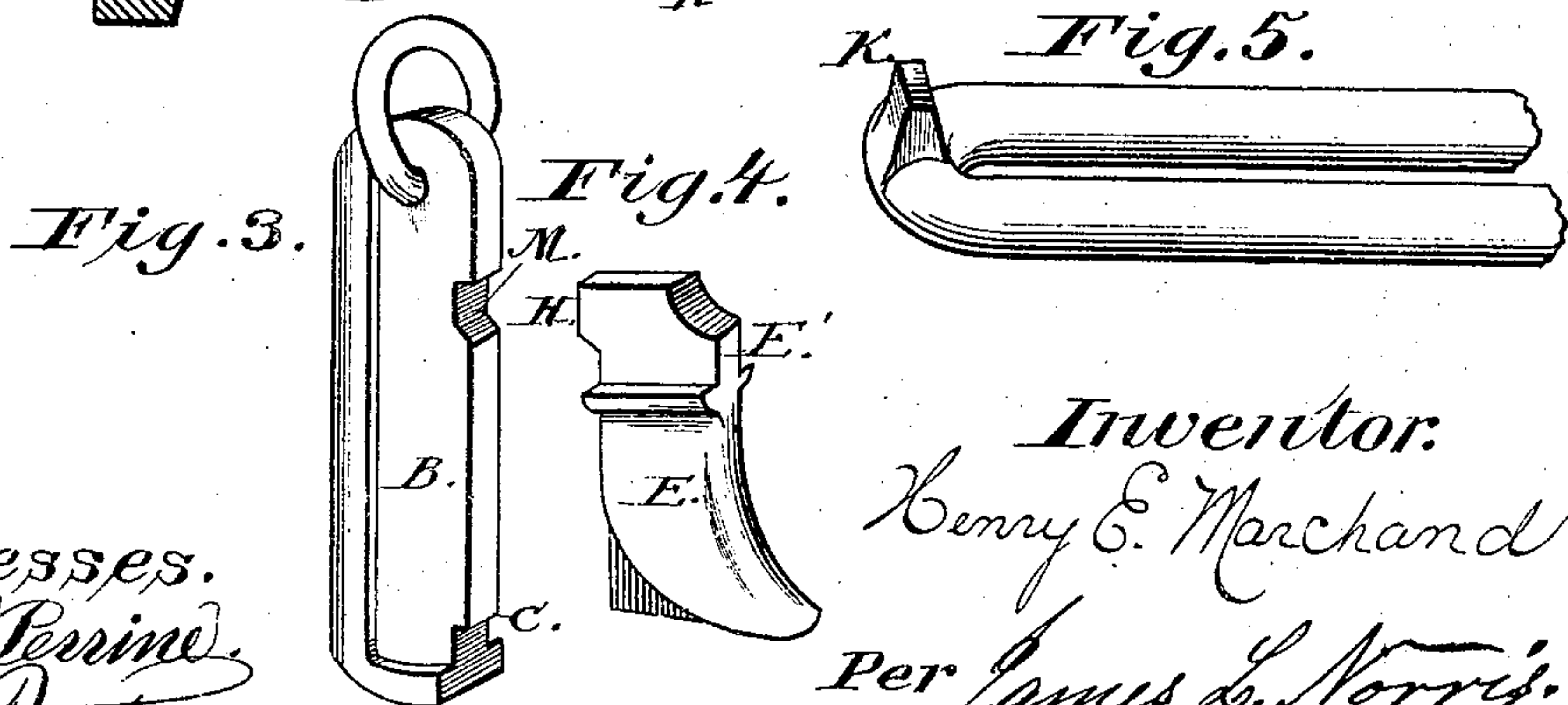
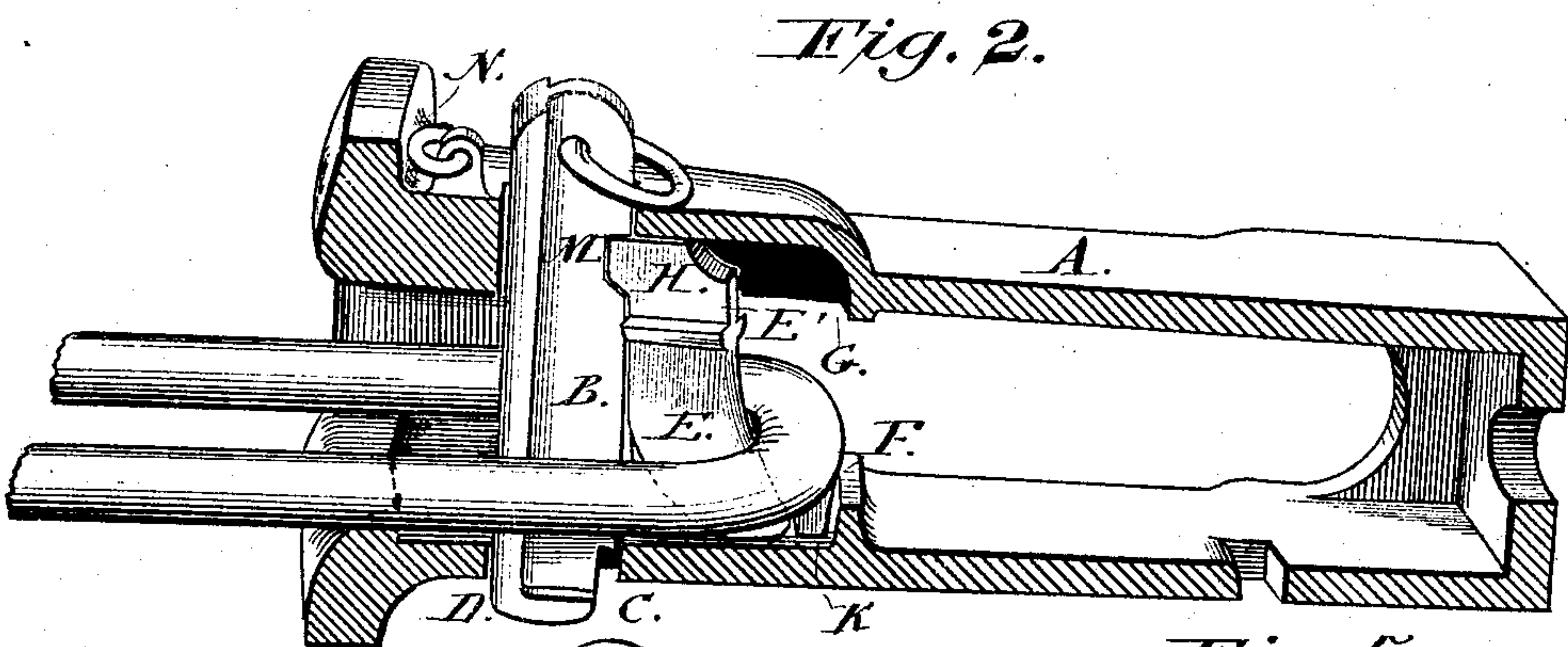
