N. GORGICHUK.

ANTISUBMARINE DEVICE.

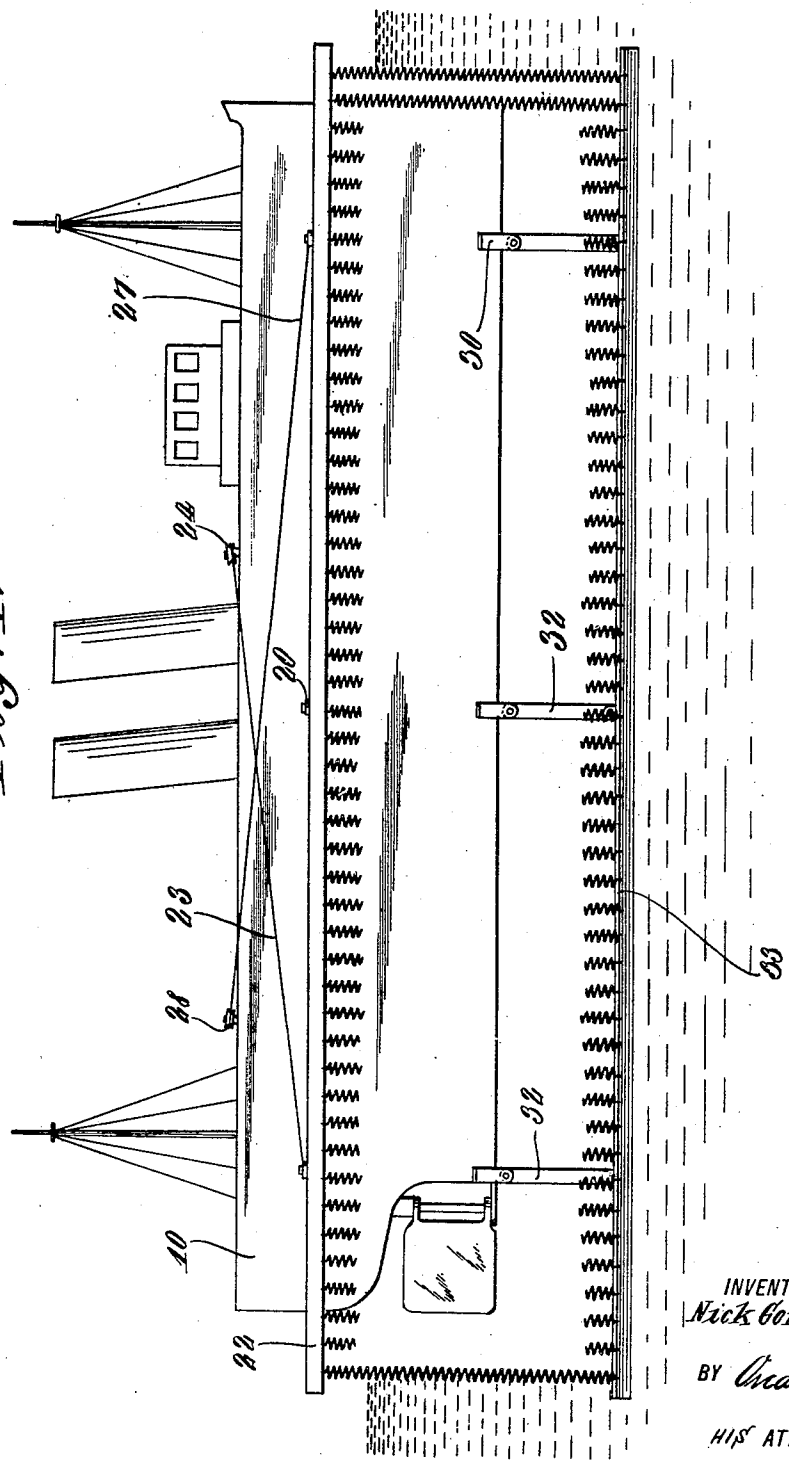
APPLICATION FILED SEPT. 29, 1917.

1,258,111.

Patented Mar. 5, 1918.

3 SHEETS—SHEET 1.

Fig. 1.



