Jan. 30, 1923.

1,443,366

H. W. KELLY.
TRACK TORPEDO.
FILED MAR. 16, 1918.

Fig. 6.

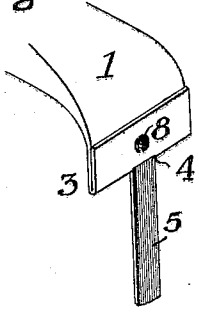


Fig. 1.

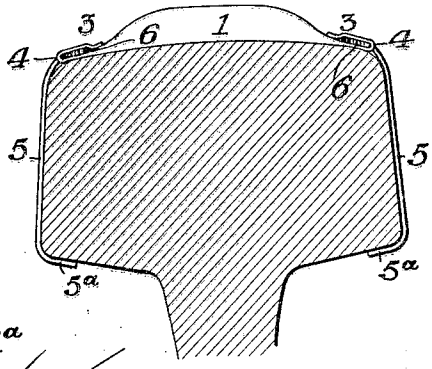


Fig. 7.

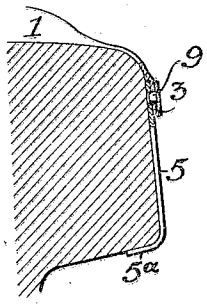


Fig. 5.

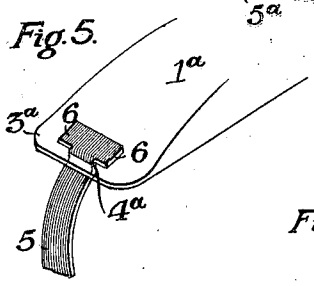


Fig. 2.

Fig. 10.

Fig. 3.

Fig. 4.

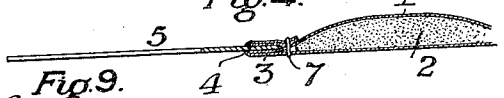


Fig. 8.

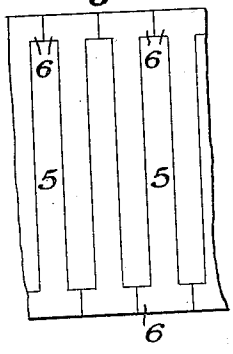


Fig. 9.

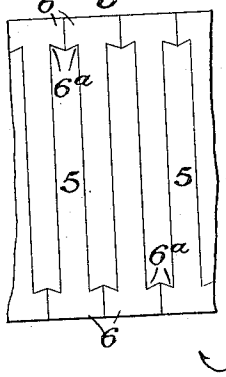
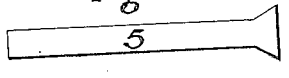


Fig. 11.



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by his Attorneys.
Howson & Howson

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UNITED STATES PATENT OFFICE.

HUGH WILLIAMSON KELLY, OF PROVIDENCE, RHODE ISLAND.

TRACK TORPEDO.

Application filed March 16, 1918. Serial No. 222,912.

To all whom it may concern:

Be it known that I, HUGH WILLIAMSON KELLY, a citizen of the United States, residing in Providence, Providence County, Rhode Island, have invented certain Improvements in Track Torpedoes, of which the following is a specification.

My invention relates to track torpedoes; and the object of my invention is to provide a torpedo having a case of paper, fibre, or other material that will be destroyed upon detonation of the contained charge and will be substantially non-flying, and to provide means for securing straps of ductile metal to the ends of this special form of non-flying charge-holding case whereby it may be held to the head of a rail.

These and other features of my invention are more fully described hereinafter, reference being had to the accompanying drawings, in which:

Figure 1, is a view showing a torpedo embodying my invention in position upon the head of a rail.

Fig. 2, is a perspective view of the torpedo before application to a rail head.

Fig. 3, is a plan view of one end of the torpedo showing the rail engaging strap connected thereto.

Fig. 4, is a sectional view on the line IV—IV, Fig. 3.

Fig. 5, is a perspective view of part of a shell or container for the explosive charge, made of rubber, rubber-containing, or other homogeneous material.

