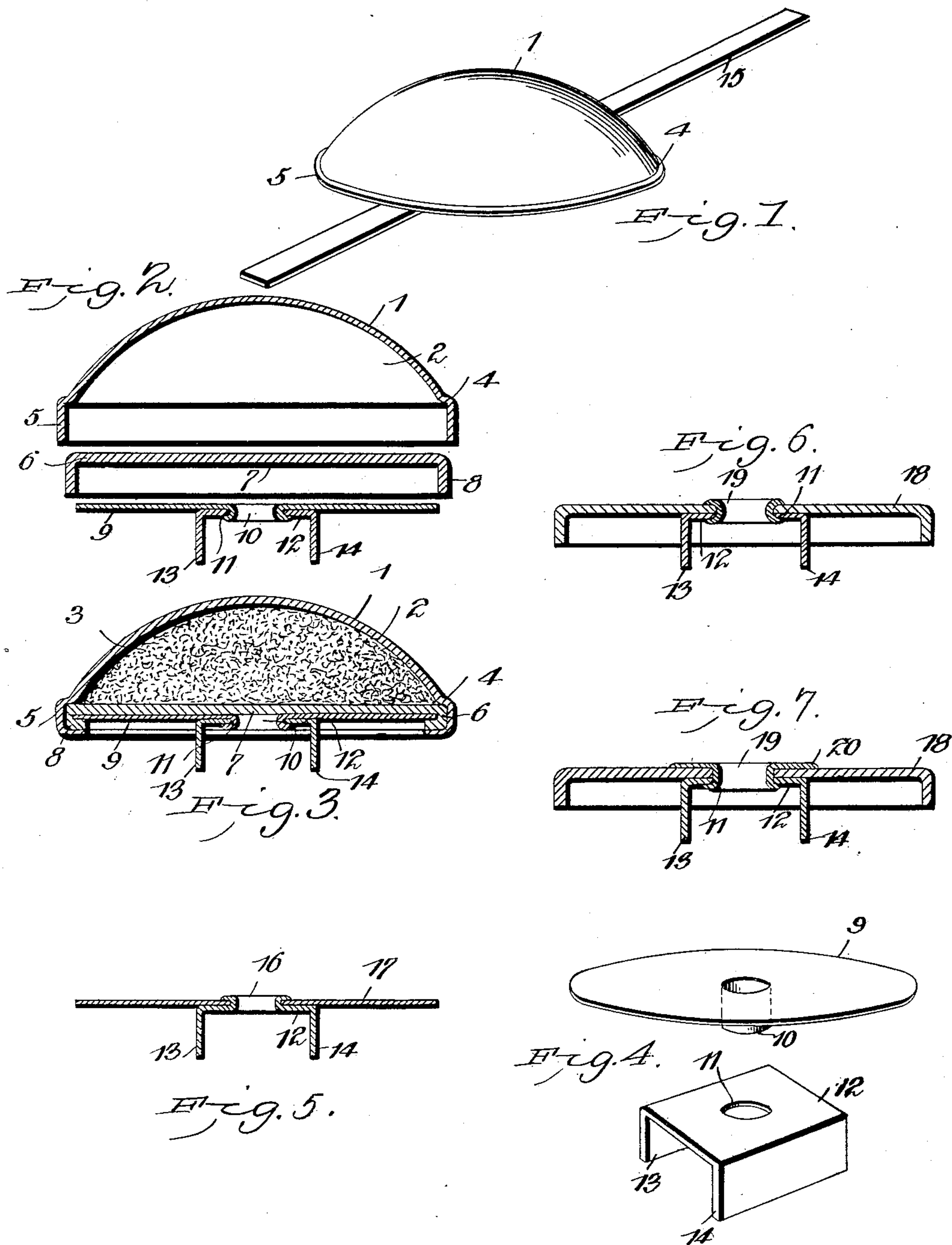


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E. S. LAFFERTY.
RAILROAD TORPEDO.
APPLICATION FILED FEB. 2, 1903.

NO MODEL.



Witnesses
E. J. Stewart
S. M. Tucker

Erastus S. Lafferty, Inventor
by *Chas. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

ERASTUS S. LAFFERTY, OF GALESBURG, ILLINOIS, ASSIGNOR TO LAFFERTY
MFG. CO., OF GALESBURG, ILLINOIS.

RAILROAD-TORPEDO.

SPECIFICATION forming part of Letters Patent No. 738,112, dated September 1, 1903.

Application filed February 2, 1903. Serial No. 141,527. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS S. LAFFERTY, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented a new and useful Railroad-Torpedo, of which the following is a specification.

This invention relates to an improved torpedo, and more particularly to that class which are charged with a detonating explosive, being adapted for application to track-rails and exploded by contact with the locomotive or car wheel and used as a signal to notify the engineer of impending danger.

