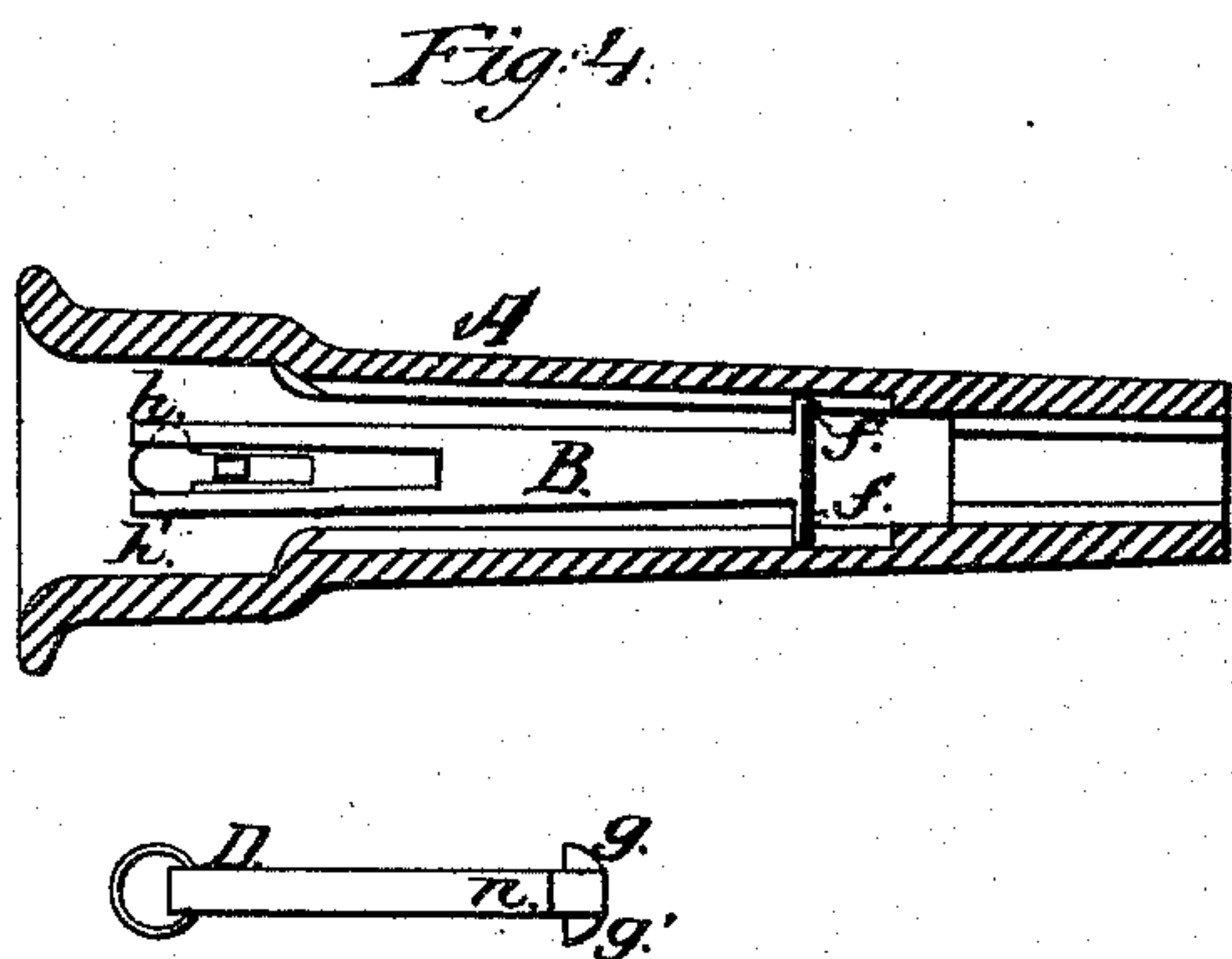
