J. J. BROSNAN.

NON-SINKABLE BOAT.

APPLICATION FILED APR. 15, 1918. RENEWED JULY 13, 1920.

1,355,937. Patented Oct. 19, 1920.

Fig. 1.

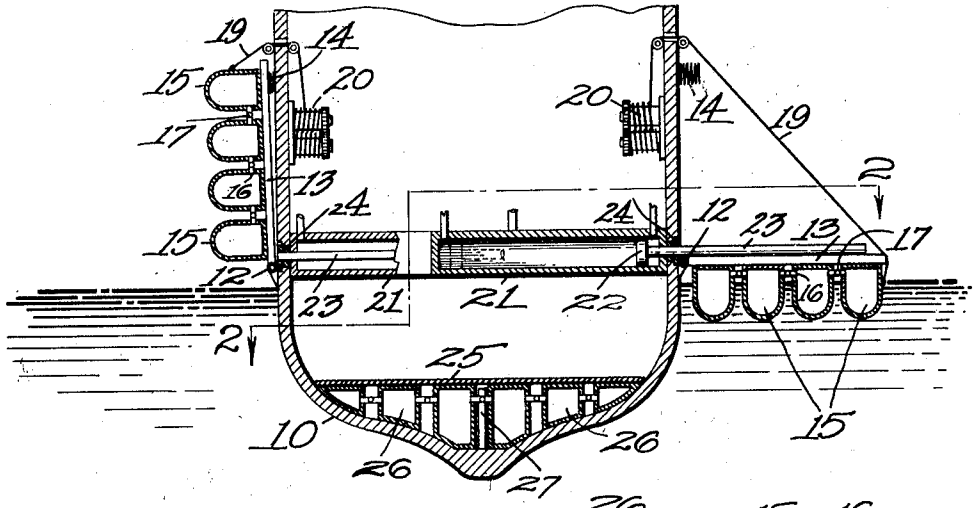
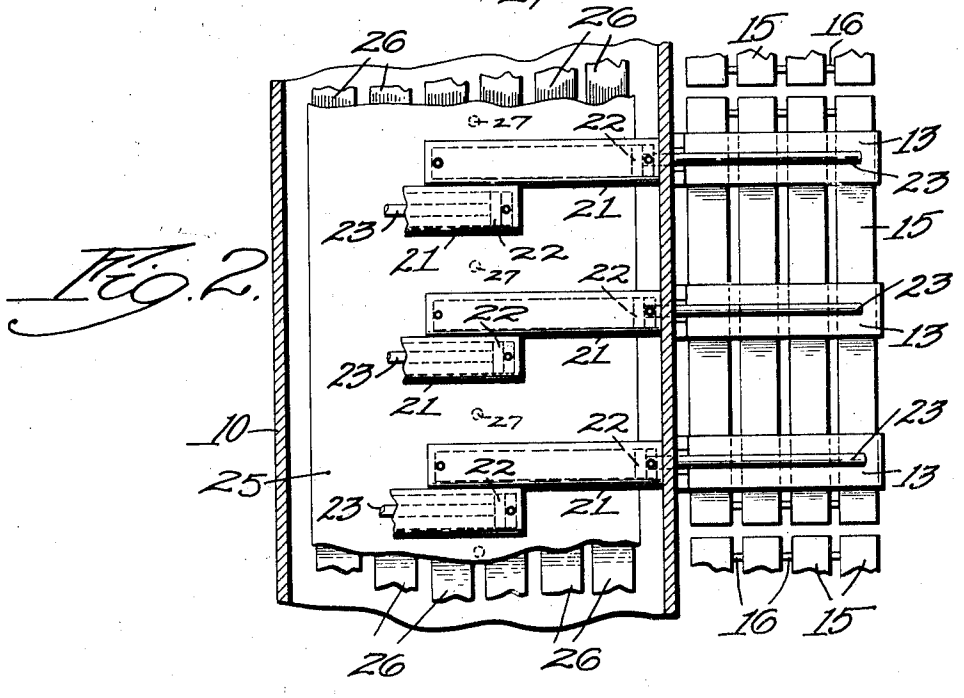


Fig. 2.



