No. 808,942. PATENTED JAN. 2, 1906.

J. NEUMAIER.

MARINE TORPEDO GUARD.

APPLICATION FILED JULY 6, 1905.

2 SHEETS—SHEET 1

Fig. 1.

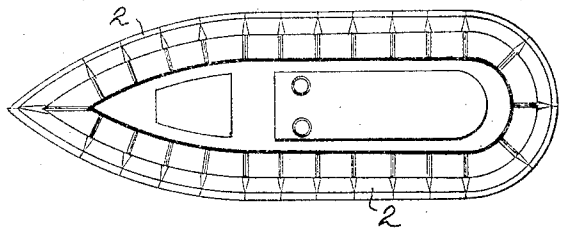
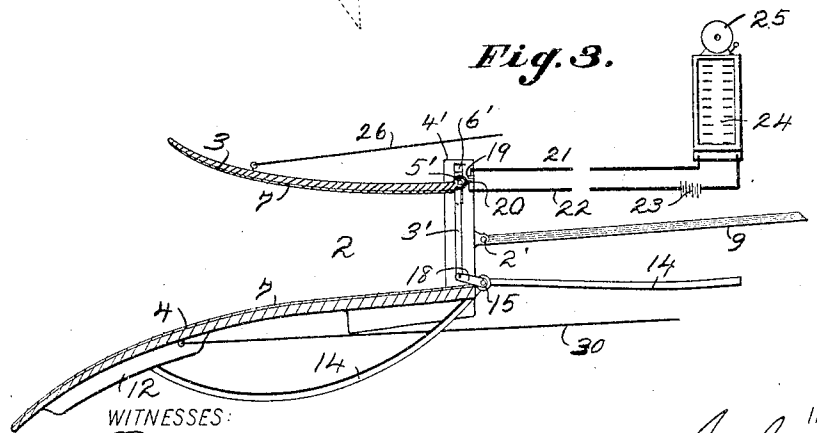


Fig. 2

Fig. 3.



WITNESSES:

F. A. Otto.

O. R. Erwin

INVENTOR

John Neumaier

BY

Erwin & Thuler

ATTORNEYS.

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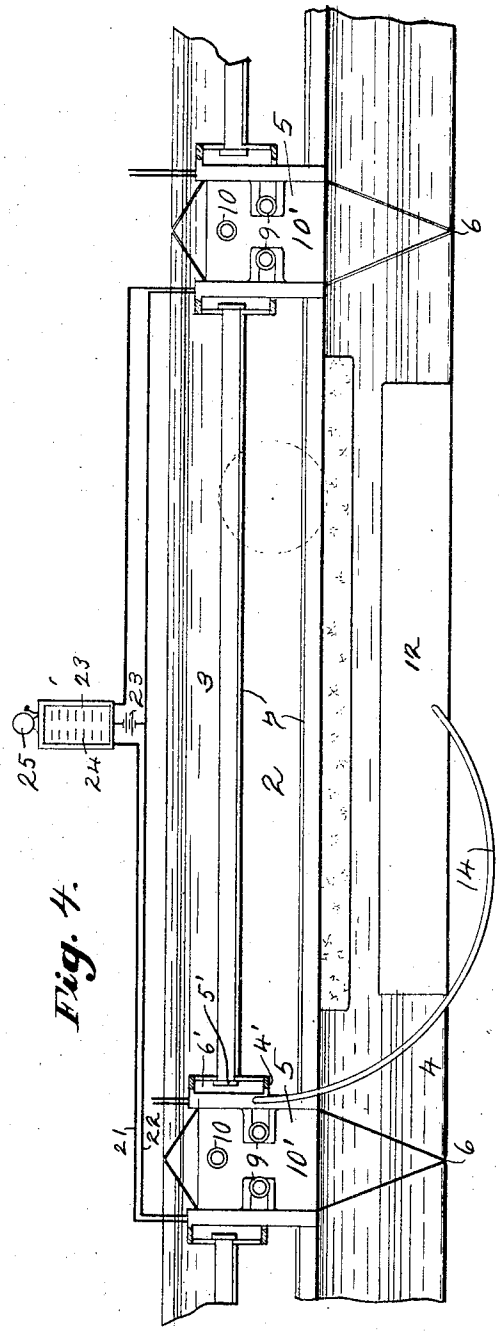


Fig. 4.

