

W. DAUBENBERG & E. W. APPELMAN.
ATTACHMENT FOR SUBMARINES.
APPLICATION FILED SEPT. 25, 1916.

1,252,408.

Patented Jan. 8, 1918.
2 SHEETS—SHEET 1.

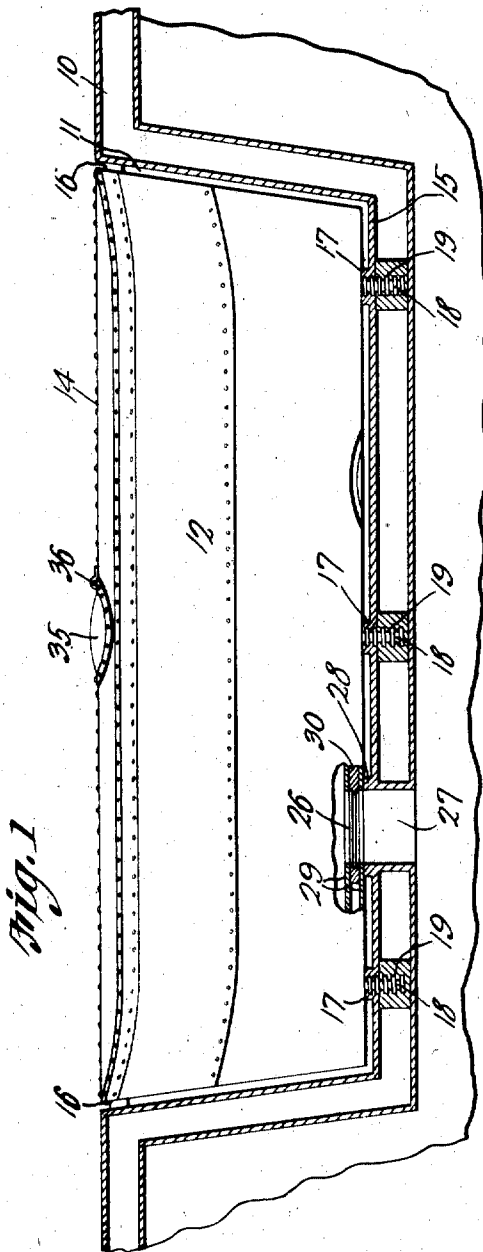


Fig. 1

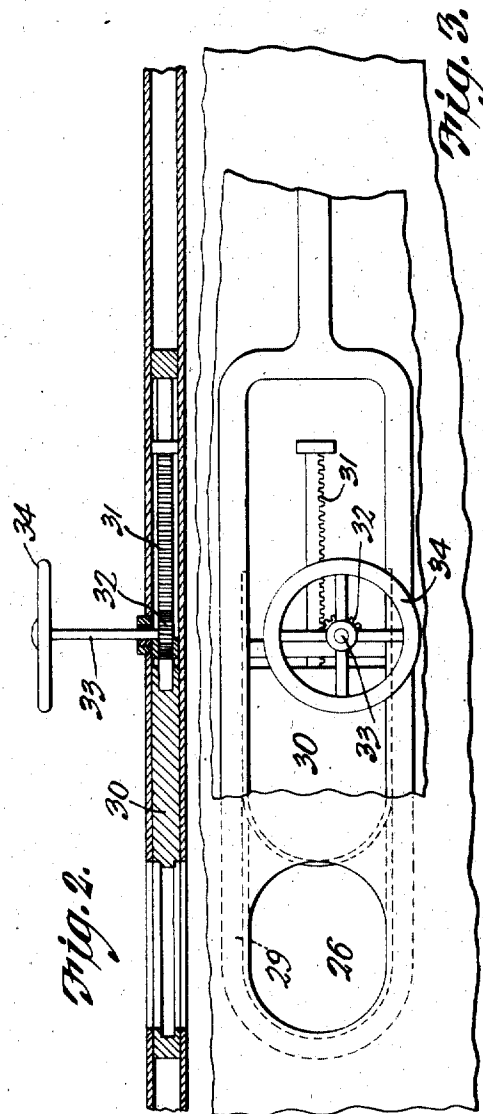


Fig. 2

Fig. 3

Witnesses

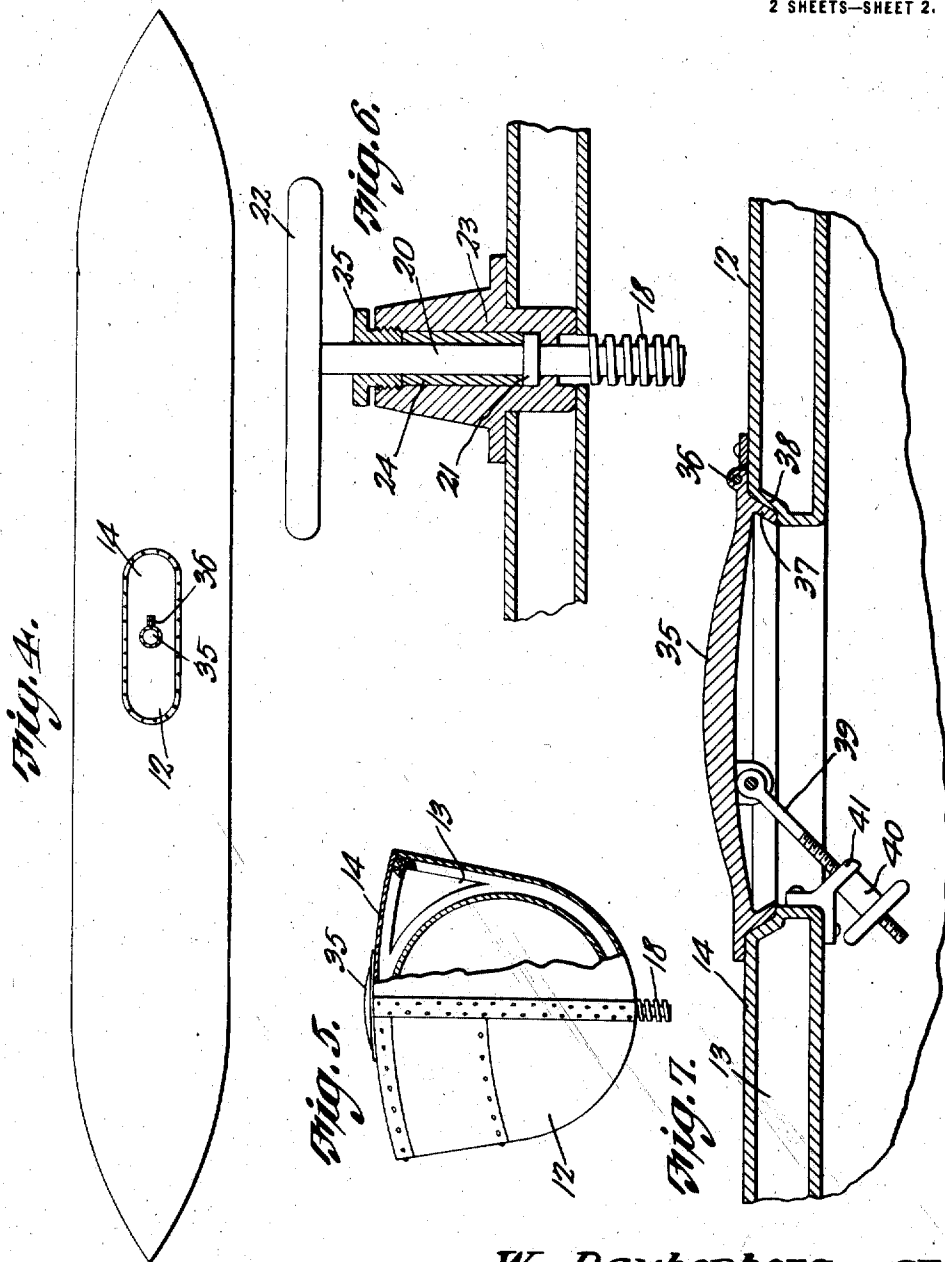
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UNITED STATES PATENT OFFICE.

WILLARD DAUBENBERG AND ERASTUS W. APPELMAN, OF POSTVILLE, IOWA.

ATTACHMENT FOR SUBMARINES.

1,252,408.

Specification of Letters Patent.

Patented Jan. 8, 1918.

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To all whom it may concern:

Be it known that we, WILLARD DAUBENBERG and ERASTUS W. APPELMAN, citizens of the United States, residing at Postville, in the county of Allamakee and State of Iowa, invented a new and useful Attachment for Submarines, of which the following is a specification.

The object of the invention is to provide
10 a lifeboat attachment for submarines whereby the release of the boat when desired during the submersion of the submarine is facilitated and insured regardless of the depth of submersion and the pressure due
15 to the weight of the water exteriorly applied; and also to provide efficient means for maintaining the boat in place with reference to the submarine, until its release is desired or necessary, without affording any
20 increased resistance to the operation of the submarine, and means for effectively protecting the occupants of the submarine in passing therefrom to the boat and after entering the same.

