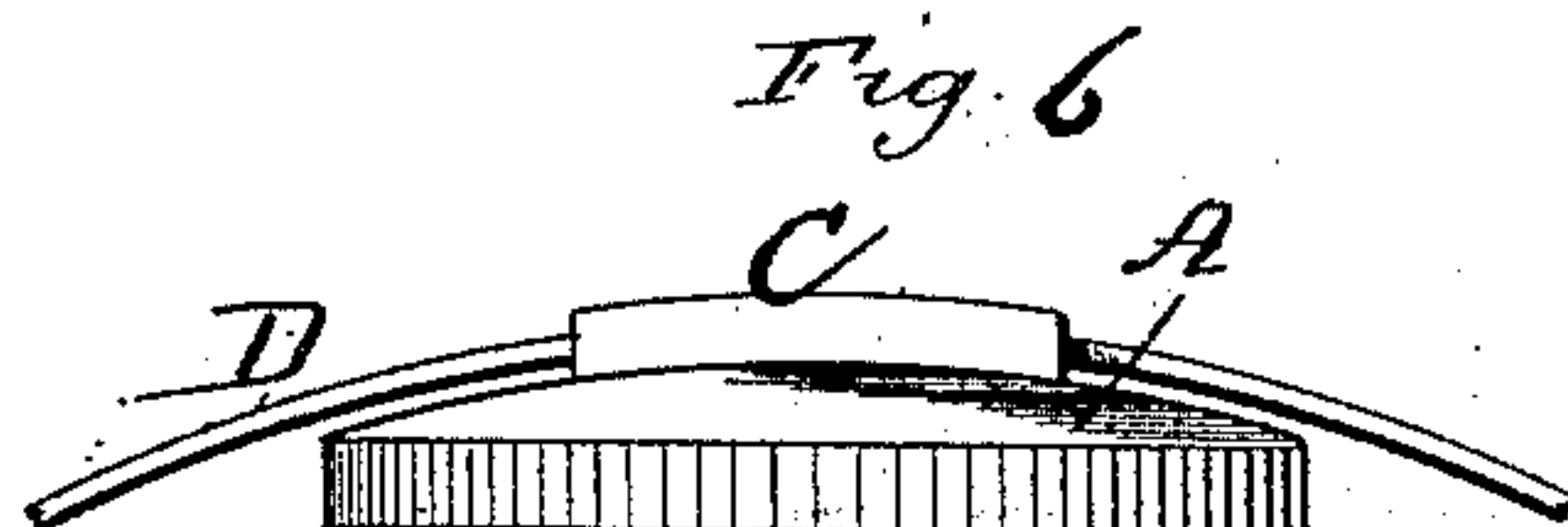
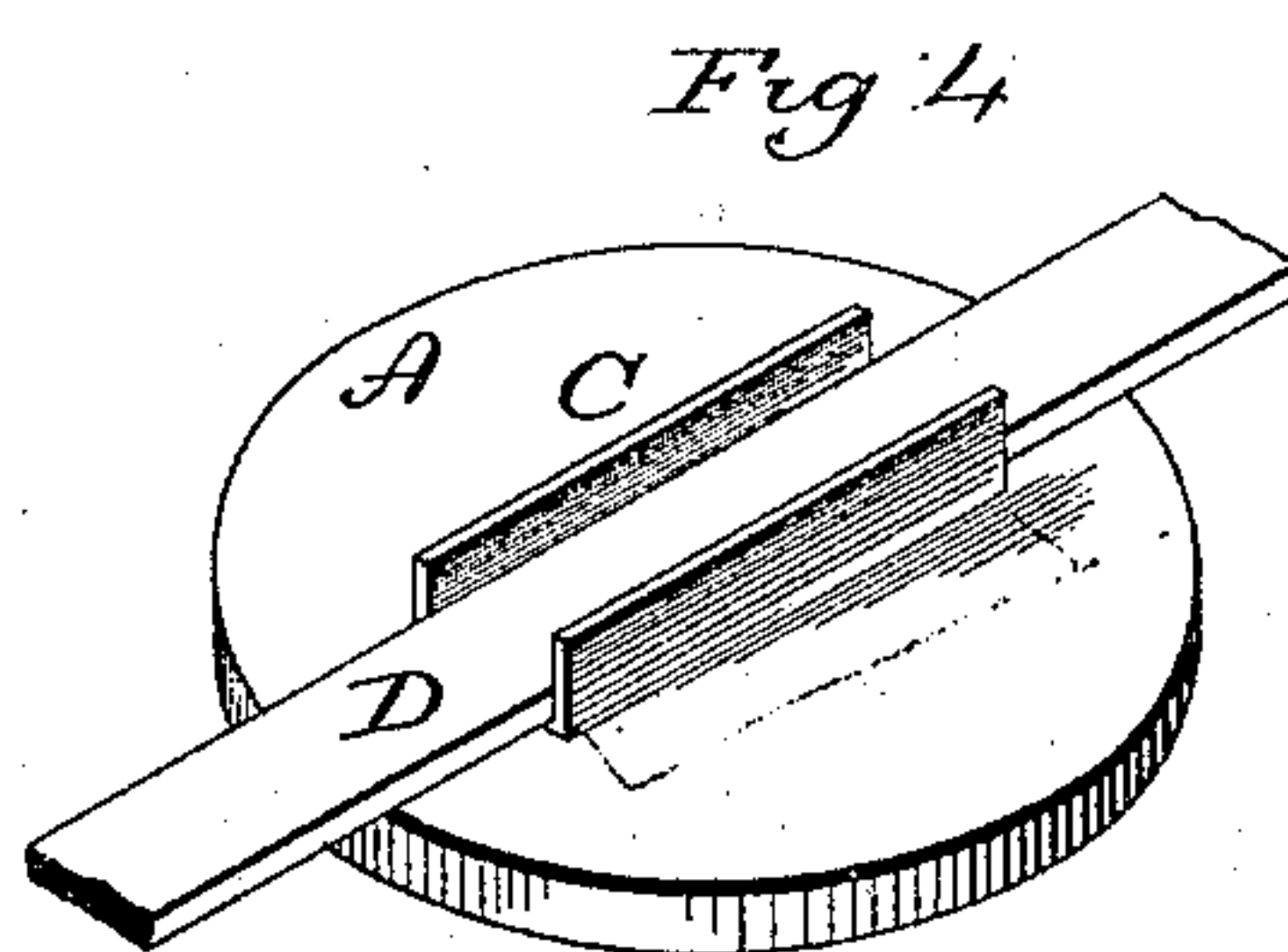
