

(No Model.)

D. R. MURPHY.

DEVICE FOR ATTACHING TORPEDOES TO RAILWAY RAILS.

No. 264,045.

Patented Sept. 5, 1882.

Fig. 1.

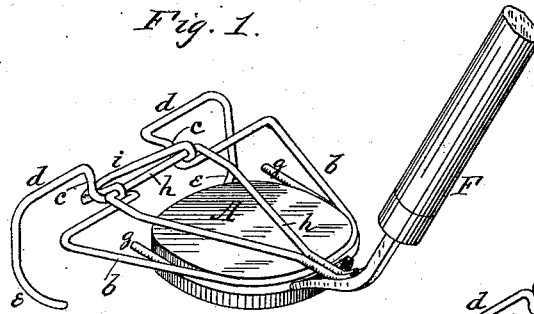


Fig. 2.

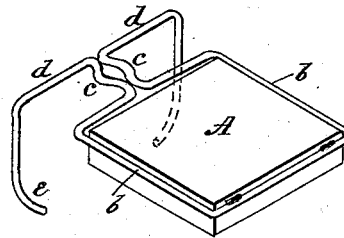
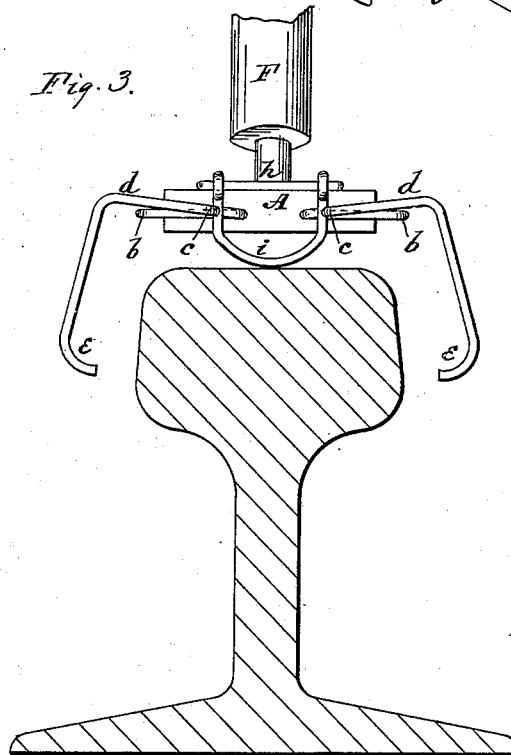


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL R. MURPHY, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS TO ABRAHAM O. TINSMAN, OF SAME PLACE.

DEVICE FOR ATTACHING TORPEDOES TO RAILWAY-RAILS.

SPECIFICATION forming part of Letters Patent No. 264,045, dated September 5, 1882.

Application filed March 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, DANIEL R. MURPHY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Attaching Torpedoes to Railway-Rails; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a perspective of the torpedo-holder and torpedo set ready for planting on the rail. Fig. 2 is a similar view of another shape of torpedo with the anchoring device hereinafter described. Fig. 3 is a section of a rail with the holder and torpedo ready for the springing of the trigger by downward pressure.

The object of this invention is to provide means for placing torpedoes on rails from a train in motion.

The invention consists in attaching to the torpedo two curved spring-arms adapted to clutch the rail-head and setting it in a fork or other suitable holder in such manner that the spring-arms are distended so as to pass freely over the rail-head, whereby the holder may be used to locate the torpedo above the rail, and by releasing the clamping devices the anchor instantly grips the rail and secures the torpedo to the rail at the point where it was released; and the invention further consists in the construction and arrangement of devices, substantially as hereinafter described.

The torpedo A, which may be of any shape found most suitable for the object to be obtained, is provided with the inclosing wire *b*, which is secured to the torpedo at the forward end, leaving the wire *b* free at the sides and back. The wire *b* is made of elastic metal, so as to have a certain amount of spring. At the rear end of the torpedo A the two ends of wire *b* approach each other, but before meeting at the middle are given a right-angled bend, so as to bring them in line and parallel with each other. Here they are bowed apart slightly to form the detents *c*, as shown, after which they are bent laterally away from the center, forming the arms *d*, whose ends are bent down-

wardly to form the anchors *e*, whose purpose is to close in under the head of the rail and secure the torpedo A thereto.

A suitable handle, F, is provided with a U-shaped slide or holder, *g g*, as shown, which incloses the torpedo in front and serves as a slide in releasing. The handle F is also provided with the bail *h*, which passes over the top of the torpedo and carries the gravitating trigger *i*, as shown.

The torpedo is set in the holder and released as follows: The torpedo A is pushed in between the holders *g g* and under the bail *h* and trigger *i*. When back as far as it will go the arms *d* are spread apart till the trigger *i* falls between them, when they are allowed to come toward each other slightly and grasp the trigger between them. The detents *c* keep the trigger from accidental displacement. In this position the trigger *i*, hanging in a slightly-inclined manner, projects far enough downwardly for its lower end to stand below the bottom of the torpedo A, and, being between the arms *d*, the arms are spread so far apart that the anchors *e* can pass down over the head of the rail with perfect freedom. In this condition Fig. 3 represents the device (from the rear) in the position for releasing. The torpedo A is in its holder, (handle not shown,) the trigger is dropped, and the anchors *e* spread so as to pass freely to their position shown. The device is now pressed downwardly, and when the pressure is sufficient on the trigger *i* to push it out of the detents *c* the spring-arms *d* fly inwardly, the anchors *e* instantly grip the rail tightly under its head, and thus held to the rail the torpedo slides freely out of its holder and remains securely anchored to the rail.

The brakeman, provided with a holder and torpedoes, can thus readily place the torpedoes on the rail at any point, no matter what the speed of the train may be. By this means the brakeman may plant his torpedoes at the proper point when his engineer gives the signal to stop or slow up without the necessity of dismounting and walking back, and he is much more likely to always set a torpedo in this way, because it is such a trifling exertion.

It will be observed that the torpedo is lowered till its spring-anchors *e* are below the

head of the rail, and that to release the torpedo no pressure upon the latter is required, such as would be necessary were the anchors *e* to be spread apart by a downward push upon the rail, as has heretofore been done or proposed in devices of this character; but I distend the anchors when setting the torpedo in its holder; then lower it over the rail-head without impact, and finally exert the releasing-pressure upon the trigger of the holder, thereby avoiding all possibility of premature explosion of the torpedo.

I claim as my invention—

1. A railway-torpedo provided with an elastic clamping device or spring-anchors adapted to be spread so as to pass the rail-head freely, and when released to spring against and grip the rail, in combination with a holder constructed and adapted to hold said torpedo with its anchors distended, and provided with a trigger to release the torpedo when pressed upon the rail, substantially as described.

2. The torpedo-holder consisting of the handle *F*, side holders, *g*, bail *h*, and swinging trigger *i*, combined and arranged substantially as described.

3. The railway-torpedo *A*, provided with the inclosing wire *b*, having detents *c*, lateral arms *d*, and downwardly-bent anchors *e*, constructed of spring metal and capable of being spread apart, substantially as described.

4. The holder consisting of the handle *F*, bail *h*, side guides or holders, *g*, and trigger *i*, in combination with the torpedo *A*, having the spring-wire *b*, bent to form the detents *c*, arms *d*, and anchors *e*, substantially as described.

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

DANIEL R. MURPHY.

Witnesses:

SHED. W. MURPHY,
T. J. MCTIGHE.