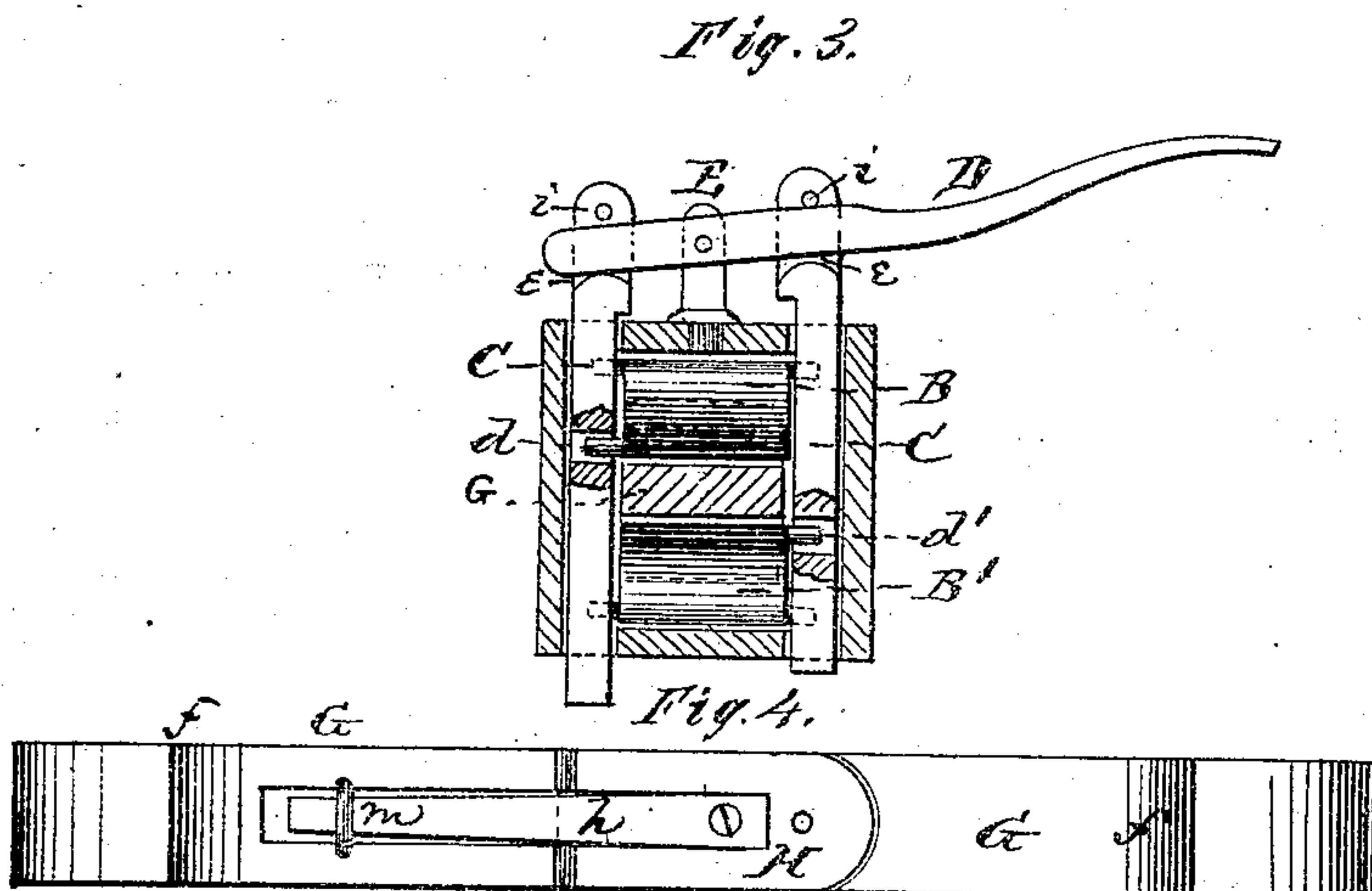
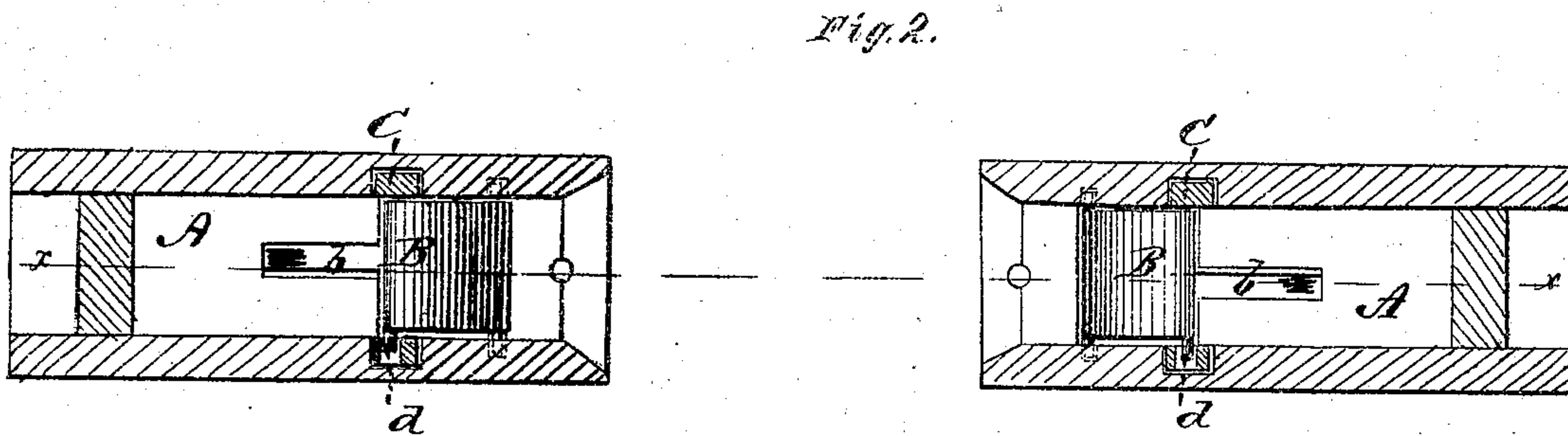