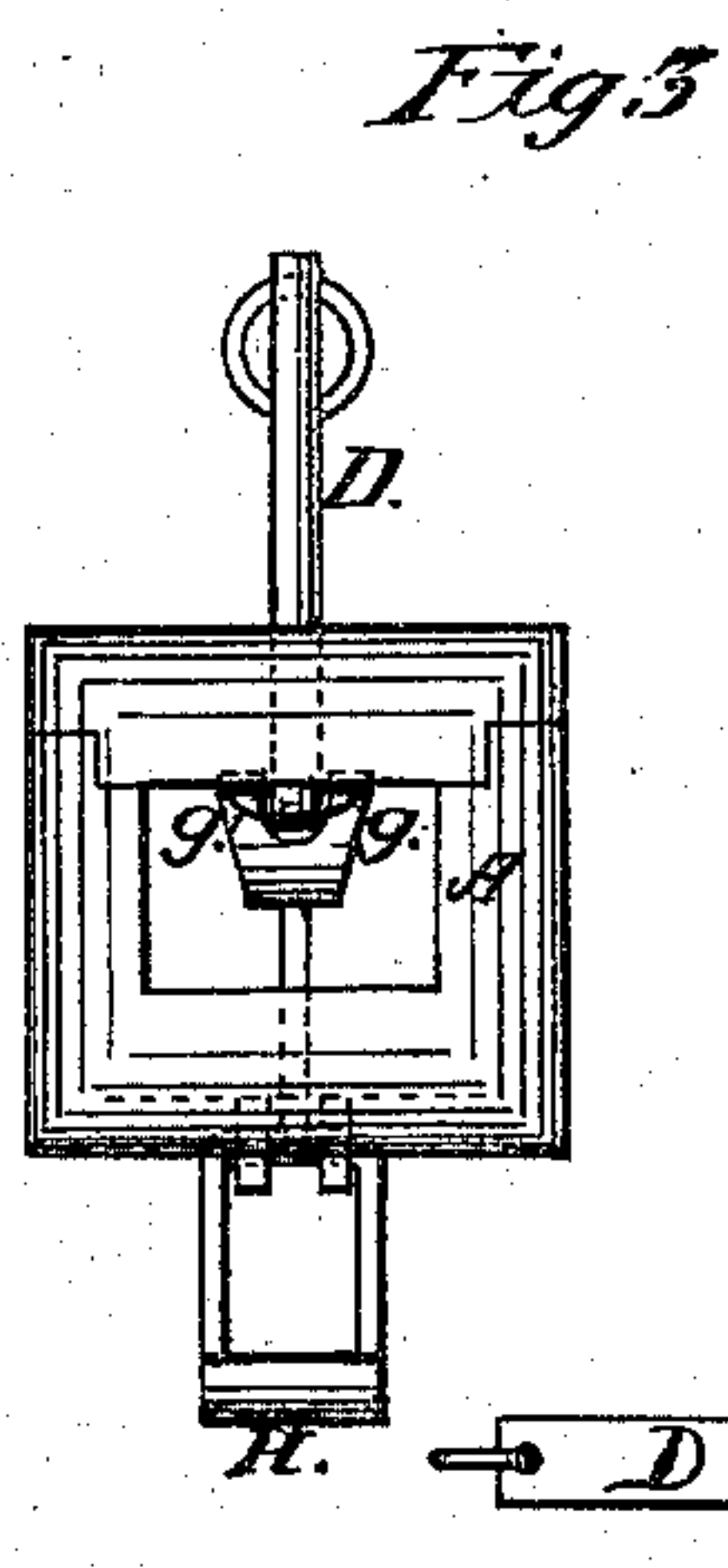
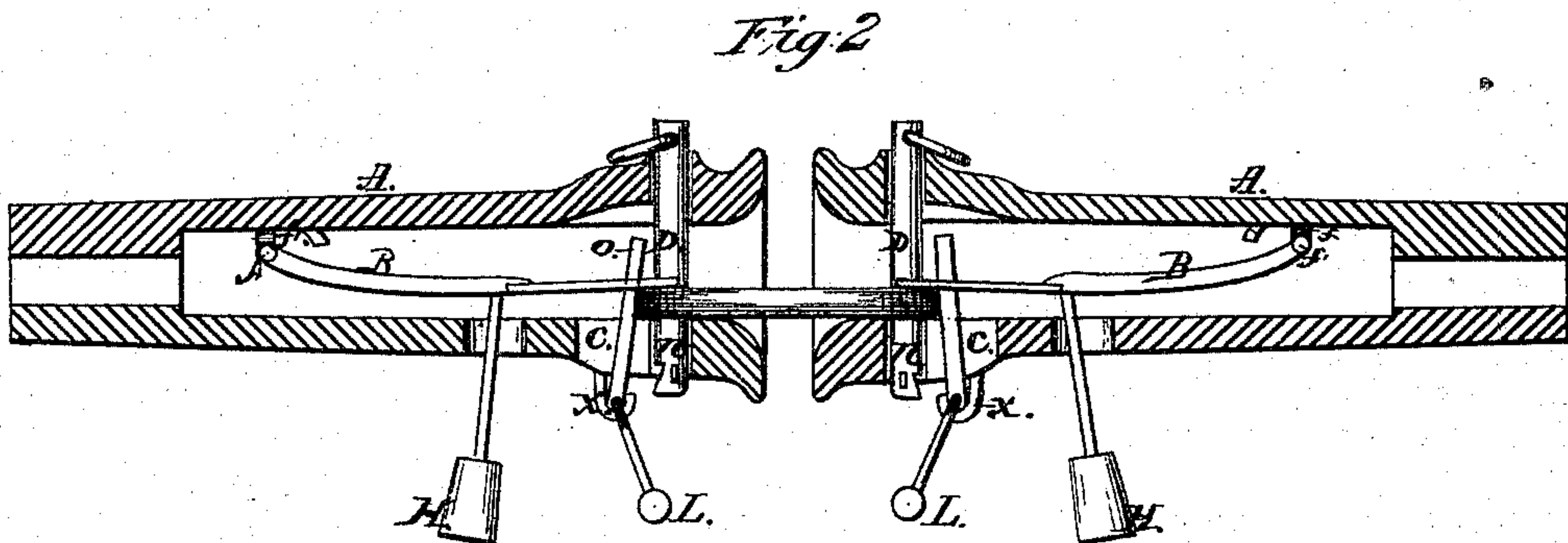