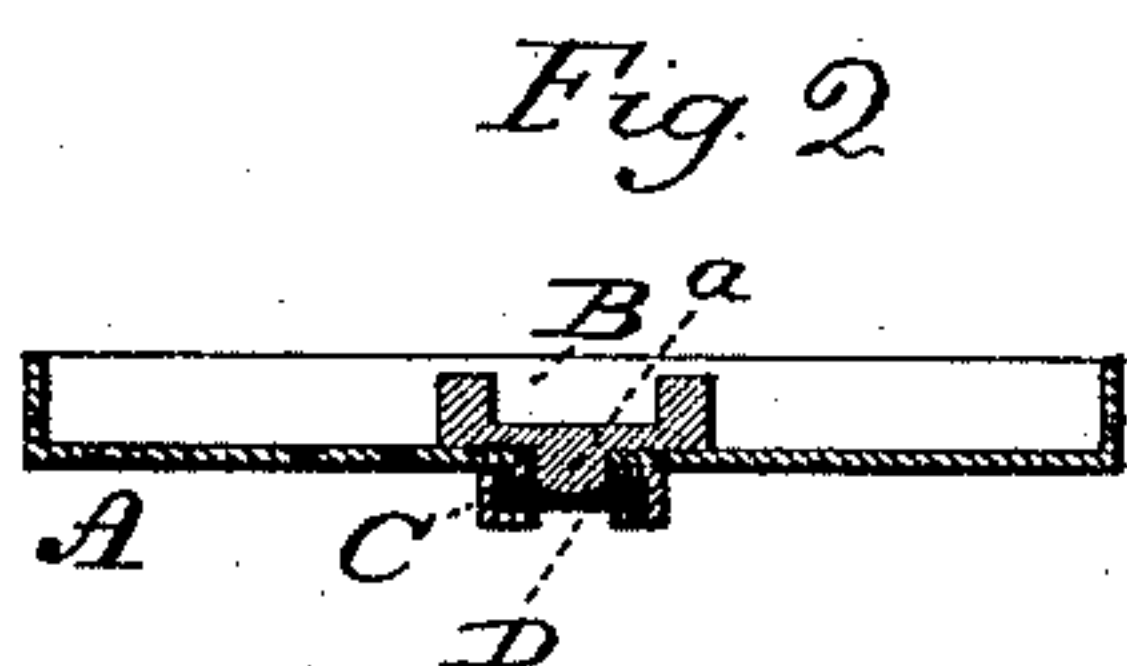
