Sept. 12, 1933. A. DESCHÊNES 1,926,229

SAFETY DEVICE FOR SUBMARINE BOATS

Filed June 18, 1932

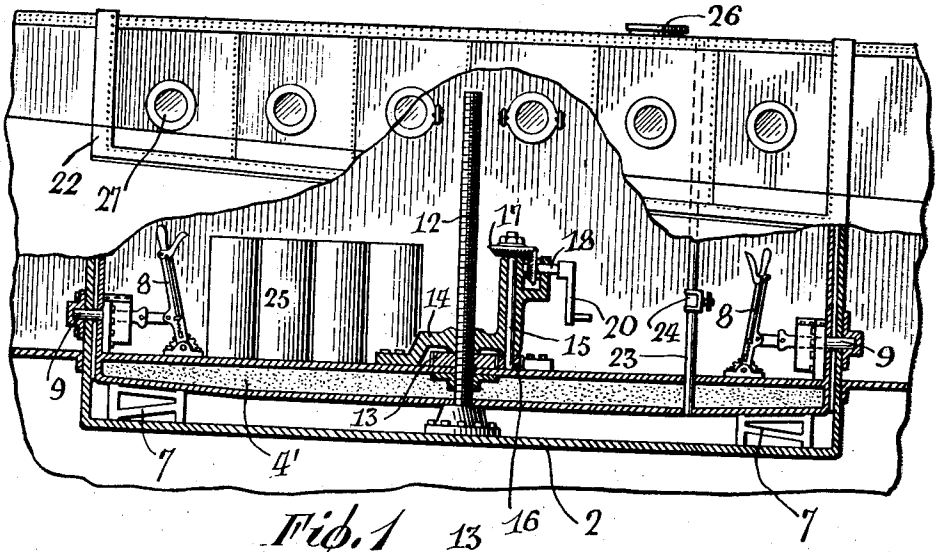


Fig. 1

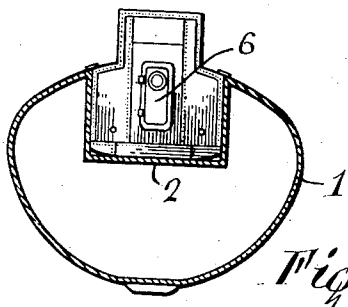


Fig. 2

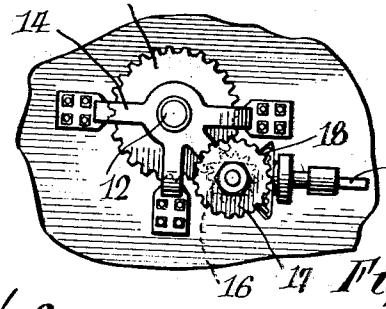


Fig. 3

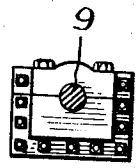


Fig. 4

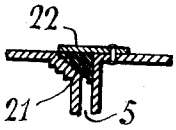


Fig. 7

Fig. 5

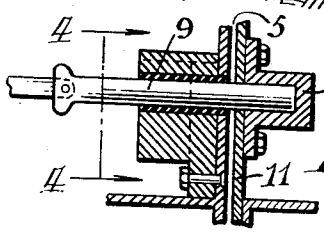


Fig. 6

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SAFETY DEVICE FOR SUBMARINE BOATS

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1 Claim. (Cl. 114—16.7)

Since the introduction of the submarine boat, considerable loss of life has occurred through the inability of the crew to escape when the boat springs a leak while submerged or for any other reason fails to return to the surface of the water. The object of this invention is to do away with such needless loss of life by providing means of escape for the crew under the conditions described above.

This object is accomplished by means of a water tight compartment member mounted in the boat and releasable therefrom at will. The member is buoyant in water and may be entered by the crew in case of need and then sealed again. Within this member are devices for detaching it from the boat and for admitting water beneath it, whereupon it rises to the surface of the water. Further, the compartment member may be lifted mechanically out of the boat. The member contains oxygen tanks to sustain the crew and is equipped with port holes for sighting aid and with a manhole cover for rescue.

The invention is fully disclosed by way of example in the following description and in the accompanying drawing in which

Figure 1 is an elevation, partly in section, of the device;

Figure 2 is a transverse section of a submarine boat equipped according to the invention;

Figure 3 is a plan section of the operating gearing;

Figure 4 is a section on the line 4—4 of Figure 6;

Figure 5 is an elevation of the submarine, showing the floating compartment released therefrom;

Figure 6 is a detail section of the locking device; and

Figure 7 is a detail section of the sealing means.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figure 5 is illustrated a submarine boat 1 of usual construction except that it is formed with a pocket or cavity 2 at any desired point in its top, either behind or in front of the tower 3. In the cavity is mounted a box-like compartment member 4, separable from the vessel and preferably having a clearance 5 from the walls of the cavity.

The floating compartment is air and water tight and may be entered from the vessel through doors 6 as shown more clearly in Figure 2. The member 4 rests on struts 7 in the bottom of the cavity 2 and further contains levers 8 from which locking bolts 9 extend into keepers 10 secured to the walls 11 of the cavity as shown in Figure 6.

To the bottom of the cavity 2 is secured a vertical screw post 12 on which is threaded a gear 13. A frame 14 secured to the bottom of the compartment 4 engages the top of the gear 13 and has a vertical shaft 15 journalled therein. This shaft carries at one end a pinion 16 meshing with the gear 13 and at its other end a bevel pinion 17. Further, a stub shaft 18 is journalled in the frame 14 and carries a pinion 19 meshing with the pinion 17. The shaft 18 is turned by means of a crank 20 thereon.

Normally, the clearance 5 around the member 4 is sealed by a flexible strip 21 carried by a marginal plate 22 secured to the upper edge of the member 4 as shown in Figure 7. A pipe 23 extends from the top of the member 4 to the bottom of the cavity 2 and contains a valve 24, for a purpose which will presently be described.

In the use of the device, in case the submarine fails to rise after submersion, the members of the crew enter the compartment 4 through the doors 6 and close the doors behind them. The compartment is buoyant in water, and the valve 24 is opened to admit water beneath it. The levers 8 are pulled to withdraw the bolts 9, and the crank 20 is turned. The consequent turning of the gear 13 on the screw post 12 effects an upward pressure on the frame 14 and thus aids in lifting the compartment out of the vessel. The clearance 5 avoids bending during this movement. Ballast 4' is provided in the bottom of the member 4 to steady the same when afloat.

The compartment rises to the surface of the water as shown in Figure 5. The shape of the frame 14 as shown in Figure 3 permits removal of the gear 13 and plugging of the hole which remains in the bottom of the compartment on withdrawal from the post 12. While awaiting rescue, the crew obtains oxygen from suitable tanks 25 in the compartment. A manhole cover 26 in the top of the compartment and releasable from the inside or outside is provided for release or rescue. The compartment may have port holes 27 to furnish light and permit sighting the rescuers.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claim.

What I claim is:

In a submarine boat, a buoyant and water-tight compartment member detachably mounted therein, and a closure member in said compartment member for permitting passage from the boat to the latter, a screw post fixed to said boat and extending upwardly into said compartment member, a nut on said post, a frame fixed to said compartment member and engaging the top of said nut, a shaft journaled in said frame and geared to said nut, and means for turning said shaft.

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