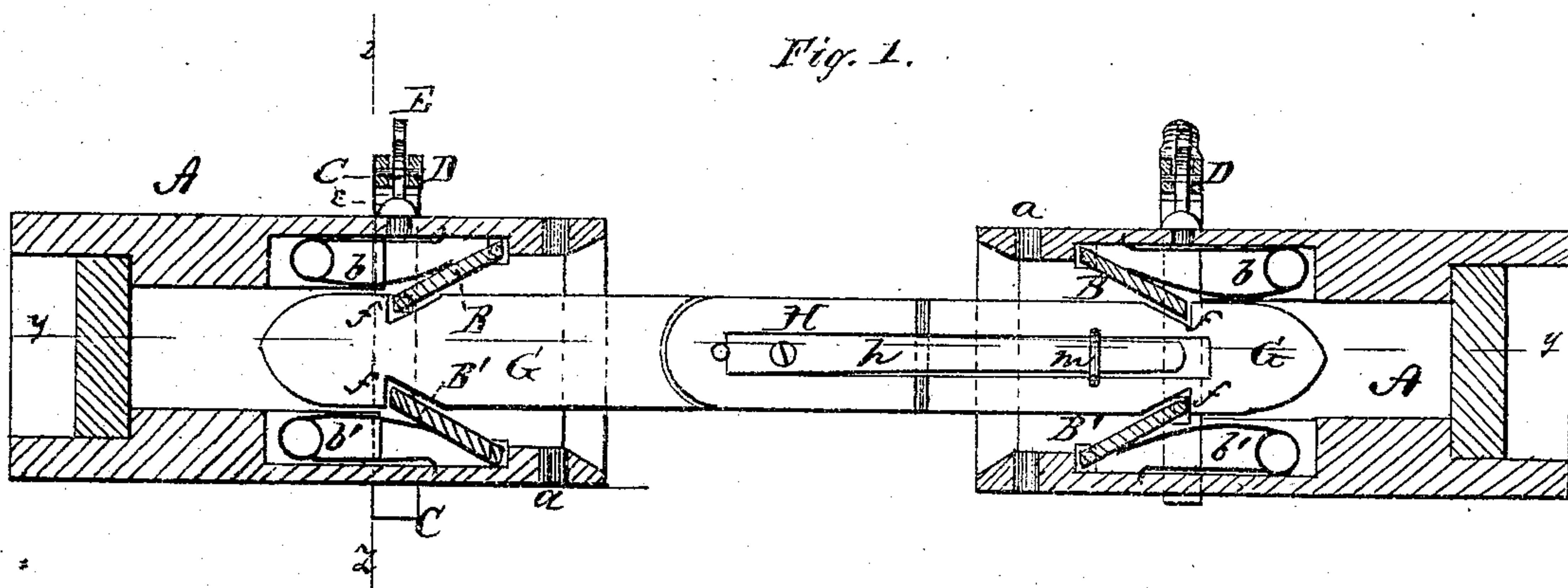