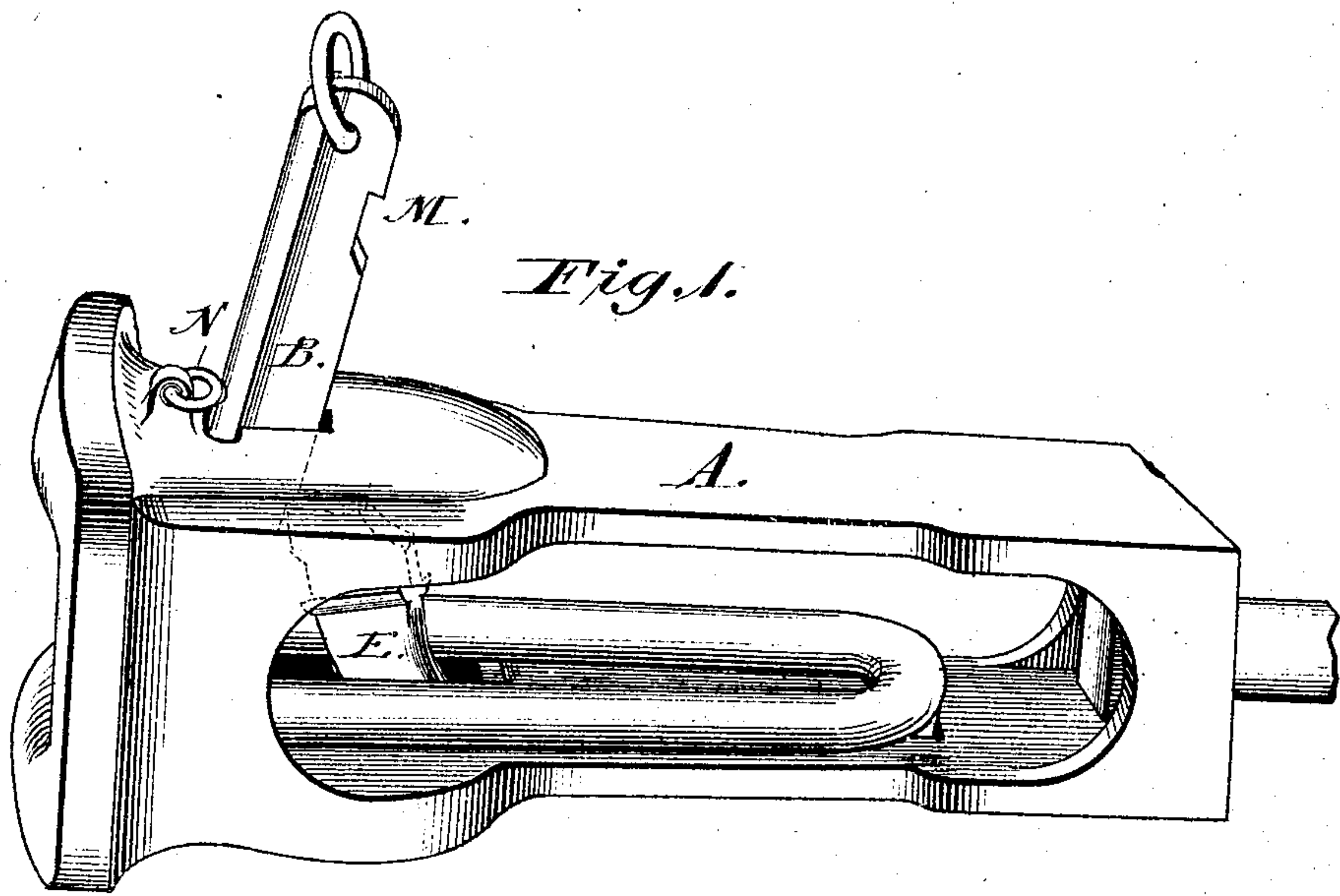