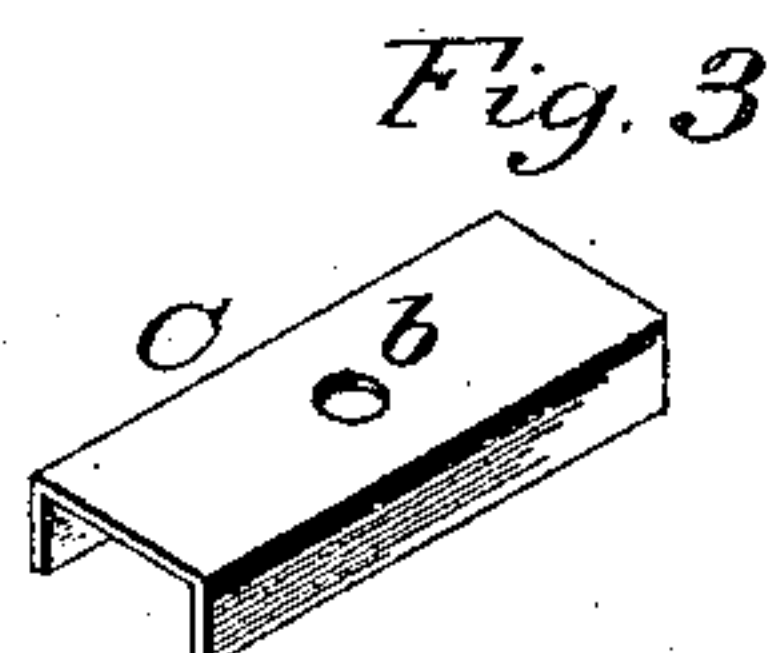
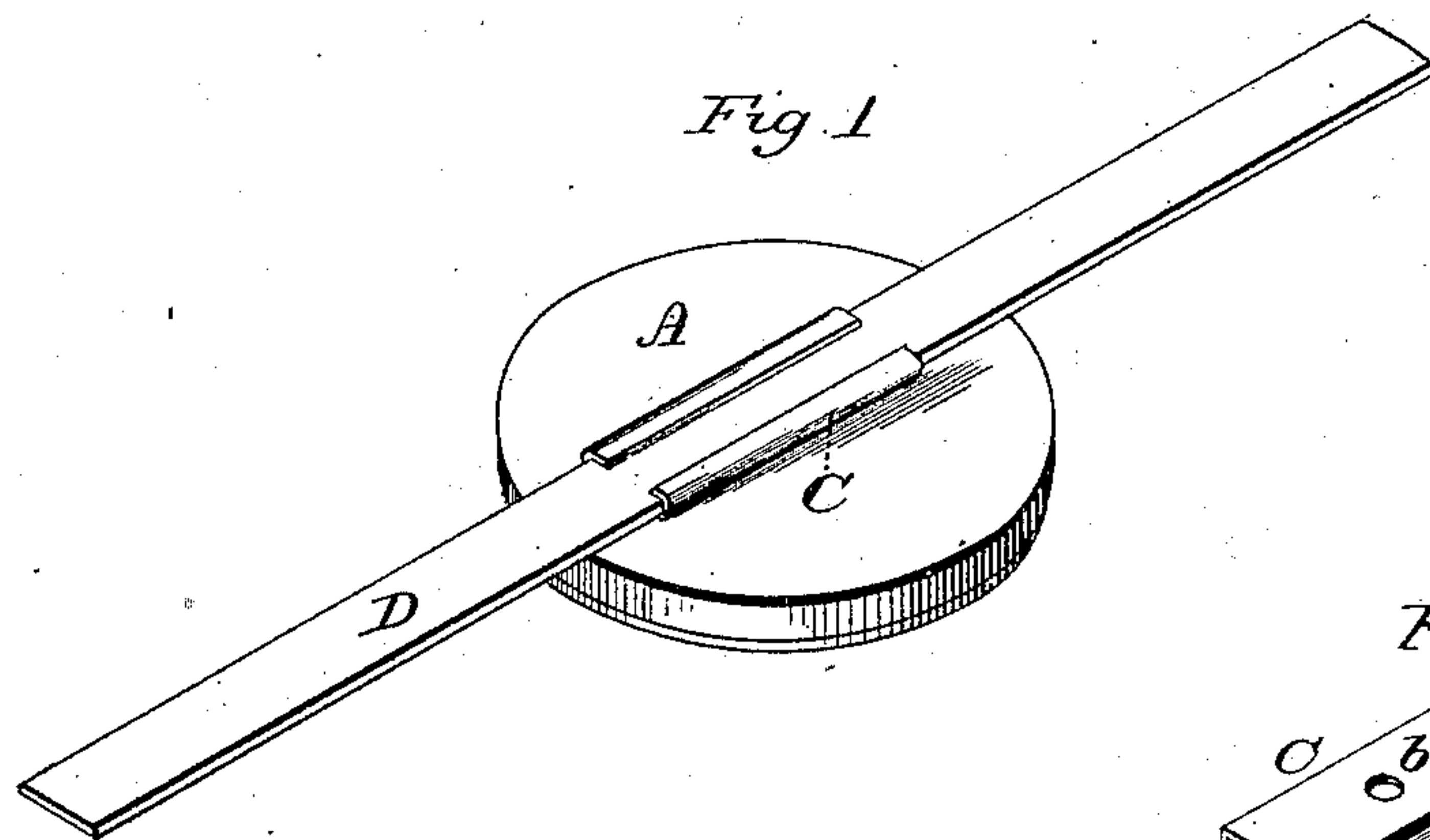