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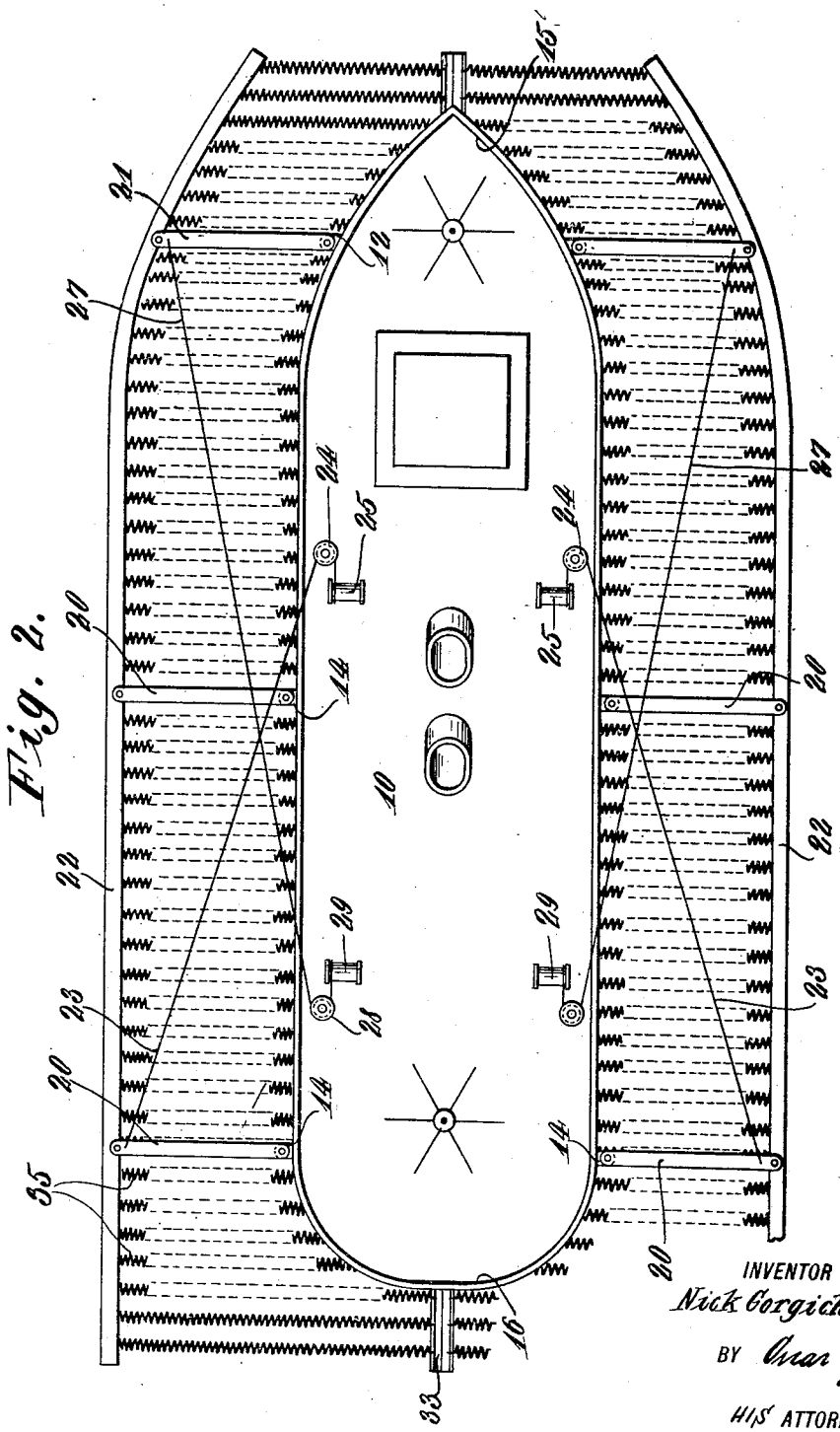
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

