

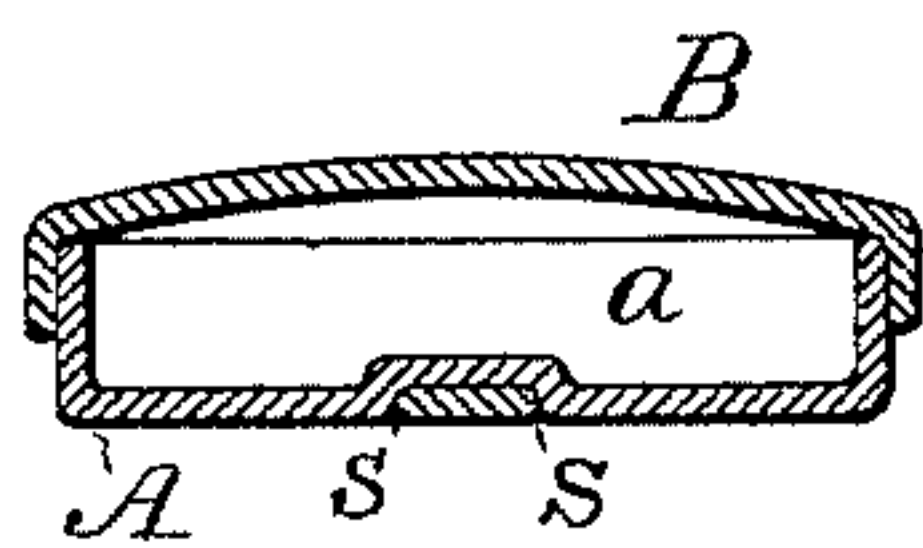
(No Model.)

C. BURNHAM.  
RAILROAD TORPEDO.

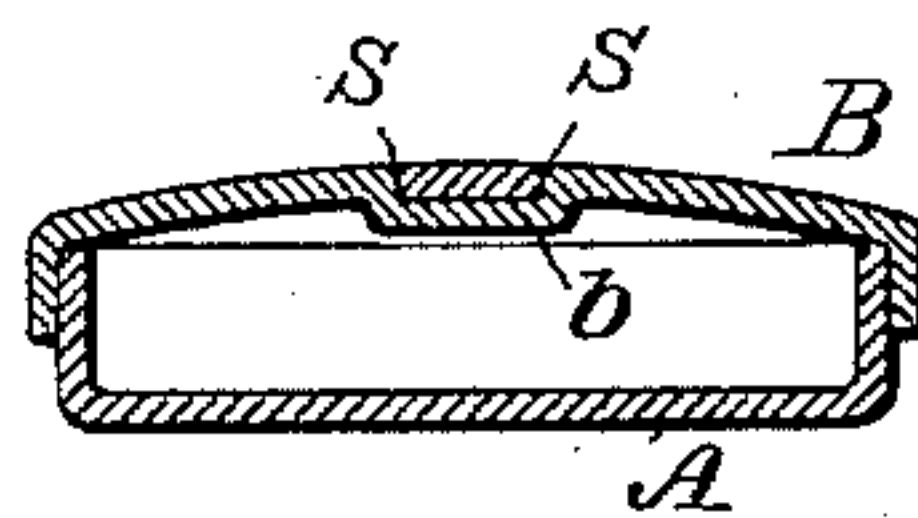
No. 327,520.

Patented Oct. 6, 1885.

