W. GASIOROWSKI.

SHIP PROTECTOR.

APPLICATION FILED APR. 19, 1918.

1,294,081.

Patented Feb. 11, 1919.

2 SHEETS—SHEET 1.

FIG. 1.

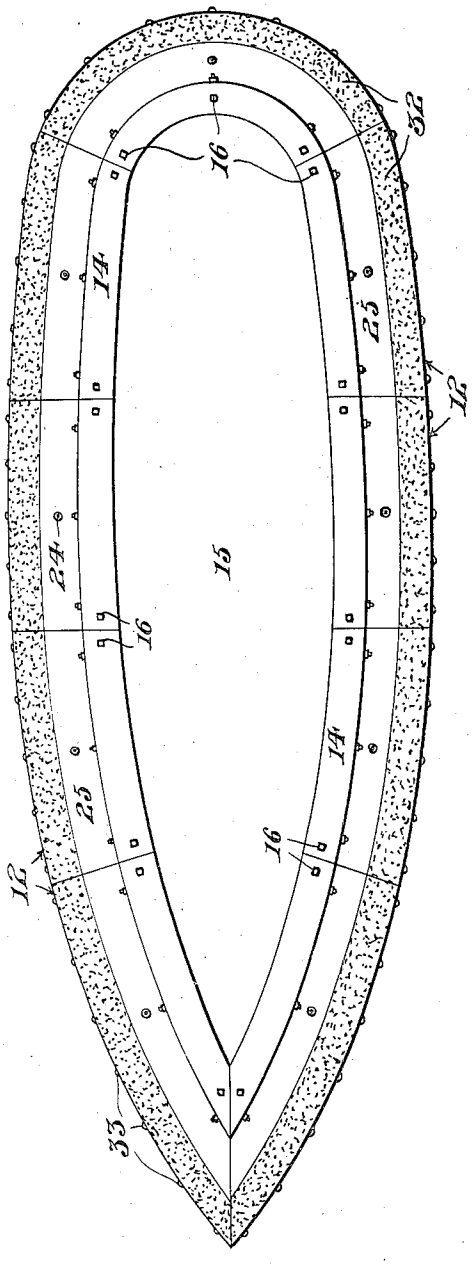
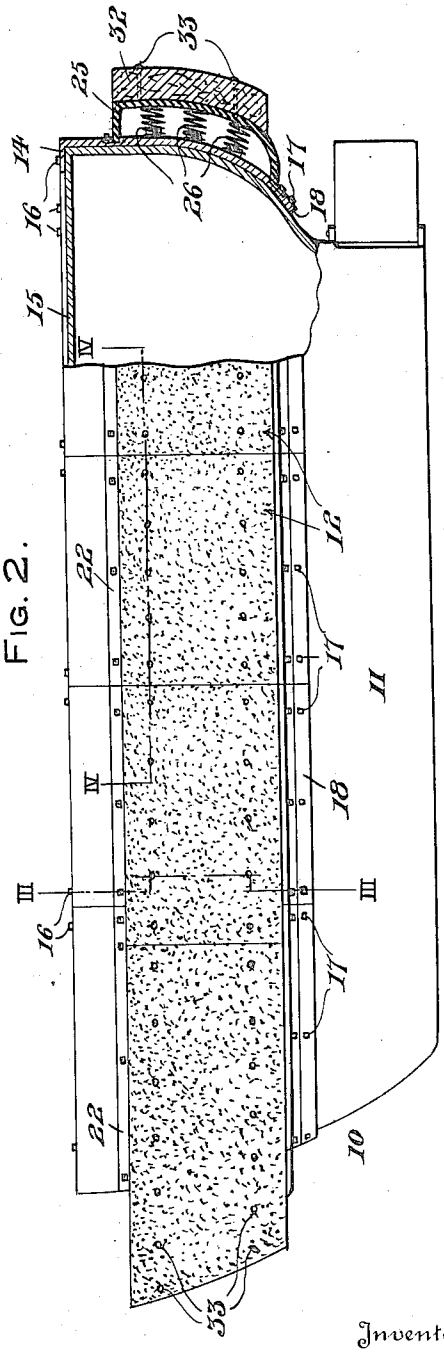


FIG. 2.



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2 SHEETS—SHEET 2.

FIG. 4.

