

F. DUTCHER.
RAILWAY SIGNAL TORPEDO.
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1,009,139.

Patented Nov. 21, 1911.

Fig. 1.

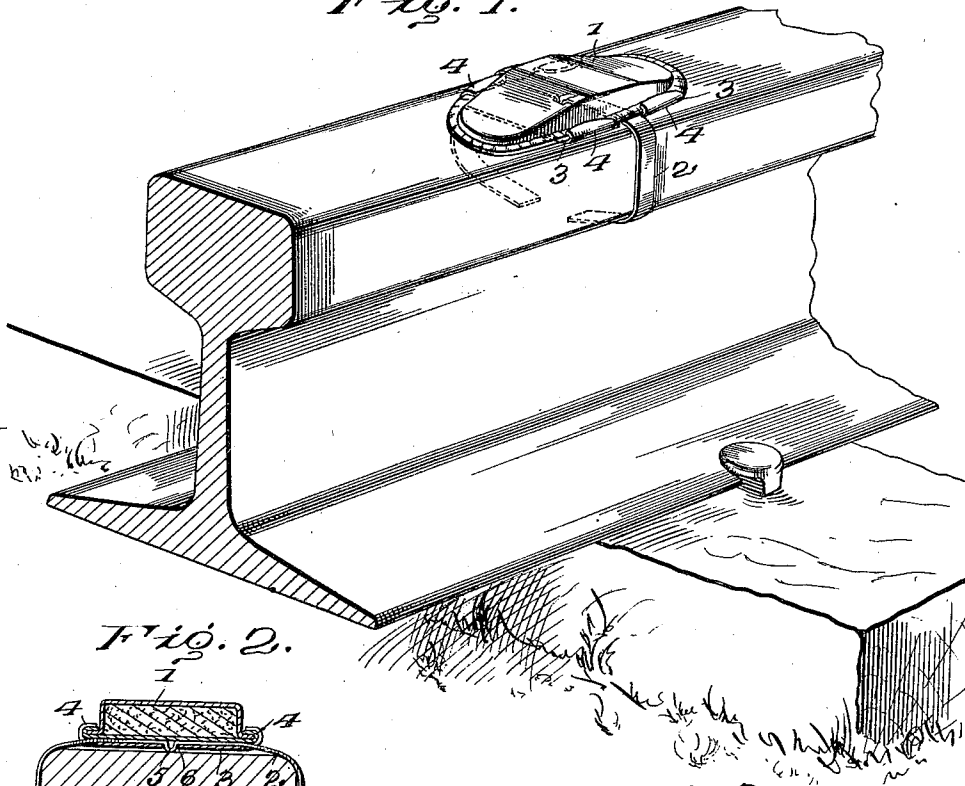


Fig. 2.

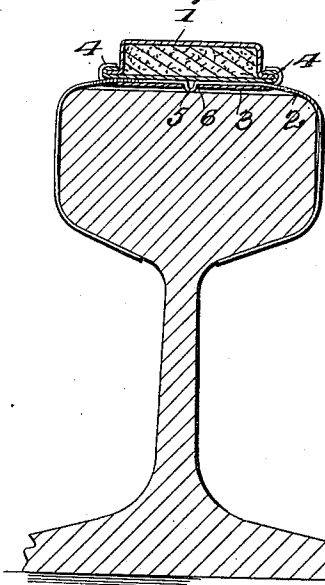
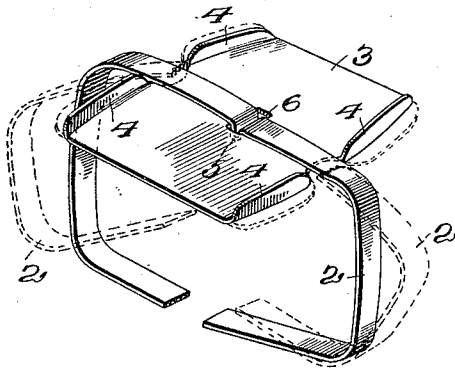


Fig. 3.



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RAILWAY SIGNAL-TORPEDO.

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Specification of Letters Patent.

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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 particularly to improvements in a spring rail-engaging member for holding the torpedo to the track.

The object of my invention is to so construct the spring that when the torpedo is passed over by the wheels of the locomotive the spring strip will be broken and fall away from the track, and to so construct the spring strip and its holding member that the strip is held to the torpedo against longitudinal movement.

In the accompanying drawings—Figure 1 is a perspective view of a torpedo with my improvement showing it applied to a railroad rail. Fig. 2 is a transverse sectional view of Fig. 1. Fig. 3 is a detached perspective view of the spring holding clip and the spring, the spring shown unbroken in solid lines and broken in dotted lines.

As is well known to those skilled in this art, spring clip torpedoes have the spring strip formed of spring steel, and this form of torpedoes is usually applied to the track by a suitable instrument from the rear end of the train while the train is in motion, and the spring is to instantly grasp the rail when it is released. It is also well-known that in the usual form of spring clips the spring remains on the track for some time after the passing of the locomotive wheels, because it is made of hard steel and usually the whole train passes over this steel strip and, in some instances, several trains will pass over the strip before it is sufficiently crushed to separate. By reason of this the hard steel strip injures the softer railroad rail, making a bad rail, which unevenly wears by reason of the indentation formed

by this steel strip. By my improvement the steel strip instantly snaps in two when it is passed over by the front wheels of the locomotive and falls away, thus preventing the aforementioned result.

While I have here shown an elongated tapered torpedo case 1 my improvement is not limited to any form of case.

2 is the steel spring strap and in the construction here shown, this strap is secured to the torpedo case by a suitable clamp 3. This clamp is shown to consist of a plate which is formed of tin or other soft metal and has its edges 4 turned around the edge of the torpedo case 1, as illustrated.

My improvement consists in forming an outward bend 5, in the spring strap 2, which is so located that the wheel of the locomotive flattens it out. This spring strap is made of hardened steel, or, in other words, is tempered, and when the tempered looped portion 5 is mashed by the wheel of the locomotive, it breaks as shown in dotted lines Fig. 3 and falls away from the track, preventing the aforesaid injury. Furthermore, this loop 5 is made to serve an additional function in that it extends through an opening 6 in the plate 3, and thus serves to hold the spring strap against relative movement.

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

1. The combination with a railway signal torpedo, of a spring metal rail engaging strap attached thereto and passing thereacross, the spring strap having a short lateral bend at a point within the periphery of the torpedo as and for the purpose described.

2. The combination with a railway signal torpedo, of a spring rail-engaging strap carried thereby and having an outwardly extending substantially U-shaped bend adapted to be flattened out and broken by the wheel of a locomotive for the purpose described.

3. The combination with a torpedo having a strap fastening plate, said plate having an intermediate opening, of a rail-

engaging strap having a projection extending into the said opening, substantially as described.

5 4. The combination with a torpedo having a strap fastening plate provided with an intermediate opening, of a spring rail-engaging strap having an outwardly extending loop portion passing through the

said opening, substantially as and for the purpose described.

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

FRANK DUTCHER.

Witnesses:

SIMON F. LOEB,

GERTRUDE DAVIDSON.

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