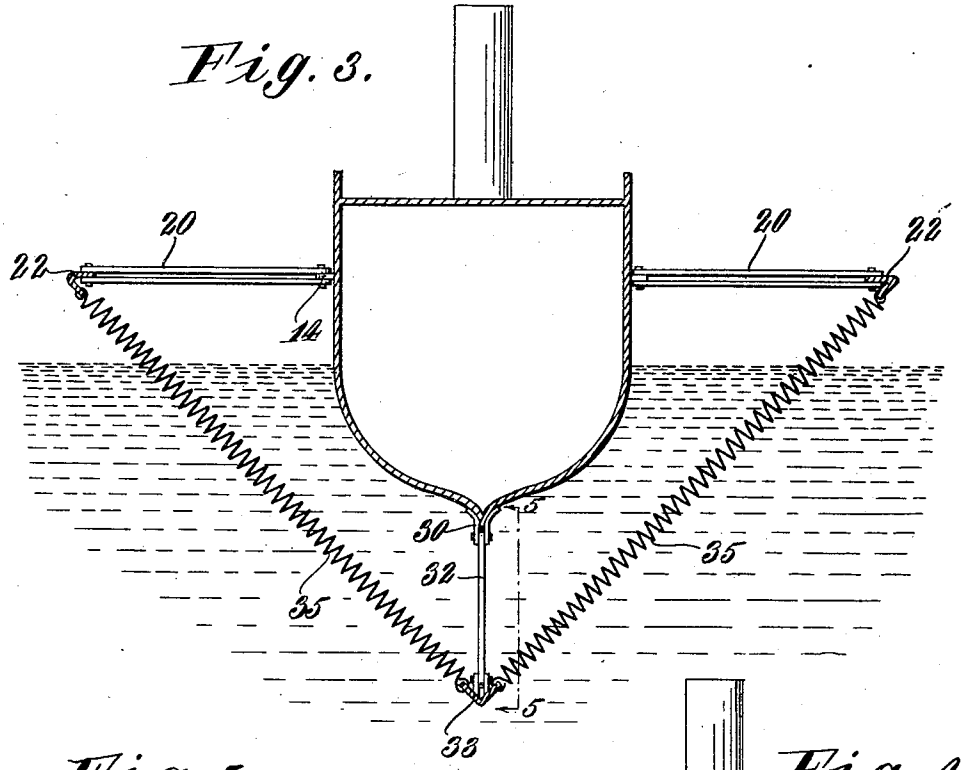


Fig. 5.

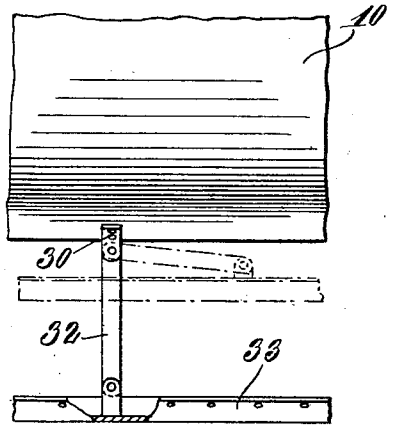
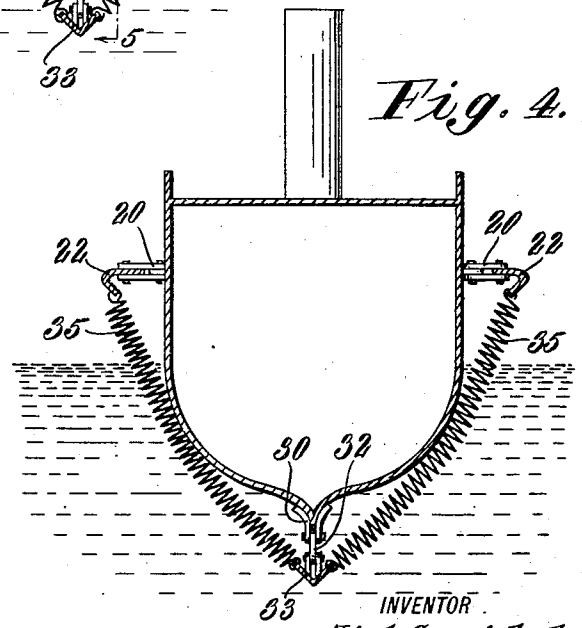


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ANTISUBMARINE DEVICE.

1,258,111. Specification of Letters Patent. Patented Mar. 5, 1918.

Application filed September 29, 1917. Serial No. 193,893.

To all whom it may concern:

Be it known that I, NICK GORGICHUK, a subject of the Emperor of Austria, and a resident of Regina, in the Province of Saskatchewan, Dominion of Canada, have invented certain new and useful Improvements in Antisubmarine Devices, of which the following is a specification.

This invention relates to improvements in antisubmarine devices, and has as its special object the provision of means for preventing the intimate approach of torpedoes, floating mines, and the like, to the hulls of ships.

A further object is to provide such means in forms which may be readily applied to ships of the ordinary construction without material change, and a still further object is to arrange the supporting means so that the same may be folded closely adjacent to the hull of the ship when their use is not required, or extended in an expeditious manner when desired, the principal object being to provide a fender comprised of a plurality of resilient elements arranged to intercept and retard a projectile of the class mentioned, it being received in such manner as to prevent it from being exploded.

