F. HICKMAN.

DETONATING RAILWAY-SIGNAL.

No. 173,291. Patented Feb. 8, 1876.

Fig. 1

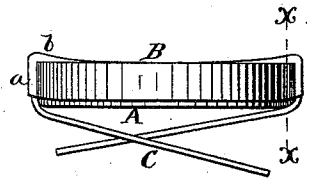


Fig. 2.

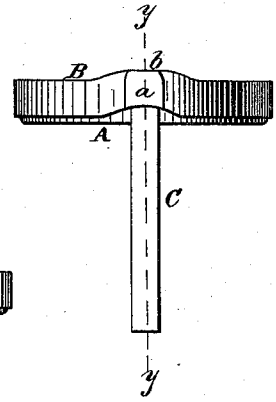


Fig. 3.

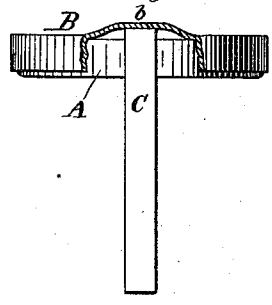


Fig. 5.

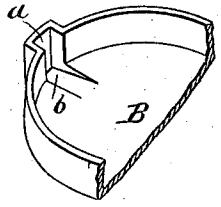
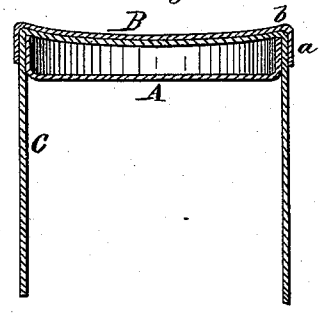


Fig. 4.



WITNESSES

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FRANCIS HICKMAN, OF READING, PENNSYLVANIA.

IMPROVEMENT IN DETONATING RAILWAY-SIGNALS.

Specification forming part of Letters Patent No. **173,291**, dated February 8, 1876; application filed January 22, 1876.

To all whom it may concern:

Be it known that I, FRANCIS HICKMAN, of Reading, in the county of Berks and in the State of Pennsylvania, have invented certain new and useful Improvements in Detonating Railway-Signals; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to torpedoes used on railroads, in which a pellet with covering-cap is employed, and a ductile metal strap passed between them for fastening the torpedo to the rail; and the nature of my invention consists in forming the cap with recesses at its sides and extending into the top of the cap to prevent the edges of the pellet from cutting the ductile metal strap, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view of my improved railroad-torpedo. Fig. 2 is another side view of the same. Fig. 3 is a section through the line *x x*, Fig. 1. Fig. 4 is a section through the line *y y*, Fig. 2. Fig. 5 is a perspective view from the inside of a part of the cap.

A represents the usual case or pellet covered by a cap, B; and C is the ductile metal strip passed between the case and cap, and extending below the case for attaching the torpedo to the rail in the usual manner. On opposite sides of the cap B are formed recesses *a a*, in which the ends of the ductile metal strip lie, and these recesses are extended from their upper ends a short distance inward in the top of the cap, as shown at *b*, so that, while the edge of the case A presses against the cap B at all other points, at the points *b b* there will be sufficient space to prevent the edge of the case from coming in contact with and cutting the ductile metal strap C, which has been a serious difficulty in this class of torpedoes. The recesses *a* with their inward extensions *b* may be formed in the cap by stamping with dies, or in any other suitable manner.

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

In a railroad-torpedo, composed of the case or pellet A, cap B, and ductile metal strip C, I claim the recesses *a*, with inward extensions *b* formed in the cap B, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of December, 1875.

FRANCIS HICKMAN.

Witnesses:
HENRY BRICKER,
F. M. BANKS.