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I. R. J. MUMFORD
SUBMERSIBLE CONTAINER

2,371,404

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FIG. 1.

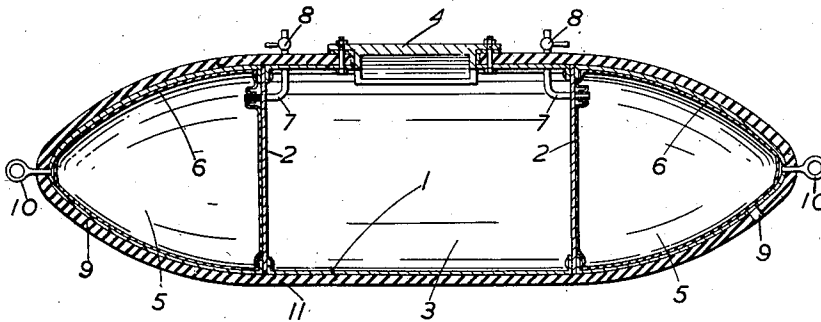
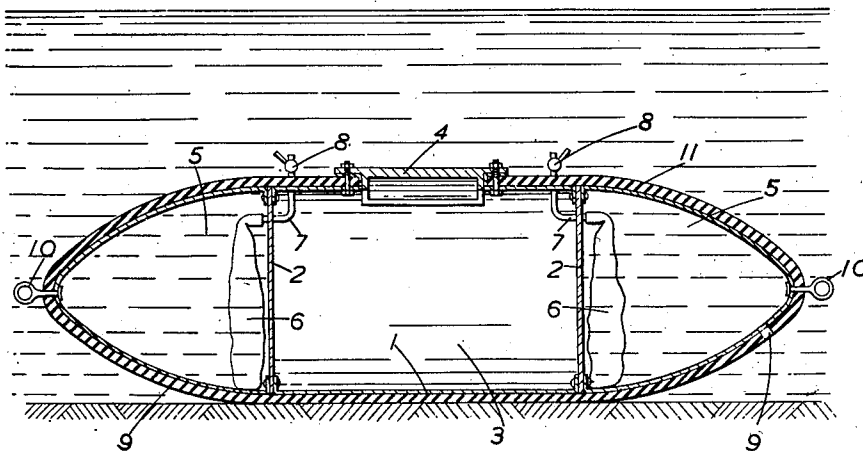


FIG. 2.



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SUBMERSIBLE CONTAINER

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In Great Britain June 20, 1941

1 Claim. (Cl. 9—10)

The subject of the present invention is a container for the transport of bullion or other cargo, the intention being that the container shall either be towed by a ship or carried on the deck thereof as a deck cargo, or alternatively be carried by aircraft, the chief object being to evolve a container of simple yet sturdy construction which, when loaded with bullion or other cargo, will float and consequently can be towed by a ship, or will float in the event of the ship being sunk or the aircraft carrying the container being forced down on the water and which, furthermore, can, if necessary, be intentionally sunk and the spot marked with a marking buoy so that the cargo can subsequently be recovered. It is contemplated that such a container, if used for the sea transport of goods, would be relatively immune from damage by torpedo attack or attack from the air, and could be towed by a relatively fast or shallow draught ship, the towing ship when reaching port casting off the towed container or containers which could then be taken to the docks by a tug, thereby avoiding the loss of time normally taken in unloading a ship and turning it round at the docks for a return journey.

A submersible container in accordance with the present invention consists of a metal or other casing of cigar or other suitable shape, the container being provided with a hold or space for cargo and including a number of compartments, each of which is adapted to hold one or more ballonettes which can be inflated when required to give the container the requisite buoyancy, each compartment, however, being open or adapted to be opened to the water to permit of the inflow of water to enable the container to be completely sunk or partially submerged.

In order that the said invention may be clearly understood and readily carried into effect, the same will now be described more fully with reference to the accompanying drawing, wherein:

Figure 1 is a longitudinal sectional view of a container constructed in accordance with the invention, the ballonettes being shown in an inflated condition; and

Figure 2 is a similar view of the container in a sunken condition, the ballonettes being deflated.

The container comprises a metal or hard plastic casing 1 divided up by means of two transversely arranged bulkheads 2 to form three compartments, the central compartment 3 being fitted with a closure hatch 4 and adapted to constitute a hold for containing bullion or other

goods which it is desired to transport. The compartments 5 at opposite ends of the container each contain a ballonette 6 each provided with an air inlet pipe 7 and valve 8, by means of which the ballonettes can be inflated when required, in which condition they fill or substantially fill the compartments in which they are contained.

Each of the end compartments is open to the sea, each compartment being formed with one or more water inlet and exit holes 9, the arrangement being such that when it is desired to submerge the container, the ballonettes can be deflated, the water then entering the holes 9 and flooding the end compartments either completely or partially according to the extent to which the ballonettes are deflated. Conversely, by inflating the ballonettes, the water contained in the compartments will be expelled through the holes 9, thereby causing a container which has been sunk to rise to the surface of the water.

In lieu of the externally arranged air connections which may be operated by remote control, the container may be fitted with one or more compressed air bottles and suitable valves by means of which the ballonettes can be inflated or deflated as required.

The hatch closing the central compartment is so constructed as to prevent the ingress of water when in position and consequently the container can either be towed on the surface of the water or towed when in a submerged or partially submerged condition according to the extent to which the ballonettes are inflated. To enable the container to be towed, it is provided with a towing ring 10 at each end by means of which it can be attached by a hawser to a winch or other connection on the towing ship, the rings also enabling the container to be lashed down on the deck of a ship as a deck cargo.

When it is desired to submerge the container temporarily, with the object of recovering the cargo at a later date, one of the towing rings may serve for the attachment of a marking buoy to indicate the spot where the container was submerged.

In order to give the container greater resiliency and prevent damage to the metal casing, if composed of relatively thin metal, it may be surrounded by an expanded rubber or other moulded covering 11, which in addition to having the advantage of protecting the metal casing also has the advantage of effecting a temporary or permanent sealing of any holes in the casing which may have been caused by gunfire. Alter-

natively, the protective covering may be disposed internally with the object of giving the casing greater strength. Although it is preferred to employ expanded rubber for this purpose owing to its lightness and resiliency, any other suitable material may be employed if desired with the object of protecting the metal casing.

It will be appreciated that when used for transport by air and the aircraft being brought down over the water, the container may be so arranged that it will break away from the aircraft and remain afloat, even though the transporting aircraft may sink, thereby enabling bul-
10 lion or other valuable cargo to be subsequently recovered.

What I claim and desire to secure by Letters Patent of the United States is:

A submersible container for the transport of goods comprising a casing of cigar shape divided

5 up into a plurality of interior compartments by a number of transversely arranged bulkheads, at least one compartment constituting a hold for the goods to be transported and fitted with a removable hatch the remaining compartments each
10 containing an inflatable ballonette and having water inlet and exit holes through which water can enter when the ballonettes are in a deflated condition to flood the compartments and cause the container to submerge, and independent
15 means for inflating said ballonettes from the exterior of the casing to cause the water to be forced through said exit holes and the container to float on the surface of the water, and connections on said casing for its attachment to a towing hawser, the container consisting of a casing protected by a surrounding covering layer of resilient material.

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