

(No Model.)

J. H. BEVINGTON.
TORPEDO.

No. 474,718.

Patented May 10, 1892.

Fig 1

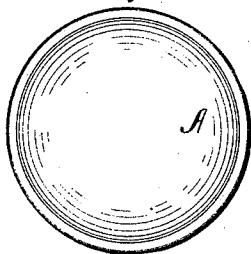


Fig 2

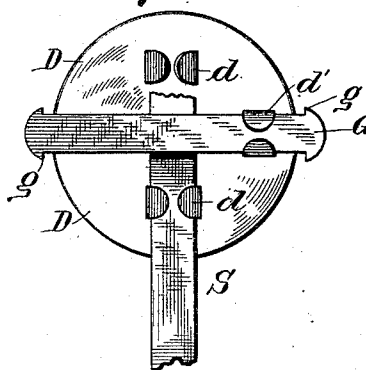


Fig 3

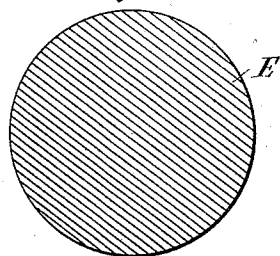


Fig 4

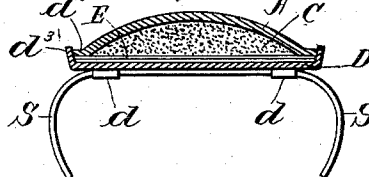


Fig 5

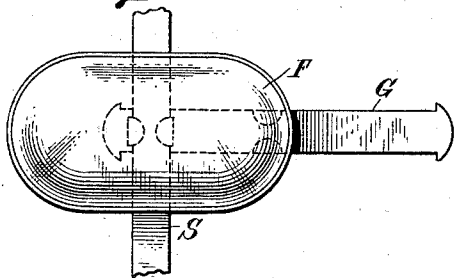
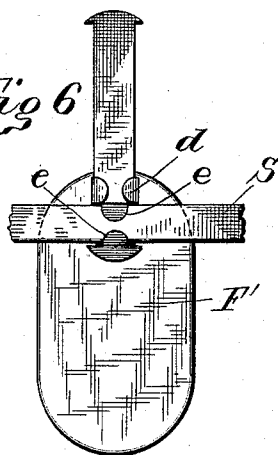


Fig 6



Witnesses

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UNITED STATES PATENT OFFICE.

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TORPEDO.

SPECIFICATION forming part of Letters Patent No. 474,718, dated May 10, 1892.

Application filed August 30, 1890. Serial No. 363,577. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. BEVINGTON, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Torpedoes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in torpedo-signals of that class which are charged with a detonating explosive composition which will explode by concussion and which are used generally as explosive signals on the track-rails of railways, to be exploded by contact therewith of a locomotive-wheel or car-wheel, and which may be used for other purposes; and the invention consists, in its main feature, in a composite structure, a shell or case having a base part of metal, and a cover or top part of paper, preferably waterproofed, and which shell or case contains the explosive composition; and in this connection my invention further consists in a shell or case having a metallic base part and a cover or top part secured thereto by means of an annular flange formed of the outer rim of the base or bottom part turned over upon the outer edge or brim of the cover or top part.

My invention further consists in a torpedo having a base or bottom part, with holding arms secured thereto by ears which are stamped or cut from the metal of said base part and are integral with the base part.

The invention further consists in constructions and combinations hereinafter described and claimed.

A torpedo embodying the preferred construction of parts and their mutual relationship, combination, arrangement, and organization in a composite body or structure—such as my improved torpedo—is hereinafter described and made the subject-matter of the claims hereto appended, and is delineated in the accompanying drawings, in which—

Figure 1 is a top plan of the cover or upper part of my torpedo; Fig. 2, a plan, seen from below, of the torpedo, the tread-strap, and part of the holding-strap; Fig. 3, a top plan of the preferred paper lining or coating

for the upper side of the metallic base; Fig. 4, a sectional elevation of the torpedo and holding-strap in a plane lengthwise of the holding-strap; Fig. 5, a top plan of a modification hereinafter referred to; Fig. 6, a plan, seen from below, of the modification shown at Fig. 5.

The shell or case is formed of a cover or top part A and a base part D. The base part D is preferably circular in shape, as shown at Figs. 2 and 4, and is preferably of metal or other suitable strong material, and has its outer circumferential portion or rim upturned to form a flaring annular flange d^3 , as shown at Fig. 4. The cover or top part A is formed of paper or some analogous light, soft, and flexible fabric of low specific gravity, such that when the torpedo is exploded the pieces into which said cover or top part is thereby torn will be of such lightness in proportion to their size, and otherwise of such nature different from metal and other heavy and hard material, that their velocity of flight through the air will be reduced to a minimum and that they will strike without harming any person or persons who may be near enough to be hit by them. In form the top part or cover A is preferably concavo-convex, or is the segment of a hollow sphere with an annular projecting brim d^2 in same plane as the base of said segment, as shown.