25 With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood
30 that changes in the precise embodiment of the invention herein described can be made within the scope of what is claimed without departing from the spirit of the invention.

35 In the drawing Figure 1 is a longitudinal sectional view of a portion of a submarine shell showing a lifeboat in accordance with the invention operatively positioned with reference thereto.

40 Fig. 2 is a detailed sectional view taken longitudinally of a portion of the bottom of the lifeboat to show the bottom hatch or inlet hatch and means for operating same.

45 Fig. 3 is a plan view of a portion of the bottom of the boat to further illustrate the mechanism indicated in Fig. 2.

Fig. 4 is a general plan view of a submarine provided with the attachment.

50 Fig. 5 is an end view partly broken away of the boat attachment.

Fig. 6 is a detailed sectional view showing the means for locking the lifeboat in its seat in the submarine shell.

55 Fig. 7 is a detailed sectional view showing a preferred form of top or outlet hatch.

In the illustrated embodiment of the in-

vention the shell 10 of the submarine (which shell may be of any suitable construction) is provided with an indent or seat 11 of a capacity and shape corresponding approxi- 60 mately with the exterior of a lifeboat 12 of the preferred general construction and shape and which obviously may be provided with any desired arrangement of buoying compartments 13. When arranged in the seat in 65 the shell of the submarine, the upper surface or deck 14 of the lifeboat is preferably flush with the deck of the submarine, so that no projecting obstacle to the movement of the submarine is presented, while the bottom 70 and walls of the boat are spaced from the floor 15 and walls of the seat to permit of the free circulation of water between the exterior of the lifeboat and the seat, so that when submerged the pressure is equalized on 75 all sides of the lifeboat to prevent any tendency to suction in displacing the boat from its seat and neutralize the downward pressure upon the deck of the boat by an equal upward pressure upon its bottom. With this 80 arrangement the lifeboat is adapted to leave its seat and rise through the water to the surface thereof by its own buoyancy and without the exertion of any effort by the operators. This spaced relation between the 85 walls of the boat and the surfaces of the seat is secured by side battens 16 and bottom battens 17 upon the latter of which the keel of the boat rests, and anchoring screws 18 preferably extend through these bottom 90 battens or rests and engage threaded sockets 19 in the shell of the submarine. Any suitable means for operating and packing the anchoring means may be employed, Fig. 6 showing a convenient arrangement wherein 95 the stem 20 of the screw is provided with a collar 21 and a hand wheel 22, the former being arranged in a packing box 23 provided with packing 24 and a gland 25. The turning of the anchor screws sufficiently to dis- 100 engage them from their sockets 19 is sufficient to release and permit the rise of the boat. In the bottom of the boat is provided an entering hatchway 26 adapted to register with a hatchway 27 in the bottom 105 of the seat formed in the submarine shell, a suitable packing ledge or batten 28 surrounding said opening 27 to form watertight contact with the exterior surface of the boat around said entrance hatch opening, 110 and mounted in a suitable loop-shaped guide 29 around and extending from said hatch

opening is a sliding hatch 30. The guide should be suitably packed between the outer and inner shells or walls of the boat so that when the hatch is in place a watertight closure is provided, and any suitable means for operating the hatch may be provided such as a rack 31 extending from the hatch within the guide engaged by the pinion 32 within the guide secured to the stem 33 of a hand wheel 34.

Also a top or outlet hatch is provided in the boat as at 35, which may be hinged as at 36, flanged as at 37 to engage the seat 38 and provided with a suitable locking means such as a pivotal rod 39 provided with a hand wheel nut 40 engaging a bracket 41.

The operation and advantages in view of the above explanations will be understood, and especially with reference to the facility with which the boat may be detached as a means of rescuing the occupants of the submarine in the event of injury to the latter while submerged, while offering no projection from the surface of the submarine shell, the top of the boat seat being permanently

open to permit of release of the boat at any time by the manipulation of means within the latter.

Having thus described the invention, what is claimed is:

A submarine vessel having an exterior seat and hatchway leading thereto, a double walled boat held detachably to said seat and having a hatchway registering with the aforesaid hatchway, a loop-shaped guide between the walls of the boat surrounding and extending from the hatchway of the boat, a hatch slidable in said guide to close the hatchway of the boat and movable away from said hatchway, and means carried by the boat within said guide for moving the hatch.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

WILLARD DAUBENBERG.
ERASTUS W. APPELMAN.

Witnesses:

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