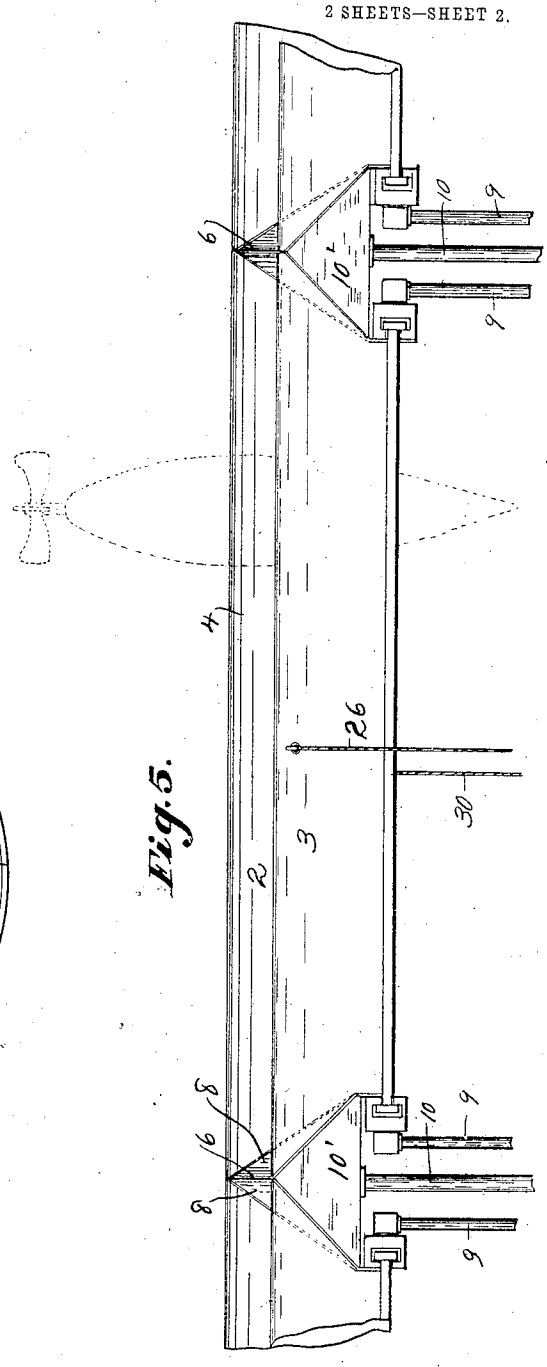


Fig. 5.

WITNESSES:

F. A. Ober

C. R. Ennis

INVENTOR

John Neumaier

BY

Ennis & Rhodes

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN NEUMAIER, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO GEORGE L. BALDAUF, OF MILWAUKEE, WISCONSIN.

MARINE-TORPEDO GUARD.

No. 808,942. Specification of Letters Patent. Patented Jan. 2, 1906.

Application filed July 6, 1905. Serial No. 268,410.

To all whom it may concern:

Be it known that I, JOHN NEUMAIER, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Marine-Torpedo Guards, of which the following is a specification.

My invention relates to improvements in devices for protecting vessels at sea from contact with marine torpedoes.

The object of my invention is to provide a device which is adapted to receive and hold a torpedo as it approaches a vessel in such a manner that explosives contained therein will not be ignited and also by which the torpedo may be removed from water and taken on board a vessel without danger of explosion.

The construction of my invention is explained by reference to the accompanying drawings, in which—

Figure 1 represents a plan view of a vessel provided with a plurality of my devices for arresting and removing approaching torpedoes. Fig. 2 represents a side view of one of the devices for grasping and removing a torpedo attached to the side of a vessel, a torpedo being indicated therein by dotted lines. Fig. 3 represents a side view of one of the series of devices for removing the torpedo, showing the mechanism for operating the pneumatic valve and a signaling device for indicating when a torpedo has been caught therein. Fig. 4 represents a rear view of one of the sections of the device looking at it from the side toward the vessel, and Fig. 5 represents a top view.

Like parts are indicated by the same reference characters throughout the several views.

1 represents the vessel, to the sides of which are attached a series of torpedo-receiving chambers 2, which extend entirely around the vessel. The chambers 2 are formed by the upper diverging walls 3 and the lower diverging walls 4 and the vertical partitions 5 5 of the several sections. The front of the partitions 5 converge, forming a V-shaped point 6, and the horizontal walls of the chambers are preferably provided with cushions 7, formed of cork, rubber, or other yielding substance, adapted to stop the approaching torpedo without causing the same to be exploded, while the converging surfaces of the vertical partitions 6 are provided with cushions 8 8, which serve to stop the torpedoes in such a manner that explosions will be avoided.

The torpedo-receiving chambers 2 are supported at a distance from the walls of the vessel 1 by the horizontally-arranged bars 9 and 10, both of which bars are connected at one end with the side of the vessel by elongated U-shaped brackets 11, and the bar 9 is pivotally connected at its opposite end with the torpedo-receiving chambers 2 by the bolt 2′, the bar 10 being rigidly connected at its outer end with the block 10′.

12 represents a flexible air-receiving sack, which is connected with an air-chamber within the vessel through the duct 14.