Preferably a circular sheet of thin paper E is placed upon the upper surface of the base D and is of such size as to fit with its outer edge or periphery against the flange d^3 , as does also the outer edge of the brim d^2 , when these parts are placed in position together, as shown at Fig. 4, for turning down the flange d^3 , in an evident manner, to secure them together and thereby retain the detonating composition C, which will explode by concussion. I prefer waterproofing the top A and the lining E, whereby the composition C, contained between them, will be securely retained and will be kept dry and free from the damaging action of moisture, which moisture might otherwise gain access thereto.

The holding-strap S, of any suitable flexible metal, is adjustably and removably replacedly fixed to the lower side of the base D by being slid beneath ears d and between

said ears and the lower side of the base D, as shown at Fig. 2. The ears *d*, as shown, are formed by stamping or cutting the base D, so that said ears may be turned outwardly therefrom while being an integral part thereof.

The ears *d* furnish a cheap, convenient, and simple means for securing the strap S to the torpedo, and the strap S is used to seat the torpedo on the upper surface of the rail-head by bending the projecting ends of said strap to clasp the head of the rail in any ordinary manner.

G is a metallic tread-strap, which is held by ears *d'*, of same construction as the similar ears *d*. The strap G has shoulders or projections *g* at each of its ends to limit the extent to which it may be slid endwise in either direction. As shown at Fig. 2, the strap G can be slid into place for handling, shipping, and other uses until a torpedo is to be placed on a rail, when a strap is drawn out at one side of the torpedo lengthwise of the rail and being thin the locomotive or car will readily pass onto it without moving the torpedo, and when on it will hold the torpedo securely from slipping, while the wheel rolls onto the torpedo itself.

In the modification shown at Figs. 5 and 6 the torpedo proper is of an elongated form, and the strap G is adjustably fixed to its base, as hereinbefore described, except that but one pair of ears *e* are used, and they are located near one end of the elongated case. In the modification referred to the holding-strap S is adjustably held in ears, struck up from the metal of the strap G in same manner as the ears *d* are struck up or formed from the metal of the base D.

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

1. A torpedo embodying in its construction, and in combination, substantially as hereinbefore described, a base or bottom part and a cover or top part of paper or other analogous material secured to each other to form a hollow shell, and a composition, explosible by concussion, contained in said case or shell.

2. A torpedo embodying in its construction, and in combination, substantially as hereinbefore described, a base or bottom part of metal and a cover or top part of paper secured to each other to form a hollow case or shell, and a composition contained in said shell, which is explosible by concussion.

3. A torpedo embodying in its construction,

and in combination, substantially as hereinbefore described, a metallic base or bottom part and a waterproofed-paper cover or top part secured to each other to form a containing-case for the explosive composition.

4. A torpedo embodying in its construction, and in combination, substantially as hereinbefore described, a metallic base or bottom part, a waterproofed-paper cover or top part, and a lining or upper surface of waterproofed paper, such as E, for the base part, all secured to each other to form a containing-case for the explosive composition.

5. A torpedo embodying in its construction, and in combination, substantially as hereinbefore described, a metallic base or bottom part and a paper cover or top part secured to each other by an annular flange on the outer rim of said base part, which flange is turned over and onto the rim of the paper part to form a case or shell, and a composition explosible by concussion contained in said case or shell.

6. In combination with a torpedo for railway and other uses, having a bottom or base part formed of metal or other suitable material, with ears struck up from the material of said base and integral therewith, a holding-strap secured to the torpedo by clamping it between said ears and the main part of the base, substantially as described.

7. In combination with a torpedo for railway and other uses, having a bottom or base part formed of metal or other suitable material, with ears struck up from the material of said base part and integral therewith, a tread-strap secured to the torpedo to permit of endwise insertion and adjustment of said strap between the body part of the base and said ears, substantially as described.

8. In combination with a torpedo for railway and other uses, having a bottom or base part formed of metal or other suitable material, with ears struck up from the material of said base part and integral therewith, a tread-strap having shouldered ends secured to the torpedo to permit endwise movement thereof, limited by said shouldered ends between the body part of the base and said ears, substantially as described.

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

JAMES H. BEVINGTON.

Witnesses:

C. J. PUFFER,

R. N. McCORMICK.