(No Model.)

E. N. HILL.

RAILWAY TORPEDO.

No. 479,879. Patented Aug. 2, 1892.

Fig. 1.

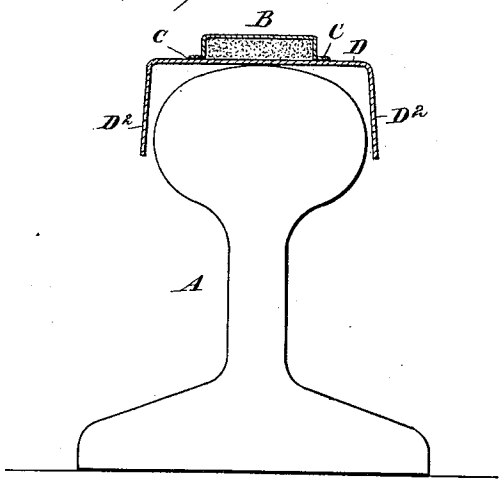
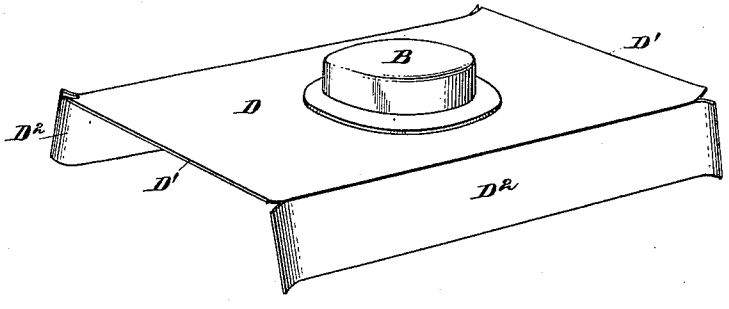


Fig. 2.



Witnesses
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EUGENE N. HILL, OF BUFFALO, NEW YORK.

RAILWAY-TORPEDO.

SPECIFICATION forming part of Letters Patent No. 479,879, dated August 2, 1892.

Application filed December 11, 1891. Serial No. 414,652. (No model.)

To all whom it may concern:

Be it known that I, EUGENE N. HILL, a citizen of the United States, residing at Buffalo, Erie county, in the State of New York, have invented a certain new and useful Improvement in Torpedoes for Use on Railways, of which the following is a specification.

My invention is intended more especially for freight-trains, in which the speed rarely exceeds fifteen miles per hour. I will describe it as thus applied.

I use a small thin box of metal containing fulminate adapted to explode with a loud sound when it is suddenly compressed, as by the passage over it of locomotive-wheels. I can use any form of construction of such box and any quality and quantity of explosive and detonating means therefor adapted to fulfill the conditions for safe transportation and handling and certainty of explosion when the wheels roll over it. I have devised improved means of supporting the fulminate-bearer. It can be placed on the rail from the rear of a train in motion.

My improvement affords the hitherto-unattained quality of resting lightly on the rail and extending a sufficient distance each way with a sled-runner end, and is guided by simple flanges extending down on each side. It can slide along with the motion of the train, mounting by its sled-runner ends over one or more joints, if necessary, keeping its place on the rail until it is gradually arrested by friction.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a cross-section of the device, showing it in place upon a rail. Fig. 2 is a perspective view.

Similar letters of reference indicate corresponding parts in both the figures where they appear.

A is one of a series of lengths of rail united and supported in any ordinary or suitable manner. B is a closely-sealed box of tinned iron or other suitable material, inclosing a sufficient quantity of fulminate to insure a loud detonation. These parts may be of any ordinary or suitable character.

D is a sufficiently-long support or shoe adapted when the torpedo is placed in position to extend several inches in each direction from the fulminate-box B in the directions longitudinally of the rail. Each end of the shoe D is rounded up, giving it a sled-runner character, as indicated by D′. A wing D^2 extends down from each side of the shoe D, the space between the wings being adjusted to receive the rail, so that the entire device may match easily thereon. The sled-runner ends D′ and the wings D^2 are preferably formed integral with the shoe D. The whole may be conveniently formed of heavy tin-plate. The box B is secured thereon by soldering. It may ordinarily be formed by striking up the main body B of the box and allowing the shoe D to serve as the base of the box, the parts being secured together by solder C, applied along the junction of the box B with the shoe D.

My torpedo is cheap, involving little cost above those of the ordinary kinds, and it can be applied in the ordinary way when the operator is on the ground. In such case and in any case the torpedo serves in all respects in the ordinary manner, receiving the tread of the wheel and being exploded by the sudden compression and concussion induced. The great advantage over the ordinary construction lies in the facility for applying it with the train in motion. The operator, stooping on the steps at the rear end of the caboose or last car of the freight-train, reaches to the proper point over the rail, and, gently placing the torpedo in position over and close to the rail, lets go of it. The speed with which it has been moving gives it a momentum which impels it along the rail in the same direction that the car is moving; but the friction gently retards it, and my experiments indicate that it will with any ordinary speed attainable in freight-trains come to rest inside of three lengths of rail.

The torpedo can be placed in the position desired with sufficient exactness for all practical purposes with the train moving at all ordinary speeds.

Modifications may be made by any good mechanic without departing from the principle or sacrificing the advantages of the in-

vention. The box B may be complete in itself, independent of the shoe, and may be confined to the shoe by means of one or more lugs and rivets. For rails set in line with ordinary exactness the sled-runner ends of my shoe D need not be turned up so high as shown.

I claim as my invention—

1. The railway-torpedo described, having a box B, adapted to protect the fulminate, in combination with the shoe D, having sled-runner ends D′ and wings D^2, extending downward on each side, said ends and said wings being formed integral with the shoe, all arranged for joint operation, as herein set forth.

2. A railway-torpedo provided with a shoe carrying the fulminate and adapted to slide upon a rail and pass over the rail-joints without being displaced, said shoe having wings D^2, extending downward on each side, and upturned or sled-runner ends D′, substantially as described.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

EUGENE N. HILL.

Witnesses:

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