

F. HICKMAN.  
Detonating Railroad-Signal.

No. 160,431

Patented March 2, 1875.

Fig 1

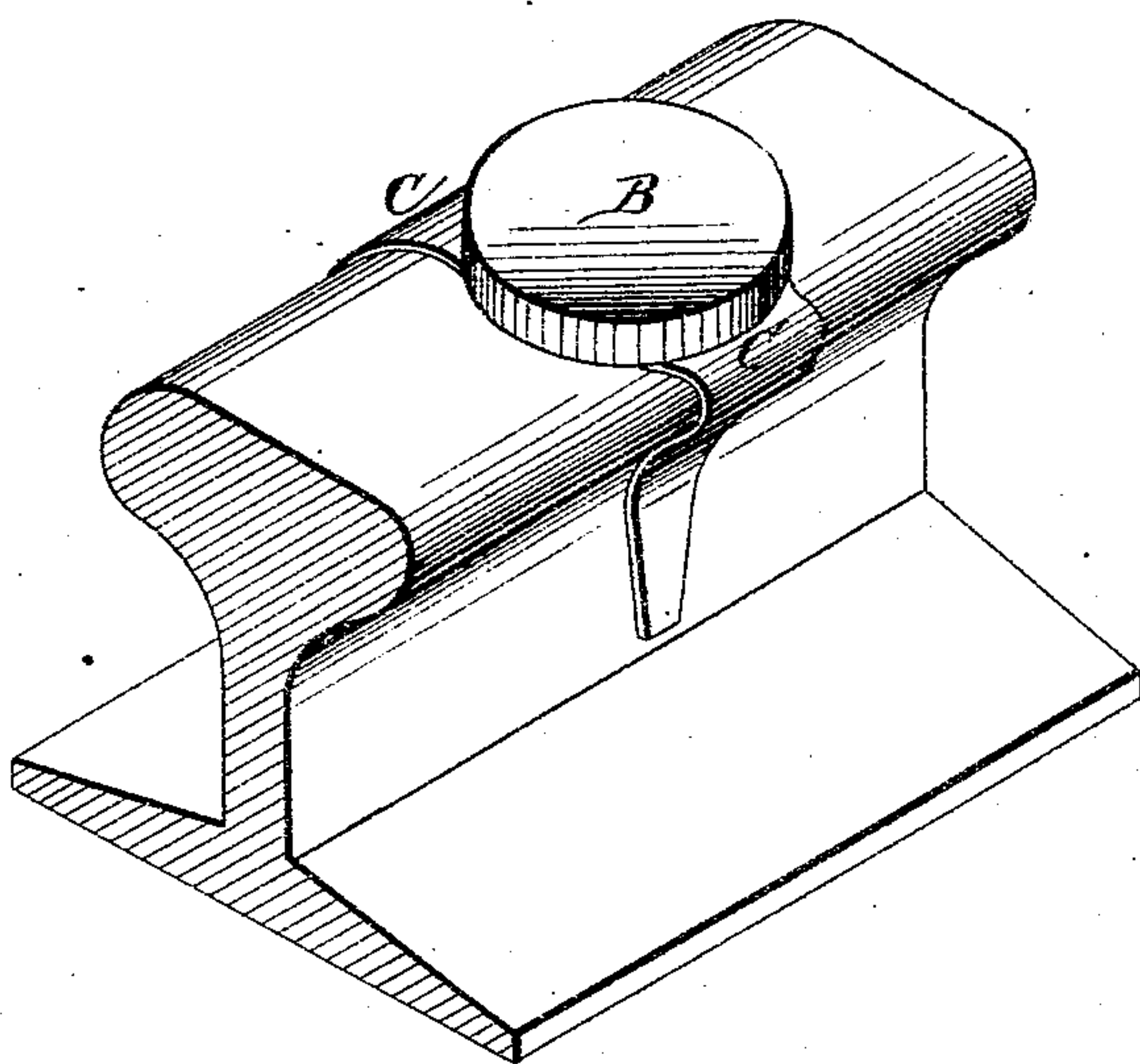
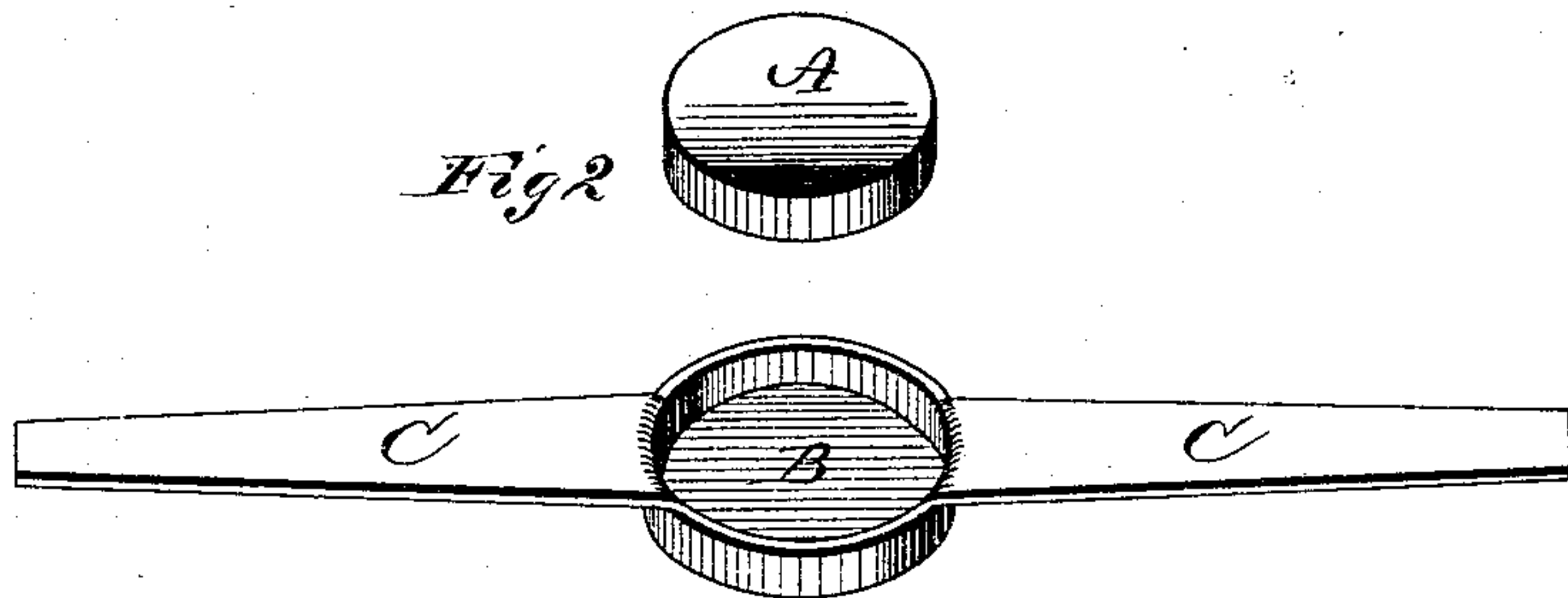