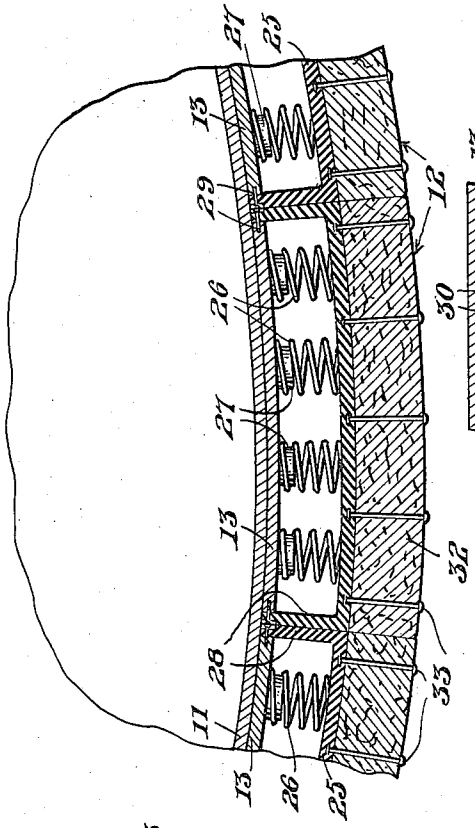


FIG. 6.

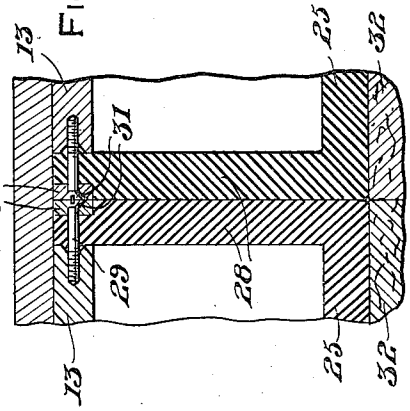


FIG. 5.

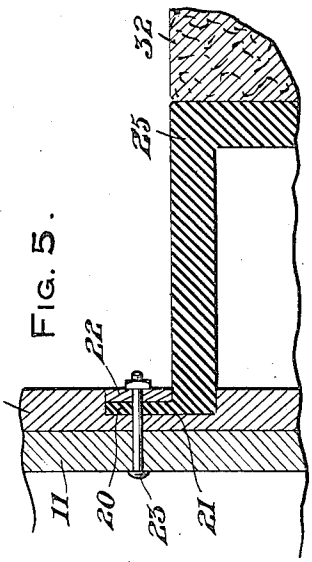
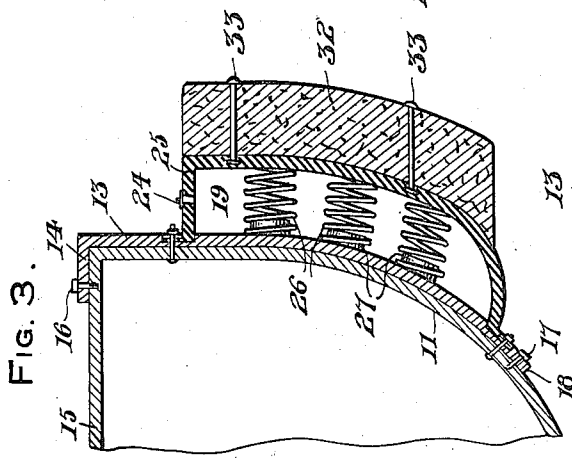


FIG. 3.



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UNITED STATES PATENT OFFICE.

WOJCIECH GASIOROWSKI, OF WEST TORONTO, ONTARIO, CANADA.

SHIP-PROTECTOR.

1,294,081. Specification of Letters Patent. Patented Feb. 11, 1919.

Application filed April 19, 1918. Serial No. 229,567.

To all whom it may concern:

Be it known that I, WOJCIECH GASIOROWSKI, a subject of the Emperor of Austria, residing at West Toronto, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Ship-Protectors, of which the following is a specification.

The primary object of the invention is the provision of a ship protector in the nature of a buffer for the hull thereof adapted for absorbing shocks and jars of oncoming missiles adjacent the water-line of the ship as well as for cushioning any contact with another ship or a dock.

A further object of the invention is to provide a protector adjacent the water-line of a hull also serving as a stabilizer and buoying member for the craft and having a plurality of floating means, one adapted for the protection of the other.

A still further object of the device is the provision of a means to prevent injury to a hull as well as to maintain the same in a floating position when injured, the construction being such as to offer only slight resistance to the travel of the ship through the water, while any damaging of one section of the device will not destroy the efficiency of the remainder thereof.

