

F. DUTCHER.
RAILWAY SIGNAL TORPEDO.
APPLICATION FILED JUNE 8, 1911.

1,009,228.

Patented Nov. 21, 1911.

Fig. 1.

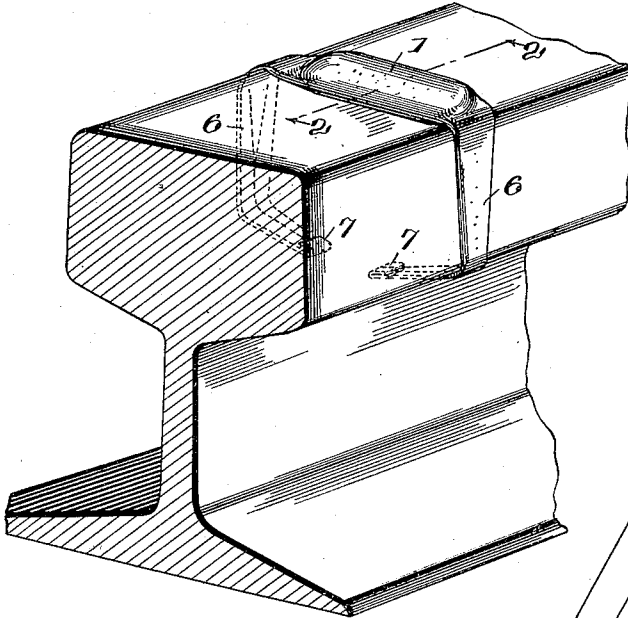


Fig. 2.

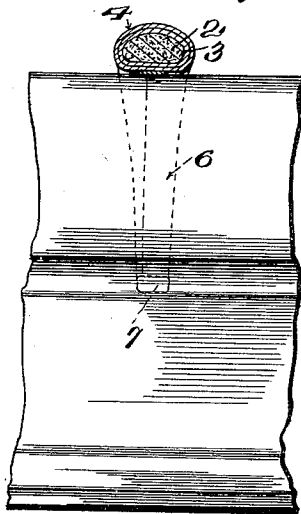


Fig. 3.

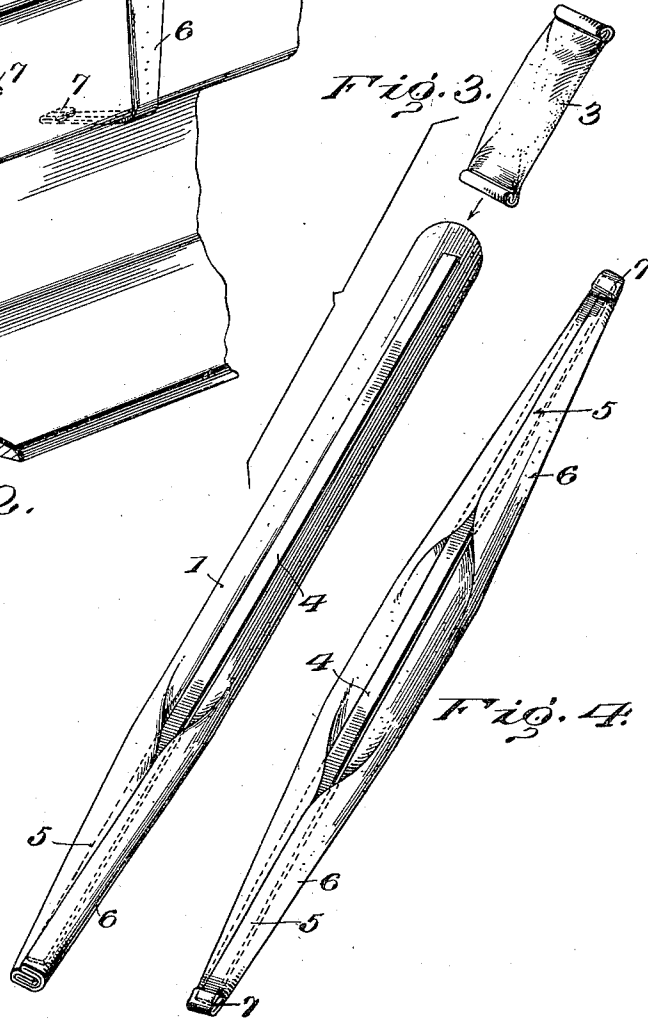
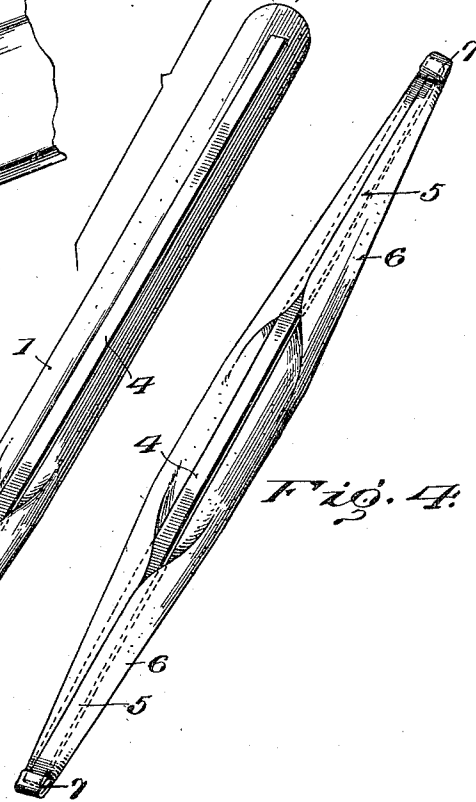