(No Model.)

J. M. CLOUGH.
RAILROAD TORPEDO.

No. 311,416.

Patented Jan. 27, 1885.



Witnesses.
J. R. Shumway
J. S. Parker

Jefferson M. Clough,
Inventor
By atty.
J. M. Paul.

UNITED STATES PATENT OFFICE.

JEFFERSON M. CLOUGH, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

RAILROAD-TORPEDO.

SPECIFICATION forming part of Letters Patent No. 311,416, dated January 27, 1885.

Application filed May 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, JEFFERSON M. CLOUGH, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Railroad-Torpedoes; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the invention, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view inverted; Fig. 2, a vertical central section of the lower portion or base of the torpedo, showing the method of attaching the strap; Fig. 3, a perspective view of clasp detached; Fig. 4, a perspective view of the bottom portion of the torpedo inverted, showing the strap laid within the clasp; Fig. 5, a transverse section of the clasp, showing it attached without the anvil; Fig. 6, a side view showing the strap applied to the upper portion instead of to the base.

This invention relates to an improvement in the construction of the article used for signals upon railways, which consists of a metallic disk charged with an explosive placed upon the track, so that the wheels of the locomotive striking it produce an explosion, commonly called "railroad-torpedoes," and particularly to the method of attaching the strap to the torpedo; and it consists in the construction, hereinafter described, and more particularly recited in the claim.

A represents the cup or base of the torpedo, to which the strap is attached. In the center of the torpedo is the anvil B. This anvil I construct with a rivet, *a*, upon its under side, so as to extend through an opening in the bottom of the torpedo. To the under side of the bottom portion, A, I attach a metal clasp, C. This clasp is shown detached in Fig. 3. It is cut from sheet metal, in length about two-thirds of the diameter of the torpedo, more or less, and bent into U shape in transverse section, with a hole, *b*, through its center corresponding to the rivet *a* on the anvil. This clasp is set onto the bottom of the part A. The rivet *a* extends through the hole *b*, as seen in Fig. 2, and is upset upon the reverse side of the clasp

so as to securely unite the parts, so that the head of the rivet will project somewhat into the clasp. D, the strap, is best made from lead, and of a width corresponding to the distance between the two sides of the clasp. It is laid into the clasp, as seen in Fig. 4, and then the two sides of the clasp closed down thereon, as seen in Fig. 1. In this act of closing so much force is applied as to force the projecting portion of the rivet into the strap, as seen in Fig. 2. This clasp is struck into shape by machinery, secured in place by the riveting apparatus, and the strap secured by a machine which will close the sides of the clasp down upon the strap, and when so secured its accidental detachment is impossible. The hand operation of soldering is avoided as well as the accidents due to the use of solder. The attachment is therefore not only no more expensive, but better.

In some classes of torpedoes the anvil B is omitted. In this case a simple rivet is applied to secure the clasp to the base portion, as seen in Fig. 5.

I have illustrated the strap as attached to the base portion, and generally this is the proper attachment for the strap, but it may be applied to the upper or top portion as seen in Fig. 7, the clasp being attached to or made a part of the top portion in the same manner as described for its construction or application to the base portion.

The head of the rivet *a*, as before stated, serves to aid in holding the strap in its place—that is, prevent longitudinal movement through the clasp—and while I prefer this additional security, it may be omitted.

I claim—

The combination of the clasp C, secured to the case of the torpedo by a rivet, *a*, projecting within said clasp, and the strap D, laid within the clasp upon the rivet, the said rivet engaging the strap, and the sides of the clasp closed upon the strap, substantially as described.

JEFFERSON M. CLOUGH.

Witnesses:

DANIEL H. VEADER,
LEE H. DANIELS.