

(No Model.)

L. F. JOHNSON, W. J. SLACKE & H. LACY.
MARINE TORPEDO.

No. 559,711.

Patented May 5, 1896.

Fig. 1.

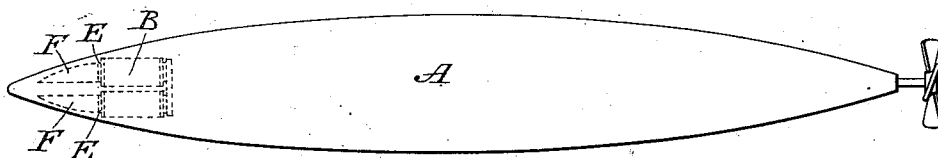


Fig. 2.

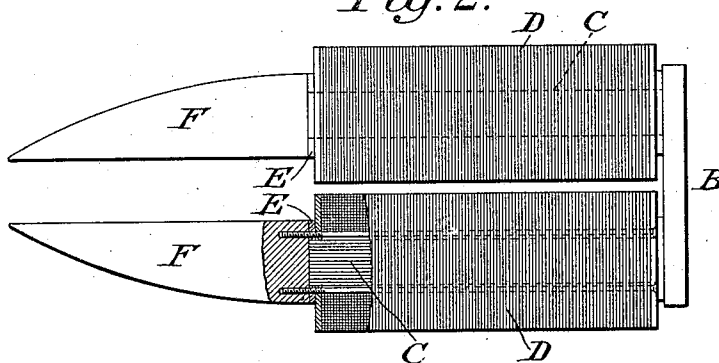
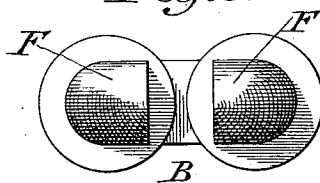


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

LOUIS F. JOHNSON, WALTER J. SLACKE, AND HOWARD LACY, OF EASTON,
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MARINE TORPEDO.

SPECIFICATION forming part of Letters Patent No. 559,711, dated May 5, 1896.

Application filed February 21, 1895. Serial No. 539,190. (No model.)

To all whom it may concern:

Be it known that we, LOUIS F. JOHNSON, WALTER J. SLACKE, and HOWARD LACY, citizens of the United States, and residents of the city of Easton, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Marine Torpedoes; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

It is well known that in the use of marine torpedoes, while it is not difficult to bring the torpedo into proximity to the vessel or other object to be destroyed, it is sometimes difficult to bring it into contact therewith. Moreover, although in some cases it would be desirable to delay the explosion of the torpedo after it has been brought into contact with the vessel, it has not been possible to hold it against the vessel after it has struck the same.

It is the object of this invention to provide a torpedo which shall with certainty be attracted to and held against an iron or steel vessel, and shall also be capable of retaining its contact with the vessel until such time as the operator desires the explosion. To this end the torpedo is provided with an electromagnet which will attract it to and cause it to be held against the iron or steel vessel, as before stated.

In the accompanying drawings, Figure 1 is a plan view, in outline, of a torpedo, the position of the magnet being indicated by dotted lines. Fig. 2 is a plan view of a magnet adapted for the purpose referred to, the magnet being partly broken out to show certain features of construction. Fig. 3 is an end view of the magnet.

The torpedo A may be of any preferred con-

struction, the improvement herein set forth being independent of the form or driving mechanism thereof. It is assumed to be of substantial cigar shape and to have a tight shell. At some suitable point within the shell, but preferably in the bow or nose thereof, is mounted a powerful magnet B.

The invention herein set forth is not directed to the particular construction of magnet, as any electromagnet of sufficient power may be employed. In the construction of magnet shown, which is merely for the purpose of illustration, cores C are provided, which are wound with layers of insulated wires D, and E represents disks attached to the cores, and to which are secured pole-pieces F, the latter being shaped to conform to the curvature of the shell of the torpedo.

It will be understood that when the magnet is energized sufficient magnetic force or power is generated to attract the torpedo to and hold it against the iron or steel vessel, the contact of the vessel and torpedo being maintained until the time of explosion.

We claim as our invention—

The combination with a torpedo-shell of an electromagnet mounted within the shell and at the bow thereof, such magnet having curved pole-pieces conforming to the converging lines of the shell whereby the torpedo may be attracted to and held against the hull of an iron or steel vessel.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

LOUIS F. JOHNSON.
WALTER J. SLACKE.
HOWARD LACY.

Witnesses:

O. C. BUNTING,
E. W. EVANS.