Fig 3



Fig 2



WITNESSES

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# UNITED STATES PATENT OFFICE.

FRANCIS HICKMAN, OF READING, PENNSYLVANIA.

## IMPROVEMENT IN DETONATING RAILROAD-SIGNALS.

Specification forming part of Letters Patent No. **160,431**, dated March 2, 1875; application filed October 13, 1874.

*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 Torpedoes for Railroad; 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 that class of torpedoes which are placed upon the rails of a railroad-track, to be exploded by the wheels of the locomotive, so as to signal or give warning to the engineer of an approaching train that there is danger ahead; and the nature of my invention consists in striking up the cap for the pellet, and the straps that hold it to the rail, of one piece of soft or flexible metal, 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 perspective view of a railroad-rail with my torpedo attached thereon. Fig. 2 is a perspective view of the torpedo, and Fig. 3 is a longitudinal section of the same.

A represents the pellet of a torpedo, B the cap thereof, and C C the straps for fastening it on the rail.

In the torpedoes now generally in use the cap and straps have been made of separate

pieces, and the straps soldered to the cap. This has been not only expensive, but the straps are also liable to become detached from the cap, especially in the act of fastening the torpedo to the rail. As this is generally done in a hurry and during excitement, the fact is apt to be overlooked that the strap (or straps) is detached, and hence the torpedo is not fastened, but will fall off, and consequently no signal given to the approaching train.

The object of my invention is to obviate this difficulty, and to this end I stamp, strike up, or otherwise form the cap B and straps C C of one single piece of soft or ductile metal, so that when the pellet A is inserted in the cap the torpedo can easily be fastened on the rail by bending the straps along the side thereof, as shown in Fig. 1, without any danger of the straps becoming detached from the cap. The torpedo can also be made considerably cheaper in this manner.

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

In a torpedo consisting of a pellet, A, cap B, and straps C C, the cap and straps formed of a single piece of soft or ductile sheet metal, for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of October, 1874.

FRANCIS HICKMAN.

Witnesses:

H. A. HALL,  
C. L. EVERT.