

A COTÉ.
SUBMARINE LIFE SAVING DEVICE.
APPLICATION FILED FEB. 21, 1921.

1,409,361.

Patented Mar. 14, 1922.
2 SHEETS—SHEET 1.

Fig. 1.

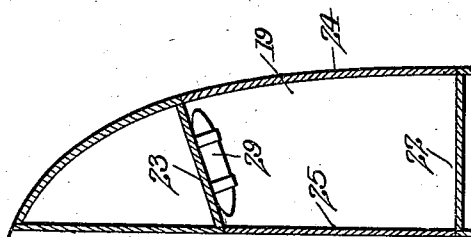
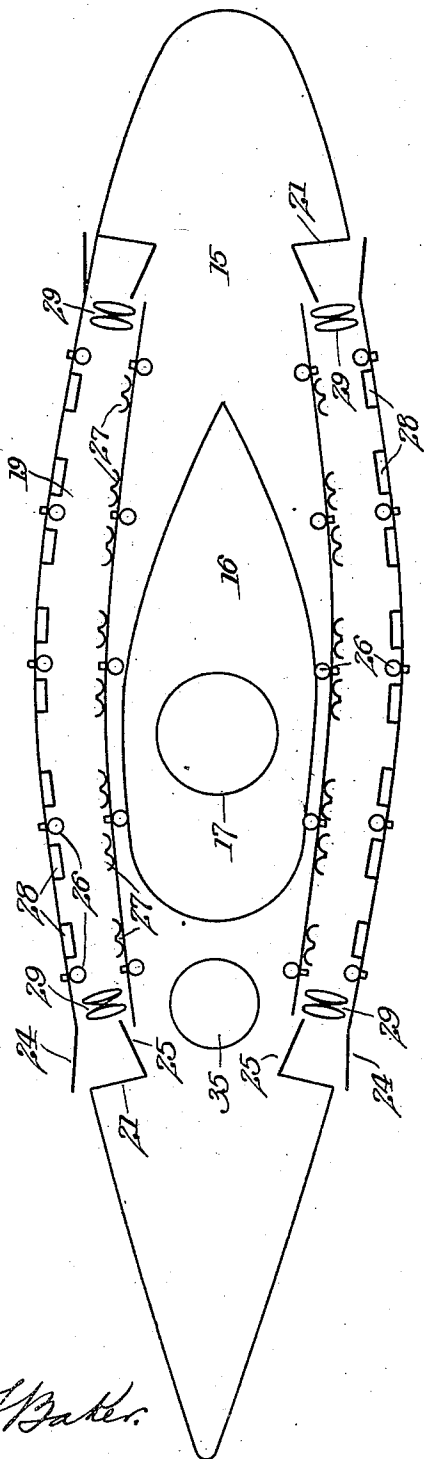


Fig. 3.

G. F. Baker.

WITNESS:

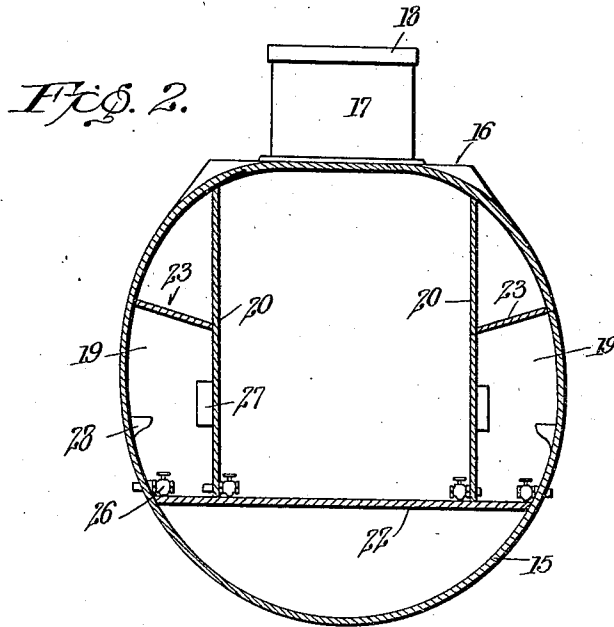
Adrien Côté,
INVENTOR

BY Victor J. Evans
ATTORNEY

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UNITED STATES PATENT OFFICE.

ADRIEN COTÉ, OF FRANKLIN, MASSACHUSETTS.

SUBMARINE LIFE-SAVING DEVICE.

1,409,361.

Specification of Letters Patent. Patented Mar. 14, 1922.

Application filed February 21, 1921. Serial No. 446,669.

To all whom it may concern:

Be it known that I, ADRIEN COTÉ, a citizen of the United States, residing at Franklin, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Submarine Life-Saving Devices, of which the following is a specification.

This invention relates to life saving devices for the crews of submarines and has for its object the provision of means whereby the crew of a submarine may save themselves in case the submarine sinks.

An important object is the provision of means of this character by which escape of the crew will be possible regardless of whether the submarine, after sinking, lies upon either side, is tilted either forwardly or rearwardly, or whether it is partially embedded in sand or ooze, special means of egress being provided.