These and other like objects are attained by the novel construction and combination of parts hereafter described and shown in the accompanying drawings, forming a material part of this disclosure, and in which:—

Figure 1 is a side elevational view showing the application of the invention to a ship.

Fig. 2 is a top plan view of the same, the fenders being extended.

Fig. 3 is a transverse sectional view showing the arrangement of fenders relative to the hull.

Fig. 4 is a similar view of the same, the parts being in a retracted or folded position, and

Fig. 5 is a fragmental sectional view taken on line 5—5 of Fig. 3.

In the drawings, the numeral 10 designates a conventional type of ship, having attached on each side of its hull, a plurality of brackets 14, at some distance above the water line.

Arms 20 and 21, are pivotally engaged with the brackets 14 and 12, the latter being disposed near the front or bow 15 of the ship, there being engaged at the outer ends of the arms rigid bars 22, the same extending from a point past the rear or stern 16 of the ship to a distance in front of the same, and which is bent to conform to the contour of the hull.

Attached to the rearmost arms 20, are cables 23, the inner ends of which are brought upward and over the deck of the ship 10, carried around sheave pulleys 24, mounted upon vertical axes on the deck, the extreme ends of the cables being connected with drums 25 of a winch. Other cables 27, are attached to the outer ends of the pivoted arms 21, and pass rearward over the sheave pulleys 28, to similar drums 29, the arrangement being such that when the drums are rotated the cables are wound thereon in an obvious manner, and it will be seen, that by causing the drum 29 to rotate, stress is placed on the cable 27, drawing the arms 20 and 21 rearwardly, and, if the drum 25 be free to rotate, the arms will be folded closely alongside the hull of the ship carrying the rigid bars 22 with them.

Engaged with the keel of the vessel are other brackets 30, in which are pivoted arms 32, having at their extreme ends pivotally attached angular bars 33, extending longitudinally below the vessel coincident with the bars 22.

Engaged in suitable openings in the bars 33 are a plurality of uniformly spaced, spirally coiled springs 35, the same extending obliquely upward and outward and having their opposite ends engaged in similar openings formed in the bars 22.

In operation, the parts being in a closed position as shown in Fig. 4, and it be desired to extend the same upon entering a danger zone or upon warning being given of the approach of a torpedo, the drums 25 are caused to be rotated, stressing the cables 23 and extending the arms 20 and 21 straight outward from the ship, thereby extending the springs 35 and through them causing the bar 33 below the keel to move toward the front of the ship, holding all of the springs tensionally extended and at a distance between the springs less than the diameter of a torpedo so that the same will become enmeshed and entangled in the spring which obviously will give under the momentum of the projectile, and effectually retard the same so as to prevent its contacting with the hull.

Under normal conditions, the drum 29 is

actuated, causing the arms 20 and 21 to move closely adjacent to the sides of the vessel, thereby offering little or no impediment to the progress through the water of the ship.

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

1. In an anti-torpedo device, the combination with a plurality of arms pivotally engaged to the hull of a vessel above the water line, a second plurality of arms pivotally engaged with the keel of the vessel, longitudinally extending bars carried at the extremities of all of said arms, a plurality of resilient elements tensionally engaged between said bars, said elements extending over the sides of the hull between the side bars and the keel bar, and means for extending the first named arms.

2. In an anti-torpedo device, the combination with a pair of rigid curved bars hingedly engaged with the sides of a ship, a straight bar hingedly engaged below and to the keel of the ship, means for actuating said curved bars, and a plurality of coiled springs tensioned between said side bars and said keel bar upon both sides of the ship.

3. In an anti-torpedo device, the combination with the hull of a ship, a plurality of brackets rigidly engaged at spaced intervals upon the hull thereof and above its waterline, of a second plurality of brackets rigidly engaged with the keel of the ship, arms pivotally engaged with each of said brackets, means for causing said arms to fold closely adjacent to the hull of the ship. means for extending the upper series of said arms directly outward, bars attached to the extremities of the side arms, another bar extending downward from the arms attached to the keel, and a plurality of helically coiled springs engaged with the bars at the side of the ship at one end and with the keel bar at the other end thereby presenting a resiliently barred grating enveloping the sides and hull of the ship.

In testimony whereof I have affixed my signature.

NICK GORGICHUK.

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