April 10, 1945. J. F. PROWS 2,373,502

SHIP LOCATOR AND RAISING DEVICE

Filed June 9, 1943 2 Sheets-Sheet 1

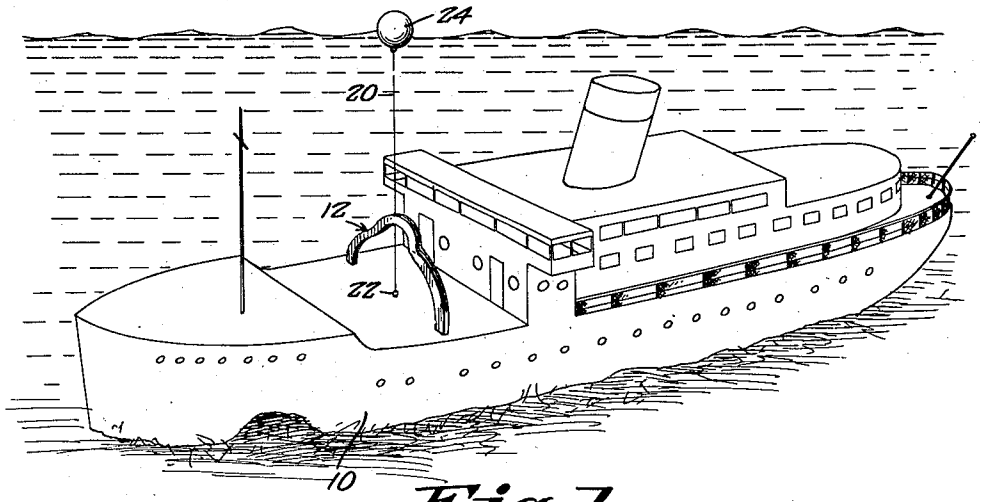


Fig. 1.

Fig. 2.

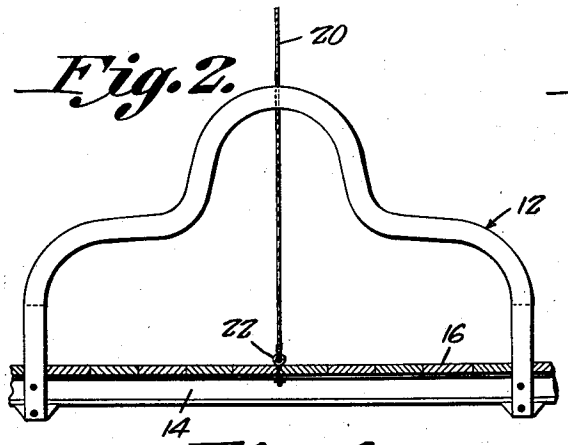


Fig. 3.

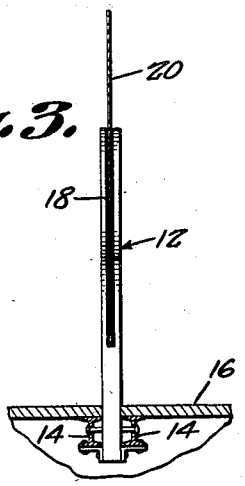
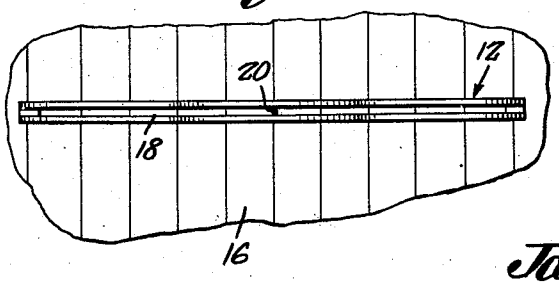


Fig. 4.



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Filed June 9, 1943 2 Sheets-Sheet 2

Fig. 5.

