

J. PRIOLO.
 MEANS FOR PREVENTING SHIPS FROM SINKING.
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1,293,918.

Patented Feb. 11, 1919.

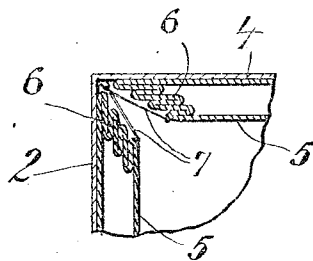
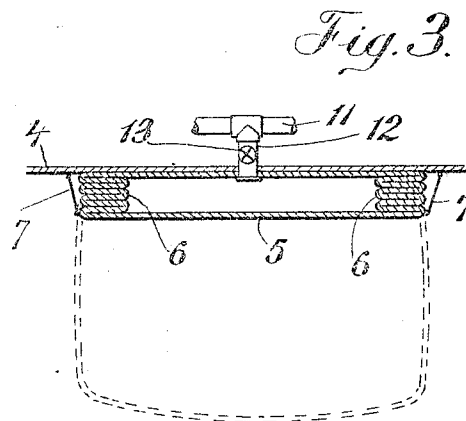
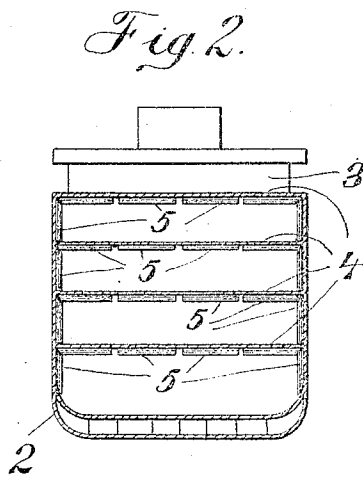
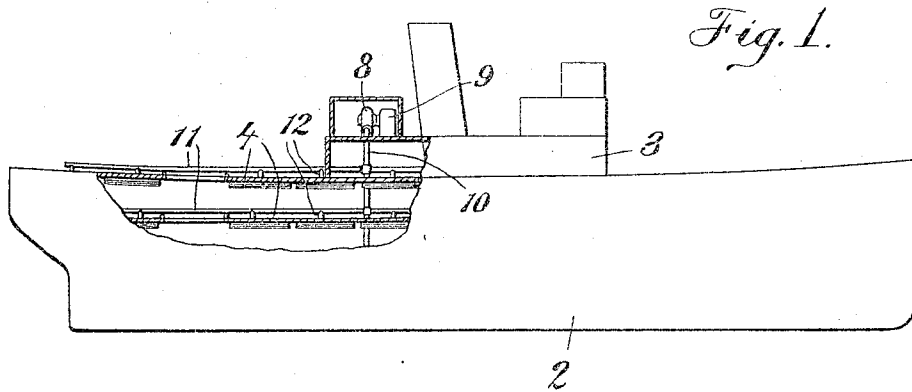


Fig. 4.

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MEANS FOR PREVENTING SHIPS FROM SINKING.

1,293,918.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that JOHN PRIOLO, a subject of the King of Italy, but who has declared his intention to become a citizen of the United States, and has taken out his first papers for citizenship, and resident of Brooklyn, New York, has invented certain new and useful Improvements in Means for Preventing Ships from Sinking, of which the following is a specification.

This invention has particular reference to a means for rendering ships unsinkable by torpedoes, mines or the like, or upon collision with icebergs, sunken reefs, or other ships.

The invention as herein described provides a novel arrangement whereby a number of air-tight compartments of sufficient capacity to sustain the ship in the event of damage to the hull are provided, these compartments being constructed and arranged to occupy a minimum amount of space when not in use.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

Figure 1 of the drawings is a side elevation, partly in section, of a vessel equipped with my invention.

Fig. 2 is a transverse section.

Fig. 3 is a detail section illustrating the construction of the collapsible compartments.

Fig. 4 is a similar view illustrating the construction at the meeting corners of the walls and decks.

My invention may be applied to any ordinary type of vessel without altering the construction thereof. In the drawings I have shown a steamship whose hull is indicated at 2, the superstructure at 3 and the decks at 4. According to my invention a series of collapsible air-tight bags 5, adapted to be inflated by compressed air from a pump or tank, are secured under the various decks and also along the sides of the hull. It will be understood that these bags cover substantially the entire area of the decks and sides of the hull where the disposition of cargo or of the various parts of the ship mechanism or structure provide room for expansion.

As indicated at 6, the bags may be arranged to collapse against the decks and

walls by having their sides fold together after the fashion of the sides of an accordion, or in what might be termed accordion plaits. The bags may be retained in this position by any easily displaceable means, light cords 7 being here shown attached to the lower side of the bags, as shown in Figs. 3 and 4, which break under the air pressure and permit of expansion of the bags to the dotted position as shown. These bags are preferably made of wire reinforced rubber, or of any suitable material of sufficient strength to withstand considerable pressure.

As a means for inflating the bags I have here shown an air pump 8 located on the superstructure 3 and driven by an engine or motor 9. This pump is connected by a suitable system of piping with the various bags. In Fig. 1 I have shown a main pipe 10 leading down from the pump through the various decks, and having connected thereto feed pipes 11 leading along the decks. From these feed pipes 11 short branch pipes 12 lead to the air bags, each of these pipes having therein a one way valve, indicated at 13 in Fig. 3, which prevents escape of the air from the inflated bag.

In Fig. 4 I have shown an arrangement of the bags at the corners of the decks and hull by which free expansion of the bags without interfering with one another is provided for, the sides of each bag toward the meeting line of the two walls slanting inwardly toward their opposite sides and presenting successively overlapping plaits when in folded position, as shown at 6, so that when expanded the sides of the bags meet along a diagonal line intersecting the corner.

As will be apparent, I have, in effect, provided a series of collapsible air-tight compartments which when not in use occupy a minimum of space but which will substantially fill all vacant spaces in the hull when inflated and so prevent the ship from sinking in the event of damage to the hull. Also by providing a large number of bags of relatively small size, as clearly shown in Figs. 1 and 2, the rupture of one bag after inflation will have no appreciable effect on the buoyancy of the ship, each bag being independent.

It is to be understood that where reference is made to the walls of the ship structure in the appended claim the term is used broadly enough to denote either the vertical walls of the hull or the deck, or like part,

the particular construction of the ship not being a part of my invention, which is adapted for use on ships of various types and constructions.

5 What I claim is as follows:—

The combination with two angularly disposed meeting walls of a ship structure, of an air tight bag secured to each wall and adapted to fold in accordion plaits upon

themselves to lie substantially flat against 10 said walls, the side of each bag toward the meeting line of the walls slanting inwardly toward the opposite side of the bag and presenting successively overlapping plaits when in folded position. 15

Signed at the city, county and State of New York this 13th day of July, 1918.

JOHN PRIOLO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."