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK DUTCHER, OF VERSAILLES, PENNSYLVANIA.

RAILWAY SIGNAL-TORPEDO.

1,009,228.

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Application filed June 8, 1911. Serial No. 632,051.

To all whom it may concern:

Be it known that I, FRANK DUTCHER, a citizen of the United States, residing at Versailles, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railway Signal-Torpedoes, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in railway signal torpedoes, and pertains to that type of torpedo in which an encircling or inclosing case with continuously formed rail-engaging members is used, composed of tinfoil or other similar ductile material.

In the practical use of this form of torpedo, it has been found that the thin ductile wall of the inclosing case becomes broken in the practical handling of the torpedo, and the object of my present invention is to provide means for strengthening the case and preventing its breaking under the handling thereof in its practical use, by applying thereto a strengthening strip in the manner hereinafter explained.

In the accompanying drawings—Figure 1 is a perspective view of my improved torpedo applied to a railroad rail. Fig. 2 is a transverse sectional view thereof. Fig. 3 is a perspective view of the several parts composing the improved torpedo shown partially assembled. Fig. 4 is a perspective view of my improved torpedo completed, ready to be applied to a railroad rail.

I do not make any claim herein broadly for the attachment of a strengthening strip to a torpedo of the type referred to, because this is the subject-matter of a co-pending application.

My present invention pertains to the particular manner of applying the strengthening strip to the inclosing case.

Referring now to the drawings, 1 indicates an inclosing case which is of a tubular form and may be of the seam or seamless type of tube. Placed within this tube is a suitable explosive compound. As here shown this compound 2 is placed within the case 3. The inclosing case 1 and the explosive case 3, are preferably formed of tinfoil or similar ductile material, but may be formed of any suitable ductile substance or material. The explosive case 3 is placed within the inclosing case at its center, and my present improvement consists in apply-

ing a strengthening strip 4, to the outside of the inclosing case.

The explosive case 3 is placed within the inclosing case 1, and the strengthening strip is laid on the inclosing case and the ends of the inclosing case are longitudinally folded around the ends of the strengthening strip 4, as shown at 5, which folding reduces the transverse size or section of the extended ends 6, of the combined encircling and rail-engaging device. These folds 6 serve to unite the strengthening strip 4 to the inclosing case and the strengthening strip strengthens and stiffens the thin ductile wall case, thus preventing it from being broken in the handling thereof by railway employees either before or when being applied to the railroad rail. This strip 4 is placed at the bottom of the case and between the rail and the explosive compound so that the strengthening strip is not blown away by the explosion, which might otherwise cause damage to any one happening to be near the torpedo when being passed over by a train. The extremities of the ends 6 project slightly beyond the ends of the strengthening strip 4 and are doubled backward transversely as at 7, thus forming the triple function of preventing endwise movement of the strengthening strip; locking the folds 5 and closing the ends of the case against the admission of water and moisture.

While I show the explosive compound 2 within an inclosing case 3, the compound may be of any other form without affecting my present invention.

The strengthening strip 4 preferably consists of lead, though it may be formed of any suitable material.

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

1. An improved railway torpedo comprising a tubular explosive inclosing case, having integral extended rail-engaging members, and a separate strengthening strip applied to the outside of and extending longitudinal the said rail-engaging members.

2. An improved railway torpedo, comprising a tubular explosive inclosing case having integral extended ductile rail-engaging members and a separate strengthening strip applied to the outside of the rail-engaging members and attached thereto.

3. An improved railway torpedo, compris-

ing an explosive inclosing case having ductile extended rail-engaging members, and a strengthening strip applied to the outside of and extending longitudinal the case and
5 the said rail-engaging extensions, said extensions folded over the outer portions of the strengthening strip, thus uniting it to the torpedo.

4. An improved railway torpedo, comprising an explosive inclosing case, having
10 continuously formed ductile extensions forming rail-engaging members, and a strengthening strip applied to and extend-

ing longitudinal the outer side of the inclosing case, the rail-engaging members
15 longitudinally folded over the outer portions of the strengthening strip, the extremities of the rail-engaging members doubled backward transversely for the purpose described. 20

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

FRANK DUTCHER.

Witnesses:

J. D. YOAKLEY,

C. R. WRIGHT, Jr.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."