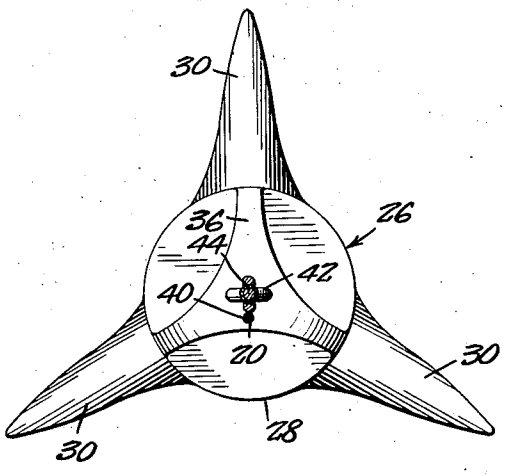


Fig. 6.

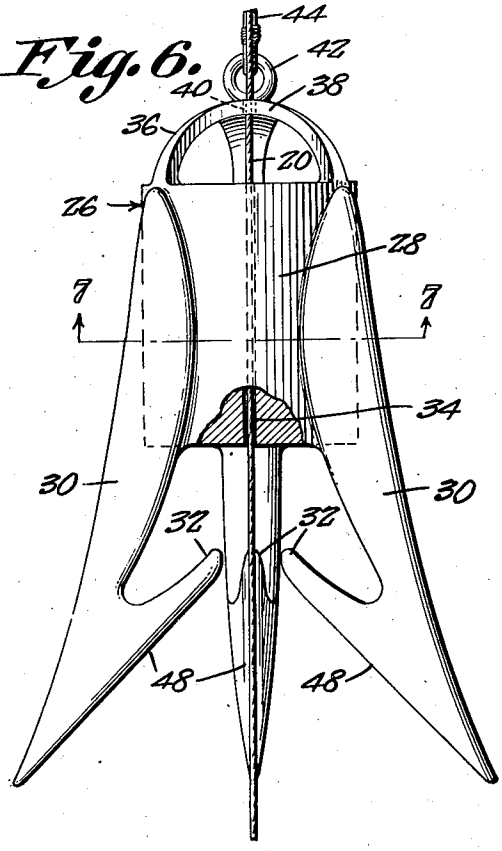


Fig. 8.

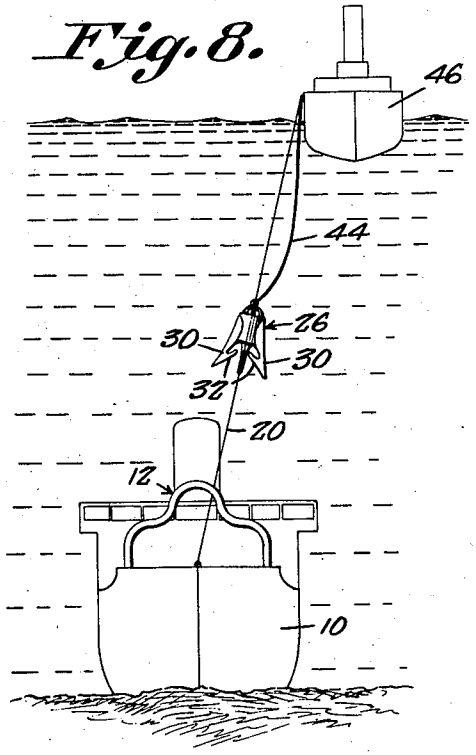
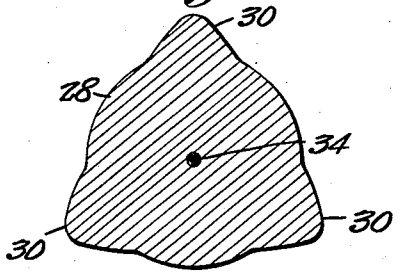


Fig. 7.



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UNITED STATES PATENT OFFICE

2,373,502

SHIP LOCATOR AND RAISING DEVICE

James F. Prows, Vallejo, Calif.

Application June 9, 1943, Serial No. 490,206

3 Claims. (Cl. 114—50)

My invention relates to sunken ships and has among its objects and advantages the provision of an improved ship locator and raising means.