H. E. MARCHAND.
Car-Couplings.

No. 146,924.

Patented Jan. 27, 1874.



Witnesses.
H. L. Perrine.
W. J. Peyton.

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Henry E. Marchand
Per James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

HENRY E. MARCHAND, OF ALLEGHENY CITY, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **146,924**, dated January 27, 1874; application filed August 5, 1873.

To all whom it may concern:

Be it known that I, HENRY E. MARCHAND, of Allegheny City, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification:

This invention relates to certain improvements in the automatic car-coupling patented to me March 25, 1873, No. 137,225, in order to render the same more effective in operation.

The invention consists in providing a gravitating trigger-arm, employed for retaining the coupling-pin in an elevated position, with a beak or projection on its forward upper edge. When the coupling-link is drawn forward, said beak or projection will be caused to enter a recess or engage a projection on the coupling-pin, thus locking the same in position. The invention further consists of an arched and covered recess, arranged in the draw-head, behind the coupling-pin, for receiving the upper end of the trigger-arm; the object being to prevent the entrance of snow, dust, &c., and to properly guide the trigger-arm.

In the drawings, Figure 1 is a perspective view of my car-coupling, representing the devices in position for coupling; Fig. 2, a longitudinal section of the draw-head, showing the internal arrangement. Fig. 3 is an enlarged detached view of the coupling-pin; Fig. 4, a detail view of the trigger-arm or pin-support; Fig. 5, a view of the coupling-link.

The draw-head A is of any preferred construction. The coupling-pin B, which slides vertically through the draw-head, passes through an opening in the top of the latter, and is provided with ribs on its sides, which enter guide-grooves in the side wall of the draw-head. The lower end of the coupling-pin is enlarged laterally, and has a portion of its rear surface cut away to form a shoulder, C, for the purpose hereinafter stated. An opening, D, in the floor of the draw-head, is made to enable the pin to be inserted through the same; a suitable ring or link being then applied to the upper end, for limiting the descent of the pin. A vibrating or gravitating trigger-arm, E, is arranged within the draw-head, and has its lower end inserted or stepped into a seat, F, in the floor of the draw-head, immediately in rear of the coupling-pin. The lower end of said trigger-arm is made of a

curved shape, to permit it to oscillate in its seat, and it is further provided with a straight rear side, E', which limits its backward movement. The upper end of the trigger-arm is provided with a beak or projection, H, which, when the coupling-pin is elevated, will, by its inherent gravity, be caused to engage with the lower end of the pin and retain it in an elevated position until the entrance of an opposite draw-head link will cause it to be thrown back and permit the head to fall, when the coupling is made.

To perform the coupling operation, the link of one car is drawn forward until its heel K rests in the recess or seat in rear of the trigger-arm E, as in Fig. 2, which causes the projection or beak H to enter a recess, M, in the rear side of the coupling-pin, thus firmly locking the same down and preventing its accidental misplacement.

An arched and covered recess, G, in the top of the draw-head, serves to receive and guide the upper end of the trigger-arm E.

A decided advantage possessed by this covered arched recess over the open slot shown in my former patent is the exclusion of rain, snow, dust, &c.

A ring or suitable catch, N, located in proper respect to the pin B, is employed for supporting the same in an elevated position, when it is desired to cut a train or not to make a coupling.

I claim as my invention—

1. In a car-coupling, a vibrating trigger-arm, E, provided with a projection or beak, H, for engaging with the coupling-pin B, in order to lock the same down, as and for the purpose described.

2. The coupling-pin, notched or recessed, as shown, and arranged in respect to the vibrating pin-support, provided with a projection or beak, as set forth.

3. The draw-head, provided with a covered arched recess in its top, arranged, in respect to the vibrating pin-support E, as shown and described, for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of July, 1873.

HENRY E. MARCHAND.

Witnesses:

SAML. McMASTERS,
JOHN N. GRAHAM.