S. J. GRIEST.  
Car-Couplings.

No. 146,899.

Patented Jan. 27, 1874.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

SALATHIEL J. GRIEST, OF GETTYSBURG, PENNSYLVANIA.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **146,899**, dated January 27, 1874; application filed December 22, 1873.

*To all whom it may concern:*

Be it known that I, SALATHIEL J. GRIEST, of Gettysburg, in the county of Adams and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings; and I 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, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a car-coupling, and also in the construction of a flexible coupling-bar, 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 longitudinal vertical section of my car-coupling through the line *x x*, Fig. 2. Fig. 2 is a horizontal section of the same through the line *y y*, Fig. 1. Fig. 3 is a transverse vertical section through the line *z z*, Fig. 1; and Fig. 4 is a side view of the flexible coupling-bar.

A represents the bumper or draw-head of a railroad-car, constructed substantially in the same form as is generally used, the mouth of the same having inclined sides, to guide the coupling-bar into it in the act of coupling. The bumper A is, near its front end, provided with the usual holes *a* for the ordinary coupling-pin. B B' represent two tongues, pivoted at their front edges in the sides of the bumper A—the former in the roof and the latter in the bottom of the bumper—and their rear ends pressed toward the center by means of springs *b b'*, respectively. These tongues are of the same width as the interior chamber of the bumper, so as to reach entirely from side to side. Vertically through the bumper pass two bars, C C, one on each side, as shown in Fig. 3. Into a hole on one bar C passes a pin, *d*, from the side of the tongue B, at or near the inner edge; and a corresponding pin, *d'*, passes

from the opposite side of the bottom tongue, B', into a hole on the other bar. D represents a lever, which is forked for a suitable distance at its inner end, and straddles and is pivoted to a post or standard, E, on top of the bumper A. The upper ends of the bars C C pass through the fork of the lever D, one upon each side of the post or standard E. The bars C C form shoulders *e e* immediately below the lever D, and immediately above the lever a pin, *i*, is passed through each bar C. These parts are all so arranged that, by pressing down upon the outer end of the lever D, the two tongues B B' will be separated, the former turning upward, and the latter downward; and as soon as the pressure is removed, the springs *b b'* will throw the tongues inward again. The coupling-bar is composed of three parts, G, G, and H. Each part G has upon one end a shoulder, *f*, upon two opposite sides, and the extreme end is beveled on all four sides nearly to a point, so as to enter the draw-head. The two bars G G are connected at their other ends by the part H, which is rounded at both ends, and the two ends forked at right angles with each other. The inner ends of the parts G G are provided with corresponding tenons to enter these forks, and rounded shoulders to fit against the rounded ends of the forks. They are then pivoted together, forming two joints at right angles with each other. The center part, H, is provided on two sides with springs *h h*, which extend one along each of the parts G, in a groove on the same, and under a staple, *m*.

In coupling the cars, the end of the coupling-bar enters the bumper, and separates the tongues B B' until their inner ends can clear the shoulders *f f*, when the springs *b b'* throw them down in and against said shoulders. By pressing the lever D down, the cars are easily uncoupled. The springs *h h* hold the coupling-bar in a straight line, and allow it to give to either side, and up or down, thus causing it to accommodate itself to cars of unequal height, and to the movement of the cars in going around curves.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the bumper A, of the tongues B B', springs *b b'*, pins *d d'*, bars C C, and lever D, all constructed to operate substantially as and for the purposes set forth.

2. The coupling-bar consisting of the bars G G, each having shoulders *f f*, and the connecting-bar H, all jointed together, and provided

with the springs *h h*, substantially as and for the purposes set forth.

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

SALATHIEL J. GRIEST.

Witnesses:

A. J. COVER,

EDWD. S. REILY.