In the accompanying drawings:

Figure 1 is a perspective view of a sunken ship illustrating our invention applied thereto;

Figure 2 is a face view of a hold;

Figure 3 is an end view of the structure of Figure 2;

Figure 4 is a top view of the structure of Figure 2;

Figure 5 is a top view of a grab adapted for coaction with the hold to lift the vessel;

Figure 6 is a side view partly in section of the grab;

Figure 7 is a sectional view along the line 7—7 of Figure 6; and

Figure 8 is a diagrammatic view illustrating the manner in which the grab is directed to the hold on the sunken ship.

In the embodiment selected for illustration, the ship 10 is provided with a hold 12 of bail-like contour having its ends firmly secured to beams 14 secured to the deck structure 16 of the ship. The hold 12 is provided with a slot 18 throughout its greater extent for loosely receiving a cable 20 having one end secured at 22 to the deck structure 16 and its other end secured to a buoy or float 24 adapted to rise to the surface when the ship is sunk.

In Figures 5 and 6, the grab 26 comprises a body 28 having three arms 30 depending therefrom in diverging relationship. Each of the arms 30 includes an inwardly extending hook 32. The arms 30 are arranged one hundred an twenty degrees apart and the hooks 32 are spaced in close relationship but sufficiently far apart to permit the hold 12 to pass freely therebetween. The hooks are also spaced concentrically about the axis of an opening 34 extending longitudinally through the body 28 at its center.

To the upper end of the body 28 is fixedly connected arms 36 connected together as a unit at 38 and provided with an opening 40 for the free passage of the cable 20. An eye 42 is secured to the arms 36 for connection with a lifting cable 44 lowered from the rescue vessel 46.

In operation, the grab 26 is lowered on the cable 20 to bring one of its hooks 32 into hooked engagement with the hold 12. The hooks 32 have angular edges 48 which engage the hold 12 to cam the hold to a position between the arms and above the hooks 32. The grab 26 may be accurately lowered into position by maintaining the cable 20 taut and a slight inclination of the cable with respect to the vertical will cause one of the hooks to catch on the hold 12 when the grab is lifted.

The slot 18 permits the cable 20 to swing relatively to the hold in the event that the sunken ship tilts over on its side. The cable 20 is normally coiled on the vessel and the float 24 locates the position of the sunken vessel.

Without further elaboration, the foregoing will so fully illustrate my invention, that others may, by applying current knowledge, readily adapt the same for use under various conditions of service.

I claim:

1. In combination with the exposed deck of a ship and means mounted in supporting position under the deck, of an auxiliary beam disposed parallel with and closely adjacent one of said deck beams, an approximately inverted U-shaped member mounted in vertical transversely arranged position on the deck, said member having vertical end legs extending through openings in the deck between the adjacent beams thereunder, the U-shaped member having a slot extending the full length thereof and terminating above the bottom ends of the legs, a fastening element extended transversely through the webs of said beams and each leg, and angular brackets connecting the lower end of each leg with said beams.

2. In combination with the exposed deck of a ship and means mounted in supporting position under the deck, of an auxiliary beam disposed parallel with and closely adjacent one of said deck beams, an approximately inverted U-shaped member mounted in vertical transversely arranged position on the deck, said member having vertical end legs extending through openings in the deck between the adjacent means thereunder, the U-shaped member having a slot extending the full length thereof and terminating above the bottom ends of the legs, a fastening element extended transversely through the webs of said beams and each leg, angular brackets connecting the lower end of each leg with said beams, a line fastened to the deck and extended through the slots in the U-shaped member, a float attached to the free end of said line, and a grab adapted for sliding on said line having a plurality of fixed converging hooks for engagement with said U-shaped member.

3. In a ship raising grab, a cylindrical body having a guide bore axially therethrough, a plurality of arms integral with the body and extending longitudinally downward therefrom in diverging outwardly curved formation, a hook directed inwardly and upwardly from the lower part of each arm, and an arcuate upwardly bulging spider formed integral with the top end of the body for attachment of a hoist line thereto.

JAMES F. PROWS.