The object of the invention is to provide a simple, inexpensive, and efficient device of this character the several parts of which may be readily assembled and quickly and securely applied to a track-rail, being thoroughly protected from the wet and atmospheric moisture.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a torpedo embodying the features of this invention. Fig. 2 is a transverse vertical section of the same with the cup or shell separated therefrom. Fig. 3 is a view similar to Fig. 2, showing the parts assembled and secured. Fig. 4 is a perspective view of the base or supporting plate and strap-retaining slip, showing the parts detached. Fig. 5 is a vertical section showing a modified form of fastening the strap-retaining arms, and Figs. 6 and 7 are further modifications of the same.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the cup or shell, which may be formed of metal, waterproof paper, or other suitable material pressed, stamped, or otherwise formed, being preferably concavo-convex in cross-section and defining a pocket or chamber 2 for the reception of a detonating explosive 3. The cup or shell 1 is provided with an annular shoulder 4 and a depending annular flange 5, and fitting within the cup or shell and resting against the shoulder 4 is an in-

verted-cap-shaped lining 6, preferably formed from paper saturated with paraffin or like material, so as to render the same waterproof. The cap-shaped lining 6 is provided with a flat imperforate central portion 7 and a depending peripheral flange 8 and serves to retain the detonating explosive in the chamber 2 as well as protect it from dampness. A bottom supporting plate or disk 9 fits within the cup or shell 1, its upper face being in contact with the lining 6, and this plate or disk is provided with an integral depending eyelet-tube 10, which passes through an opening 11, formed in a strap-securing clip 12, and to which it is secured by bending or otherwise clenching the end of the tube, as shown. The clip 12 is preferably formed of a single piece of material and provided with longitudinally-disposed vertical flanges 13 and 14, adapted to receive the securing-strap 15, which may be retained therein by bending said flanges inwardly in contact with the strap and by means of which the torpedo is secured in position on the track.

In assembling the several parts the operation is as follows: The cup or shell having been filled with a suitable detonating explosive, the waterproof lining is placed in the cup, with the top of the lining resting against the shoulder 4 and the peripheral flange 8 lying parallel with the flange 5. The supporting plate or disk 9, carrying the strap-securing clip 12, is now inserted, and by suitable means the flanges 5 and 8 are bent inwardly toward and upon the supporting plate or disk, as clearly shown in Fig. 3 of the drawings, thereby firmly and securely clamping the lining and disk within the cup or shell and effectively excluding moisture.

With a device constructed in this manner the dome-shaped cap-piece being preferably smooth prevents the accumulation of any moisture when exposed to rain or damp weather, and the lining is protected from direct contact with any accumulated moisture, owing to its position under the dome, and as the outer edge of the dome is bent under the lining the latter is held from contact with the rail and is not acted upon by any moisture which may accumulate thereon.

In Fig. 5 I have shown a different manner

of securing the strap-retaining clip to the base or supporting plate. In this case the clip 12 is formed with an integral eyelet-tube 16, which passes through an opening in the disk 17 and serves to secure the clip to the disk preparatory to introducing the same within the cup or shell.

In some cases where it is preferable to use a shell formed of waterproof paper or other suitable flexible material the metallic supporting-plate is dispensed with and a paper disk 18 substituted, the clip being secured to the disk by means of an independent eyelet 19, as shown in Fig. 6 of the drawings,

In Fig. 7 I have shown the eyelet-tube 19 provided with an inwardly-extending flange 20, which rests against the disk, forming a broad bearing surface, preventing the paper or other flexible material of which the disk is formed from tearing when the clip is applied.

From the foregoing description it will be seen that I have provided an exceedingly inexpensive torpedo-signal, the several parts composing the same being quickly and easily assembled and when secured together rendered thoroughly waterproof, the torpedo being provided with a simple yet effective clip for retaining the securing-strap by means of which the device is held in position on the track-rail.

In some instance the lining may be formed of material of such a close and naturally waterproof texture that it will be unnecessary to first treat the same with paraffin or a similar coating material, and, if desired, the lining, as well as the supporting-disk, may be formed with an upwardly-extending annular flange adapted to receive the cup or shell, the several parts being bent, crimped, or otherwise secured together.

While I have described the torpedo as applied to track-rails, it may also be used with equally good results for other purposes, and various changes in form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

1. A torpedo of the class described, comprising an upper flanged shell or body portion and a lower supporting-plate or bottom portion, the flange on the body portion being bent inwardly and clamped upon the supporting-plate and a waterproof lining interposed between the body portion and the supporting-plate.

2. A torpedo of the class described, com-

prising an upper flanged shell or body portion and a lower supporting-plate or bottom portion, the flange on the body portion being bent inwardly and clamped upon the supporting-plate, an independent strap-retaining clip secured to the supporting-plate and a waterproof lining interposed between the body portion and the supporting-plate.

3. A torpedo of the class described, comprising an upper flanged shell or body portion and a lower supporting-plate or bottom portion, the flange on the body portion being bent inwardly and clamped upon the supporting-plate, a depending eyelet-tube formed integral with the supporting-plate, a strap-securing clip provided with an opening adapted to receive the eyelet-tube, and a waterproof lining interposed between the body portion and the supporting-disk.

4. A torpedo of the class described, comprising a flanged cup or shell and a supporting-plate, the flange on the cup or shell being bent inwardly upon the supporting-plate, a strap-securing clip provided with parallel longitudinally-disposed flanges, and a central opening, a depending eyelet-tube carried by the supporting-plate and adapted to pass through the opening in the clip, and a waterproof lining interposed between the shell and the supporting-disk.

5. A torpedo of the class described, comprising a cup or shell provided with a depending peripheral flange and an annular shoulder, a waterproof lining provided with a corresponding depending peripheral flange fitting within and resting upon the shoulder formed in the cup or shell, a supporting-disk having a strap-securing clip fastened thereto, the flange on the shell being bent inwardly over and upon the supporting-disk, the lining forming a moisture-excluding packing between the shell and the supporting-disk.

6. The combination in a torpedo, of the dome-shaped metallic cap having a peripheral flange and provided with an annular shoulder, a lining formed of waterproof material and having a depending peripheral flange, and a bottom disk disposed within the flanged portion of the lining, the two flanges on the cap and lining being bent inwardly under the disk and serving to confine the lining against the shoulder of the cap.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ERASTUS S. LAFFERTY.

Witnesses:

LEROY J. BAIRD,
FRANK E. FRYE.