Figs. 6 and 7, are views illustrating another form of connection for the rail-engaging strap within the scope of my invention.

Figs. 8 and 9, are views illustrating one manner of preparing retaining straps to be secured to the torpedo for holding the same to the head of a rail, and

Figs. 10 and 11, show straps with other forms of heads.

In the form of structure illustrated in Figs. 1, 2, 3, et seq., 1 represents a shell or container for detonating material, which may be of paper, friction cloth or any other suitable form of textile or knitted fabric, or any other suitable material, adapted to contain a detonating charge 2 of any suitable character prepared in any suitable manner; such feature forming no part of my invention, being well known in the art to which my invention relates.

The ends of the shell or container may be turned over as at 3, and in the edge of such folded portion an aperture 4 may be provided through which a retaining-strap 5 of ductile metal, preferably lead, may be passed; such strap having a head at one end which may comprise side projections 6 whereby it may be retained in place by the fold of the material constituting the casing or shell of the container, or otherwise, and the folded ends so prepared may then be sewn as at 7, or otherwise secured to said container for the detonating material. In lieu of sewing, other fastening means may be provided; rivets, eyelets or the like.

In Fig. 5, I have shown a molded container 1^a of rubber, rubber-containing, or other homogeneous material, having ends 3^a apertured at 4^a through which the headed retaining straps 5 may be passed; such molded structure being otherwise capable of performing the same functions as the paper or fibrous structures, and being as simple to apply to the rail head and as efficient as said paper or fibrous structures.

In Figs. 6 and 7, I have shown a form of torpedo in which the ends may come over the rail head, and to which ends the retaining straps may be secured by means of eyelets or rivets, as indicated at 8 and 9, respectively.

By providing each end of the explosive-containing shell with a strap of this character, means are provided whereby it may be properly positioned on the head of the rail for engagement by the wheel of a locomotive or other vehicle traveling on the rails and to which a warning should be given. The ends of the straps may be long enough to engage the under side of the rail head as indicated at 5^a.

When fastening means such as the eyelets 8 or rivets 9 are employed, the strap may be passed through an aperture in the folded end of the torpedo, as in the structure shown in Figs. 1, 2, 3, et seq.; such arrangement being illustrated in Fig. 6, where an eyelet fastener 8 is shown. In lieu of this, the strap may be on the inside of the folded end of the torpedo, as shown in Fig. 7, where a rivet 9 is employed as the fastening member. Both eyelet and rivet may be of ductile metal so as to reduce the possibility of injury should either fly on explosion of the torpedo.

The lead straps 5 which are attached to the torpedo for engagement with the rail head

may be cut from solid sheets of lead in the manner indicated in Figs. 8 and 9; the method of cutting providing extended ends to form heads which will be held by the folded end of the container, or the fastening means described, in the manner shown in the drawings.

In the form of strap shown in Fig. 8, the side extensions 6 are at right angles to the main body of the structure, while in the form shown in Fig. 9, such extensions are shown as undercut by recessing the same adjacent the main body of the strap, as indicated at 6^a. Other forms of heads are shown in Figs. 10 and 11; that of Fig. 10 being round, while that of Fig. 11, is wedge-shaped, and such forms may be cut from solid sheets in the same manner as illustrated in Figs. 8 and 9. Any suitable form of strap attachable to the ends of the torpedo and capable of performing the desired function, I deem to be within the scope of my invention.

I claim:

1. The combination, in a track torpedo, of a shell or casing containing an explosive charge and having folded ends, means for securing said ends in folded condition, and rail-engaging straps of ductile metal for holing the torpedo to a rail head secured to said folded ends; said straps having enlarged heads retained in the folds of said container ends.

2. The combination, in a track torpedo, of a container having folded ends, apertures in the folds of said ends, headed rail-engaging straps adapted to said apertures and held to the container by said heads, and means for securing the folded ends of the container to hold the straps against displacement.

HUGH WILLIAMSON KELLY.