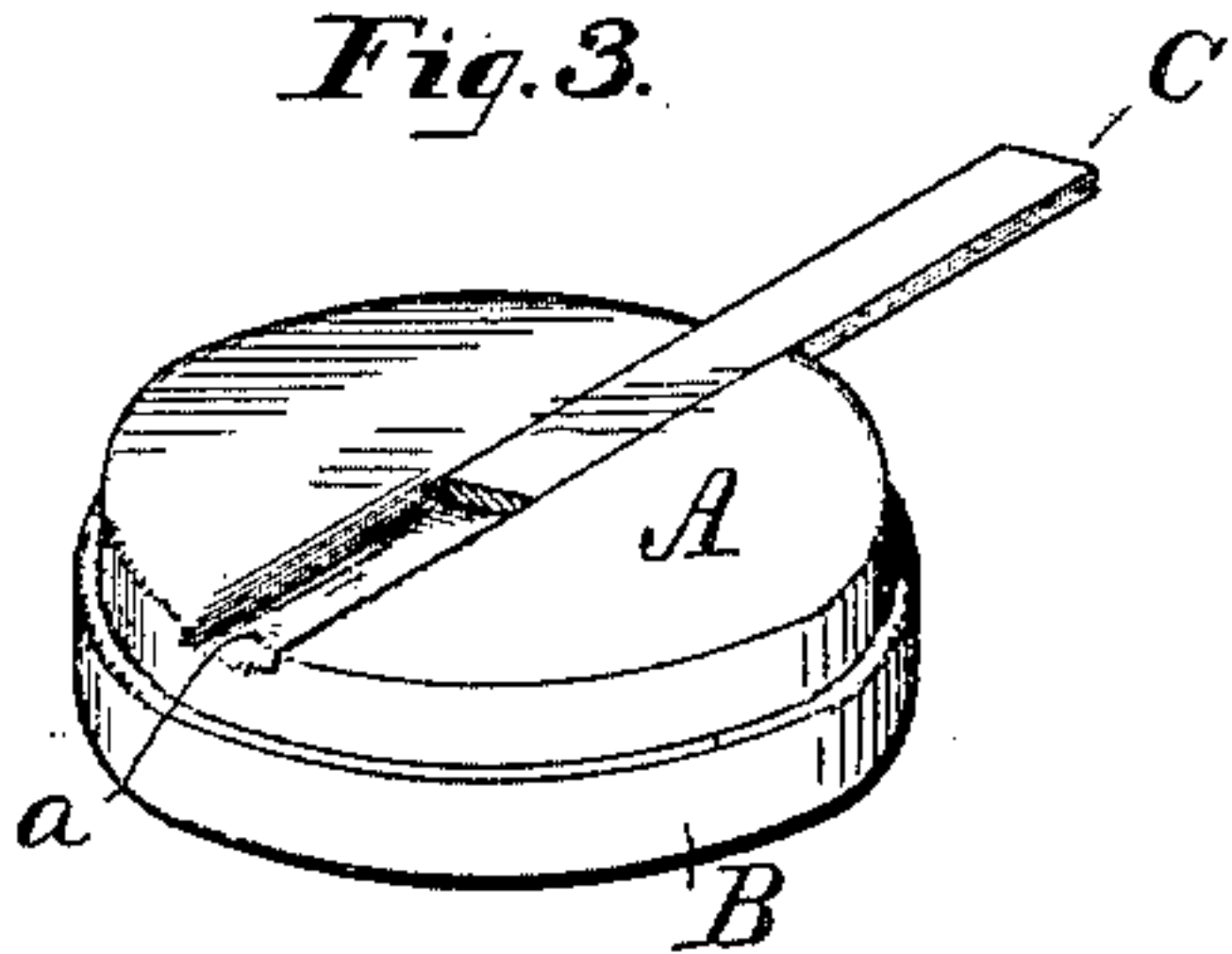
*Fig. 1.*



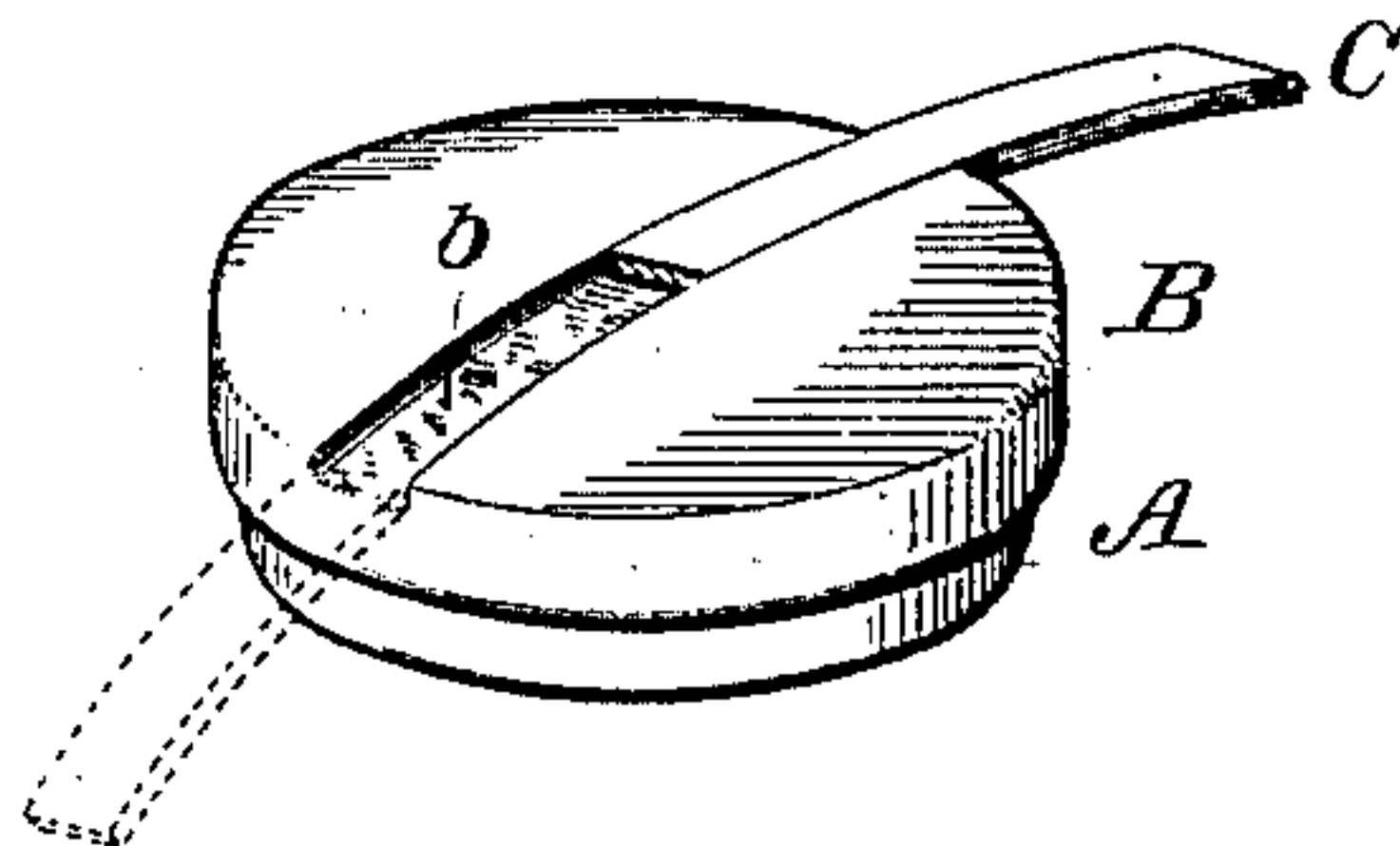
*Fig. 2.*



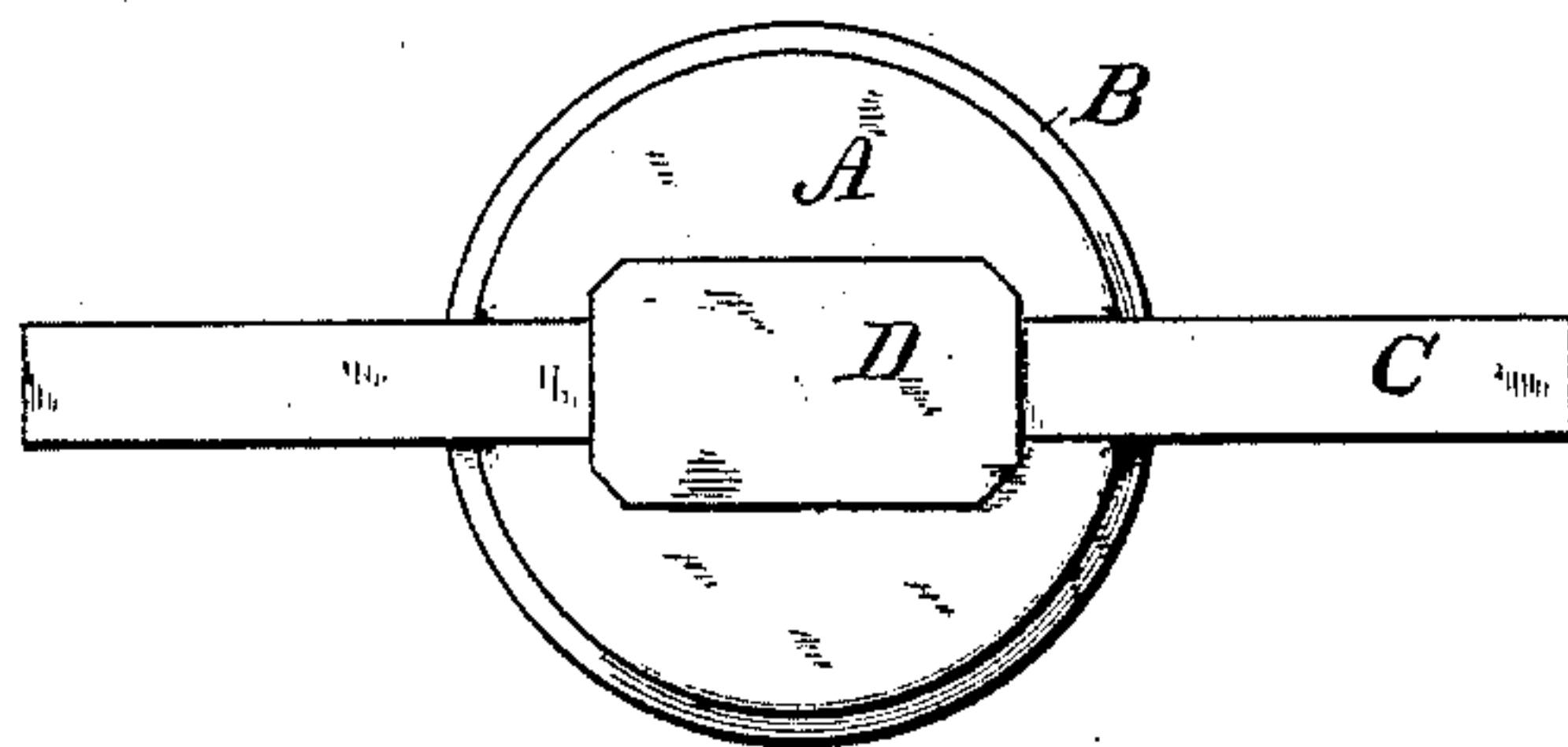