A further and more specific object is the provision in a submarine of chambers formed within opposite sides and normally in non-communicating relation to the remainder of the hull but provided with doors whereby the crew may pass into the chambers and provided with other doors leading to the outside, valves being provided for admitting sea water to the chambers.

Another object is the provision in a life saving apparatus of this character of collapsible rafts located within the end portions of the chambers and formed of buoyant material so as to rise to the surface when the outside doors are opened, the rafts being designed to support the crew after they have reached the surface.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed and illustrated in the accompanying drawings in which—

Figure 1 is a somewhat diagrammatic plan view of a submarine constructed in accordance with my invention, parts being in section,

Figure 2 is a central cross sectional view therethrough, and

Figure 3 is a cross sectional view taken at the end of one of the compartments or chambers.

Referring more particularly to the drawings, the numeral 15 designates generally a submarine hull having a deck 16 provided

with the usual entrance and exit opening 17 normally closed by a suitable door 18. In carrying out my invention I provide within opposite sides of the hull, elongated compartments or chambers 19 formed by longitudinal partitions 20, transverse ends 21, bottoms 22, and upwardly and outwardly inclined ceilings 23. These compartments are provided with doors 24 opening outwardly through the hull and are also provided with doors 25 which open outwardly from the interior of the main portion of the hull. Any suitable or preferred means is of course employed for holding these doors shut and water tight. Such means is not illustrated as it is believed to be a non-essential detail. Each compartment is provided with a series of sea cocks 26 of conventional construction or which might be constructed for simultaneous operation so that the compartments may be flooded rapidly when desired.

Suitably mounted within the compartment are racks 27 for life saving belts and other racks 28 have helmets equipped with air or oxygen tanks to support breathing.

Located within each end of each compartment or chamber is a collapsible raft designated broadly by the numeral 29. Each of these rafts is formed of a pair of torpedo shaped buoyant bodies 30 which might be cork or which might be tanks. These bodies are encircled separately by suitable collars or rings 31 to which are connected jointed brace rods 32 having a species of rule joint therein so that the buoyant bodies may be brought close together to occupy but little space or held apart in expanded position. The numeral 33 designates a sheet of canvas or the like which is secured to bars 34 carried by the bodies 30, this canvas being stretched taut when the bodies are moved apart and held by the braces 32, the canvas then serving as the floor of the raft. These rafts are preferably tethered to the ceiling portions of the compartment so as to prevent them from sliding about.

In the event of sinking of the submarine, it is intended that the crew of the submerged ship open the doors 25 and pass into the chambers 19 after which the doors 25 are reclosed and locked. The crew then don the life saving belts and the air helmets and then open the sea cocks 26 which will cause the chambers 19 to be flooded and entirely filled with sea water, any suitable vents being provided for permitting the exit of air. The

crew then release the rafts 29 and open the outer doors 24. Owing to the fact that the ceilings 23 are inclined outwardly and upwardly there should be no great difficulty experienced in getting the rafts out through the doorways 25. The rafts being buoyant and the life saving belts buoyant it is quite apparent that the crew and the rafts will rise to the surface. Pending rescue the men may of course climb onto the raft, the canvas sheets 33 thereof forming efficient floors for supporting them.

In case the submarine should sink under such conditions that it would have a distinct list to either side, the crew would naturally use the uppermost compartment 19 for effecting their escape, though in the event that the crew would be too numerous to be supplied with life belts and helmets from the upper compartment alone, they might enter the lower compartment merely for the purpose of removing the belts and helmets therein. The escape by means of the raft would of course be the same as in the first described emergency.

If the submarine should sink in such a position that either the bow or the stern would be inclined sharply upwardly, the escape would be made of course from the uppermost ends of either or both compartments, depending upon conditions.

In case the sinking should occur in sand or mud so that the doors 24 could not be opened, it would be necessary for the crew to don the life saving devices and bring the rafts into the interior of the hull below the ordinary opening 17, after which the doors 25 would be left open and the sea cocks 26 opened so as to flood the entire interior of the vessel, after which the door 18 would be opened to permit the men and rafts to escape.

From the foregoing description and a study of the drawings it will be apparent

that I have thus provided a simple and easily operated life saving device for submarine which will permit the escape of a crew practically regardless of any emergency which might arise as the device takes care of practically all contingencies and offers alternate means of escape.

While I have shown and described the preferred embodiment of my invention, it is of course to be understood that I reserve the right to make such changes in the form, construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In a submarine, separate compartments formed at opposite sides of the hull, doors establishing communication between the compartments and the remainder of the interior of the hull, other doors leading outwardly from the compartments into the surrounding water, and means for flooding the compartments, the ceilings of the compartments being inclined upwardly and outwardly.

2. In a submarine, separate compartments formed at opposite sides of the hull, doors establishing communication between the compartments and the remainder of the interior of the hull, other doors leading outwardly from the compartments into the surrounding water, and means for flooding the compartment, the ceilings of the compartments being inclined upwardly and outwardly, and buoyant rafts located within the compartments and adapted to be removed therefrom through said second named doors, the buoyancy of the rafts and the inclination of the ceilings causing the rafts to move automatically toward said second named doors.

In testimony whereof I affix my signature.

ADRIEN COTÉ.