical section of the same.

Figure 4 is a horizontal section taken on line 4—4, Fig. 3.

Similar characters of reference indicate like parts in the several figures.

In the drawings a ship 10 is sunk to the bottom of a body of water 11 is represented in connection with my improved buoy for marking the location of the ship and thus facilitate raising the ship or removing the valuables therefrom.

The buoy is connected with the sunken ship or other object by a stay line 12, the lower end of which may be attached to a reel 13 on ship board and which may be unwound therefrom as the ship sinks and pay out enough line to permit the buoy to float on the surface of the water.

My improved buoy comprises in its general organization a buoyant body and means for attaching the upper end of a stay line thereto. In the preferred construction the body consists of a hollow spherical inner shell 14 of rubber which is comparatively thick and strong and an outer shell 15 of sheet metal, such as copper, which is comparatively thin. The inner shell may be made in two semi-spherical sections arranged one above the other and the horizontal joint 16 between the same may be sealed by any suitable rubber cement. The outer shell may likewise be made of two superposed semi-spherical sections, the joint 17 between which is sealed by soldering or brazing in a well known manner.

Arranged in the upper and lower parts of the body are two bushings or ferrules 18 each of which extends vertically through the two shells thereof and is provided with outer and inner flanges 19, 20 bearing against the outer side of the outer shell and the inner side of the inner shell, respectively. A leak tight joint may be produced between each of these bushings and the body by soldering the outer flange of the same to the outer metal shell. The bore of each bushing is provided with an internal screw thread and two bushings are connected with each other so as to hold the body distended by a tie rod 21 which passes diametrically through the body and engages threaded portions 22, 23 near opposite ends thereof with the internal threads of the bushings. The latter are preferably soldered to the tie rod to exclude water from the interior of the buoy body. The extremities of the tie rod project laterally beyond the side of the buoy body so as to form attaching pins 24, 25 around which the stay line is wound and fastened by tying or otherwise to form a connection between the stay line and buoy.

In order to effectively embrace the buoy body and reliably connect the stay line therewith, the outer shell of the body is provided with one or more circumferential grooves 26, preferably two in number which are arranged at right angles to each other and divide the body into quarters. The stay line in addition to being wound around the end pins of the tie rod, also engages with the several grooves 26, whereby the stay line is reliably held against circumferential displacement and thereby forms a strong connection between the buoy and the stay line which will ensure definite marking of the location of the sunken ship so that the same can be reached with ease and facility.

As a whole this buoy is very strong and not liable to be crushed by the action of storms and the same permits of quickly attaching a line thereto in case of emergency so that the place where the ship is sunk can be marked if the same has to be abandoned hastily.

I claim as my invention:—

A buoy comprising a spherical body having an inner shell and an outer shell, said inner shell consisting of semi-spherical rubber sections, the joint between which is sealed, and said outer shell consisting of

semi-spherical metal sections, the joint between which is sealed, bushings extending through diametrically opposite parts of the inner and outer shells of said body and each having an internal screw thread and inner and outer flanges bearing respectively against the inner side of the inner shell and the outer side of the outer shell, and a tie rod extending diametrically through said body and bushings and having externally threaded parts engaging the threads of the bushings and having its ends projecting beyond the outer side of the body to form pins for receiving a stay line.

OTTO GUIDOTTI.