*Fig. 3.*



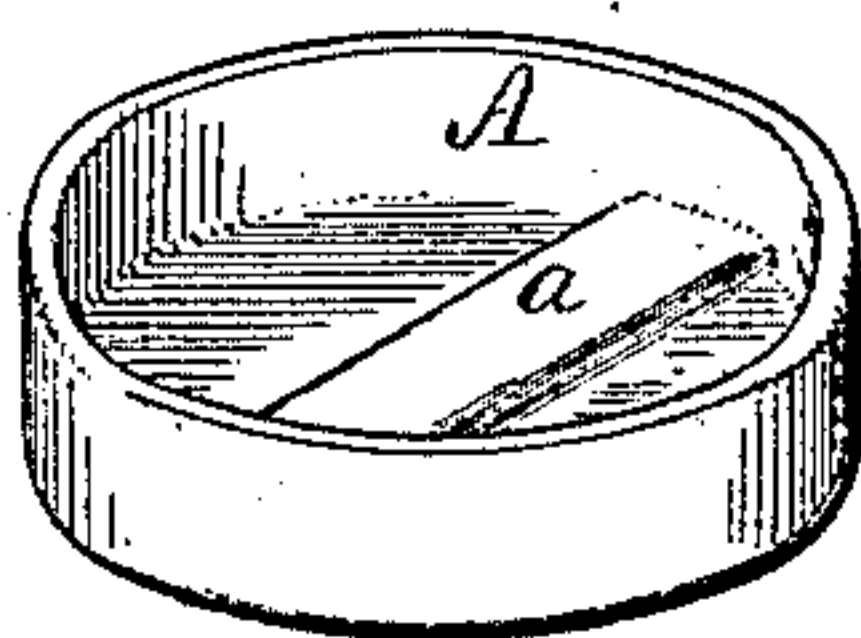
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES BURNHAM, OF PHILADELPHIA, PENNSYLVANIA.

## RAILROAD-TORPEDO.

SPECIFICATION forming part of Letters Patent No. 327,520, dated October 6, 1885.