In the drawings forming a part of this application and in which like reference numerals refer to corresponding parts throughout the several views;

Figure 1 is a top plan view of a hull provided with my device;

Fig. 2 is a side elevation thereof partially broken away;

Fig. 3 is an enlarged vertical transverse sectional view of a portion of the same taken upon line 3—3 of Fig. 2;

Fig. 4 is an enlarged horizontal sectional view taken upon line 4—4 of Fig. 2;

Fig. 5 is an enlarged detail vertical sectional view showing securing means for the device; and

Fig. 6 is a detail horizontal sectional view showing the formation of connecting portions of the different sections of which the device is formed.

It will be understood that my device may be readily arranged for protecting the hull of any form of vessel, the same being herein illustrated operatively positioned upon the ship 10 completely surrounding the hull 11 thereof at a point adjacent the water-line, the device broadly comprising a plurality of resilient float sections 12 detachably secured to the said hull 11.

A base plate 13 is arranged for each resilient section 12 adapted to conform to the shape of a portion of the hull 11 for flatly engaging the exterior thereof and is arranged with an inwardly extending top flange 14 for resting upon the deck 15 of the hull. Securing screws 16 are arranged through the flange 14 of each of the sections 12 and threaded into the deck 15 while similar screws 17 are threaded into the side of the hull 11 after projecting through a bottom bead 18 upon the base plate 13.

A pneumatic float 19 is arranged for each plate 13 formed of rubber or other suitable material of dish-shaped arrangement with a rim 20 at its top and bottom longitudinal edges adapted for positioning within sockets 21 in the adjacent plate 13 while a securing strip 22 is arranged within each socket overlying the rim 20 and secured in assembled relations by means of bolts 23 passing through the strip 22, rim 20 and plate 13 as well as the adjacent side of the hull 11. An air-entrance nipple 24 is arranged in the horizontally positioned top 25 of each float 19 whereby the same is readily inflated.

Coil springs 26 are arranged within the floats 19 for further strengthening the floats as well as arranging a resilient means serviceable in the event of an escape of the air from the said floats, these springs being mounted at their inner ends upon bosses 27 carried by the plates 13 while their outer ends engage the inner face of the outer wall of the said float. It will be understood that the plurality of plates 13 cover the entire upper portion of the hull 11 and position the floats 19 carried thereby in end abutting relations so that the floats 19 as well as the plates 13 entirely surround the hull 11 at the water-line portion thereof.

The end walls 28 of the floats 19 are secured to the ends of the plates 13 by bolts 29 while bearing strips 30 are arranged embedded within the said ends 28 with the screws 29 projecting therethrough and the heads 31 of said screws being countersunk within the strips 30. By this arrangement the end walls 28 of the floats 19 are positioned closely contacting each other with the strips 30 positioned in contact and whereby a close and substantially water-tight fit-

ting is arranged between the separate floats 19 when the plates 13 are secured to the hull. A cork float or slab 32 is secured by means of fasteners 33 to the outer wall of each of the pneumatic floats 19, the ends of the cork floats 32 being in contact with each other when the separate sections 12 are operatively positioned surrounding the hull 11.

It will be apparent that any missile approaching the vessel 10 at a point adjacent the water-line of the hull 11 will strike one of the cork floats 32 tending to stop the missile while the force of the impact upon the ship will be absorbed by the adjacently positioned pneumatic float 19 and its springs 26. Any damage to one of the sections 12 will not affect the remaining sections of the device while the destruction of one of the cork floats 32 will not affect the adjacent pneumatic float 19. If the hull 11 becomes damaged, the floats 19 and 32 will prevent the ship from sinking, maintaining the same in a floating position for traveling through the water. The form of the separate sections 12 is arranged as herein illustrated for closely fitting upon all sides of the hull 11 and any of said sections may be readily removed for replacing by a similar section when required. The device also serves as a buffer against other ships as well as docks for cushioning any blows administered by coming in contact therewith.

What I claim as new is:—

1. A ship hull protecting float comprising a plate formed to fit against the outer side of the hull and having a top flange to rest upon the adjacent portion of the deck of said hull, a pneumatic float carried by said plate, springs within said float attached to the plate, and a cork slab secured to the outer side of said float.

2. A protector comprising a plurality of plates arranged surrounding the hull of a ship, pneumatic floats in end engagement with each other carried by the plates, spring strengthening means arranged within said floats, and cork protector slabs secured upon the outer walls of the floats in end contact with each other and normally arranged in an unbroken formation surrounding the hull adjacent the water-line thereof.

3. A protector for hulls comprising a plurality of base plates adapted to be secured in position surrounding the hull, dish-shaped rubber floats carried by the plates in end engagement with each other, outwardly extending springs carried by the plates within said floats, and cork protector slabs in end engagement with each other and secured upon the outer walls of said floats.

In testimony whereof I affix my signature.

WOJCIECH GASIOROWSKI.