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NON-SINKABLE BOAT.

1,355,937. Specification of Letters Patent. Patented Oct. 19, 1920.

Application filed April 15, 1918, Serial No. 228,554. Renewed July 13, 1920. Serial No. 395,996.

To all whom it may concern:

Be it known that I, JOHN J. BROSNAN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Non-Sinkable Boat, of which the following is a specification.

This invention relates to a device for preventing a boat from sinking, and also to reduce rocking and it involves improvements in details of construction thereof and also to a device for floating the cargo on the boat to keep it out of the water in case the boat starts to sink.

The principal objects of the invention are to provide simple and easily manipulated means for accomplishing the above mentioned purposes.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a transverse sectional view of a boat with a preferred embodiment of this invention applied thereto, and

Fig. 2 is a horizontal sectional view on the line 2—2 of Fig. 1.

The invention is shown as applied to a boat 10, the details of which are not shown as the invention can be applied to any type of boat.

Pivots 12 are arranged longitudinally, preferably just above the water line, and on these pivots are pivotally mounted frames or plates 13. When not in use these frames extend upwardly and substantially contact with the sides of the boat, springs 14 being provided for forcing their upper ends away from the side of the boat when released. These frames are provided with casings 15 of sheet steel hermetically sealed and filled with compressed air preferably. These are arranged longitudinally along the frames 13 in the form shown and are provided with communicating pipes 16 having check valves 17 permitting the chambers to be filled with compressed air but preventing leakage in the opposite direction, so that if some of them get injured others will still be effective.

A chain or cable 19 is shown connected with the outer casing or with the frame 13 and wound on a windlass 20 or the like inside the boat for holding the device in the vertical position as shown on the left in Fig. 1.

Inside the boat there are horizontal cylinders 21 having pistons 22 provided with rods 23 adapted to project out over the frame 13 when the latter is lowered as shown at the right in Fig. 1, to hold this frame down, and keep it rigidly connected with the boat when it tends to sink. This is accomplished without a rigid connection that would otherwise hamper the motion of the boat. These piston rods pass through packings 24 extending through the side of the boat.

The boat is also shown as provided with a false bottom 25 for receiving the cargo, particularly any cargo that would be injured or rendered explosive by coming into contact with the water. Underneath this false bottom are buoyant air tanks 26 similar to the casings 15 connected with each other in the same way and preferably shaped to conform to the shape of the bottom of boat. These casings are guided by a series of fixed guides 27. Now if water gets into the hold it will cause this false bottom to float and keep its contents out of contact with the water, if the boat does not sink. When danger arises and especially after the boat is hit, the chains are allowed to be paid out, and the springs 14 push the frames 13 out at the top so they swing down all along the sides of the boat. The plungers are forced out by introducing air or steam into the cylinders 21 behind the pistons. This readily holds the frames down on or near the surface of the water and permits the buoyancy of the air-filled casings to be transmitted to the boat itself so as to hold it up or partially hold it so that it cannot sink absolutely. The casings are filled with compressed air to prevent their collapsing under the pressure of the water.

Another use to which the device can be put is to lower these frames into the water and reduce the rocking of the boat during storms.

Although I have illustrated and described only a single form of the invention I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore I do not wish to be limited to all the details of construction herein shown and described, but what I do claim is:—

1. The combination with a boat, of a pivoted buoyant frame on the outside thereof, and means within the boat for engaging the top of said frame throughout its width and

holding it down in contact with the water and preventing it from rising whenever the boat tends to sink so that its buoyancy will assist in holding the boat up but leaving it freely movable upwardly and downwardly about its pivot below its horizontal position.

2. The combination with a boat, of a frame pivoted to the outside thereof longitudinally along the side and provided with buoyant compartments, means whereby said frame can be swung about its pivot into horizontal position so that said buoyant compartments will lie on the surface of the water, a cylinder in the boat having a piston therein, and a rod connected with said piston arranged to be projected thereby through the side of the boat into contact with the top of said frame.

In testimony whereof I have hereunto affixed my signature.

JOHN J. BROSNAN.