15 is an air-controlling valve. The air-receiving sack 12 is of such capacity that when filled with air it will buoy up the rear end of the torpedo and the torpedo-receiving chamber 2 from the position shown in Figs. 2 and 3 to that indicated in dotted lines in Fig. 2, whereby the propeller-wheel 16 of the torpedo 17 will be thrown from the water and the same will be brought at rest and retained in the receiving-chamber. The air-controlling valve 15 is actuated by contact of the torpedo 17 with the upper wall 3 of the chamber, motion being communicated from said wall 3 to the valve 15 through the link 3′ and arm 18 of the valve, whereby air is automatically admitted into the receiving-sack 12, when, owing to the buoyancy of the sack thus inflated, the torpedo will be thrown into the position indicated in dotted lines in Fig. 2, as previously stated.

19 and 20 are electrical terminals. The terminal 19 is connected with the conductor 21, and the terminal 20 is connected with the conductor 22.

As the torpedo enters the chamber 2 the horizontal wall 3 is thrown upwardly by contact therewith, whereby the terminals 19 and 20 are brought together, and thus the electric circuit communicating with the battery 23 and the signal 24 is closed. The inner end of the wall 3 is pivotally connected with the block 4′ by the bolt 5′, which has a vertical movement in the slot 6′ as said wall is raised and lowered. The battery 23 and signal 24 are located in a convenient place within the vessel, and as said electric circuit is closed a signal-bell 25 is sounded, while at the same time an annunciator like those in common use in connection with the rooms of a hotel is caused

to drop and indicate the particular receiving-chamber into which a torpedo has entered. When a torpedo has thus been captured, it is raised from the water and brought to the deck of the vessel.

To facilitate in adjusting the receiving-chamber 2 and holding the same securely in place at the proper level beneath the surface of the water, I preferably connect the same with a winding-pulley through ropes or cables 26 and 30, which are connected with the respective upper and lower sides of the chamber 2 and extend inwardly and are connected with the sides of the vessel by the pulleys 27 and 27′ and pass from thence upwardly and over the pulleys 28 and 29. Their ends are each connected with separate winding-pulleys. (Not shown.) Thus it is obvious that by increasing or diminishing the tension of the cables 26 and 30 the front or outer ends of said chambers 2 may be raised, lowered, adjusted, and retained in their proper position to receive approaching torpedoes.

In case a vessel should be attacked by a torpedo which is electrically connected through a conductor with the shore from which it is sent out in such a manner that the same can be exploded by an electric spark sent through said conductor regardless of contact of the same with a stationary obstruction I preferably provide my device with means for automatically severing said electrical connection as soon as the torpedo enters the receiving-chamber 2. The device for thus severing the electrical connections with the torpedo may be automatically actuated by the admission of air into the air-receiving sack 12 as said sack is expanded, and the rear end of the torpedo is thrown from the water.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device for capturing marine torpedoes as they approach a vessel, the combination with the vessel sides of a series of torpedo-receiving chambers having converging walls adapted to contact with the converging walls of an approaching torpedo and stop the same and means for supporting said chambers beneath the surface of the water at a distance from the vessel.

2. In a device for capturing marine torpedoes as they approach a vessel, the combination with the vessel sides of a series of torpedo-receiving chambers having converging walls adapted to contact with the converging walls of an approaching torpedo and stop the same; means for supporting said chambers beneath the surface of the water at a distance from the vessel and means for adjusting the walls of the receiving-chambers at any desired angle to the surface of the water.

3. In a device for capturing marine torpedoes as they approach a vessel, the combination with the vessel sides of a series of torpedo-receiving chambers having converging walls adapted to contact with the converging walls of an approaching torpedo and stop the same; means for supporting said chambers beneath the surface of the water at a distance from the vessel; means for adjusting the walls of the receiving-chambers at any desired angle to the surface of the water and means for automatically tilting the receiving-chamber and throwing the rear end of the torpedo above the surface of the water.

4. In a device for capturing marine torpedoes as they approach a vessel, the combination with the vessel sides of a series of torpedo-receiving chambers having converging walls adapted to contact with the converging walls of an approaching torpedo and stop the same; means for supporting said chambers beneath the surface of the water at a distance from the vessel; means for adjusting the walls of the receiving-chambers at any desired angle to the surface of the water; means for automatically tilting the receiving-chamber and throwing the rear end of the torpedo above the surface of the water and means actuated by the approaching torpedo for closing an electric circuit between a battery and a signal, whereby notice will be given in a vessel when a torpedo is captured.

5. In a device for capturing marine torpedoes as they approach a vessel, the combination with the vessel sides of a series of torpedo-receiving chambers having converging walls adapted to contact with the converging walls of an approaching torpedo and stop the same; means for supporting said chambers beneath the surface of the water at a distance from the vessel and means for automatically tilting the receiving-chamber as a torpedo enters, consisting in an air-receiving sack; an air-duct communicating from an air-reservoir; an air-controlling valve; a link communicating between one of the movable walls of the receiving-chamber and said valve, whereby, as a torpedo enters said chamber, said valve will be opened, said sack inflated, said receiver tilted and the rear end of the torpedo thrown above the surface of the water, substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN NEUMAIER.

Witnesses:
JAS. B. ERWIN,
GEORGE L. BALDAUF.