Application filed April 7, 1885. Serial No. 161,423. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES BURNHAM, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Railroad-Torpedoes, of which the following is a specification.

My invention relates to a class of devices which are employed for signaling purposes upon railways, which consist, essentially, of a small covered box or inclosed circular case adapted to contain percussion-caps or detonating substances, and either the cup or base or the cover or cap of which is provided with arms or straps of lead or other pliable material, by means of which the box, case, or torpedo proper can be clasped upon the head of a railroad-rail, so as to be retained for explosion by the wheels of a locomotive or car.

It is an essential to the best operation of devices of this class that the under surface of the box or case for the fulminate should be level and flat, so as to adapt it to lie flat and without rocking upon the head of the rail; and also an essential to their construction that the strap, whether applied to the base or cap, should be readily and cheaply applied and fastened. Heretofore various means have been resorted to for securing the result of a level bottom for the case, and at the same time for permitting the application of the straps in a manner not augmenting the expense of producing the article.

The object of my invention is the production of a railroad-torpedo, the straps of which are applied either to the cup or to the cover of the case in such manner that, while the application is rapid, secure, and cheap, the under or bearing surface of the case remains level and flat, and the case itself is produced at a minimum cost.

A torpedo conveniently embodying a good form of my improvements is represented in the accompanying drawings, and described in this specification, the particular subject-matter claimed as novel being hereinafter definitely specified.

In the drawings, Figure 1 is a transverse central sectional elevation through a torpedo conveniently embodying my invention, the strap being applied to the bottom of the case. Fig. 2 is a view similar to Fig. 1, representing

the strap applied to the cover of the case. In both of the foregoing views the strap is retained in the strap-channel by solder. Fig. 3 is a perspective view of the bottom of the case inverted, the strap being shown with its end entered in a sunken channel formed in said bottom. Fig. 4 is a perspective view of the cover of the case, a strap, shown partly in dotted lines, being applied in a sunken channel formed in said cover. Fig. 5 is an under plan view of a case-bottom with the strap applied thereto and secured by the soldering on of an inclosing-plate of flat sheet metal. Fig. 6 is a perspective view of a case-bottom formed with the sunken strap-channel, sight being taken into the bottom.

Similar letters of reference indicate corresponding parts.

Generally stated, my invention consists in a railroad-torpedo case, either the top or the bottom of which is provided with a transverse, preferably diametric, sunken channel or recess, into and in which a strap can be entered, laid, and securely fastened, conveniently by means of solder.

In the drawings, A represents the cup bottom or base of the torpedo-case, which contains the percussion-cap or detonating material, and B represents the cap or cover which incloses such material in the cup. Either the cup or the cap is formed with a sunken channel or recess conveniently diametric in direction, and which is formed by stamping or depressing the material of said cup or cap in the act of striking them out with dies. The channel in the cap is lettered *a*, and that in the cup *b*. C is the strap, being preferably a continuous strip of lead, which is adapted as to its central portion to lie snugly within the sunken channel in either cup or cap and to be secured therein either, for instance, by soldering over it a flat plate, D, of very thin tin or other sheet metal, as shown in Fig. 5, or else by the application of a little solder, S, as shown in Figs. 1 and 2.

The strap when in its channel lies below the level of the adjacent surfaces of either top or bottom, so that when it is applied to the bottom the said bottom yet rests level upon the rail-head.

It being admittedly of advantage to secure the strap to the torpedo-case by the sim-



plest and cheapest possible fastening, it is obvious that the means which I resort to are simple, effectual, and inexpensive, as the sunken channel can be struck into either member of the case in the very act of forming it, and as it forms a guide for placing the strap properly upon the case in the act of securing said strap.

Having thus described my invention, I claim—

1. In a railroad-torpedo, a case adapted to contain percussion-caps or detonating material, which is provided as to either its top or bottom with a sunken channel to receive and contain the strap, substantially as shown and described.

2. In a railroad-torpedo, in combination with a case, either the cap or cup of which is provided with a sunken channel or transverse recess, a strap, the central portion of which is adapted to said recess, and suitable means for retaining said strap fixidly within said recess, substantially as described.

In testimony whereof I have hereunto signed my name this 30th day of March, A. D. 1885.

CHAS. BURNHAM.

In presence of—

J. BONSALE TAYLOR,  
WM. C. STRAWBRIDGE.