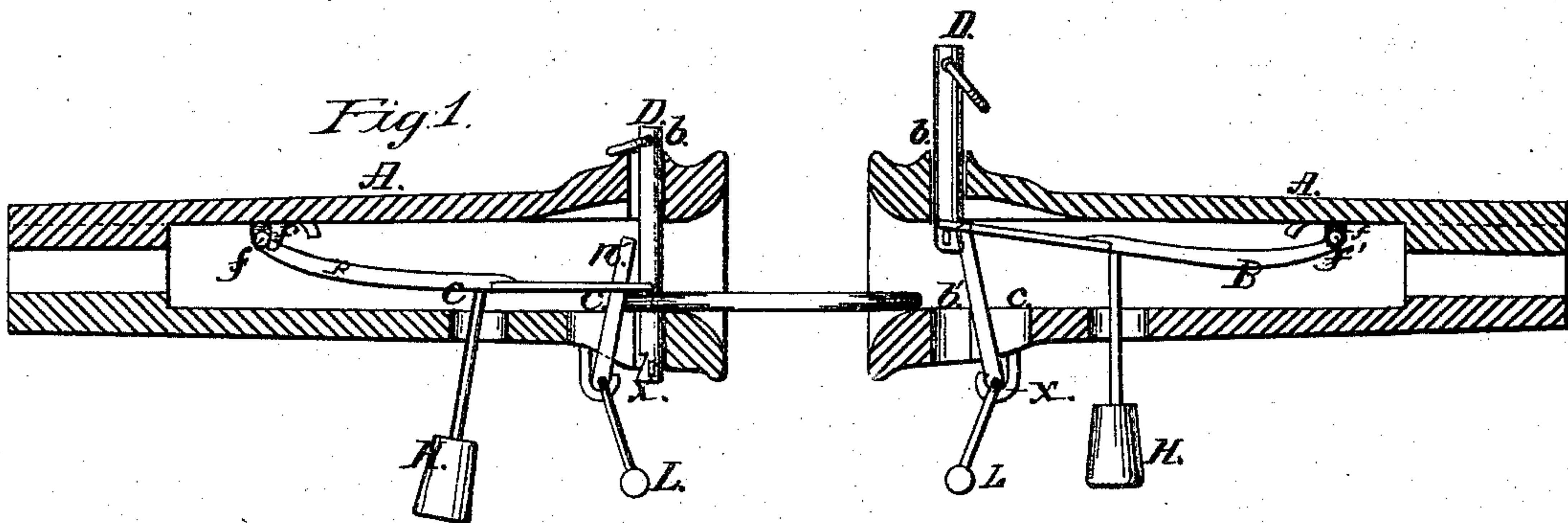


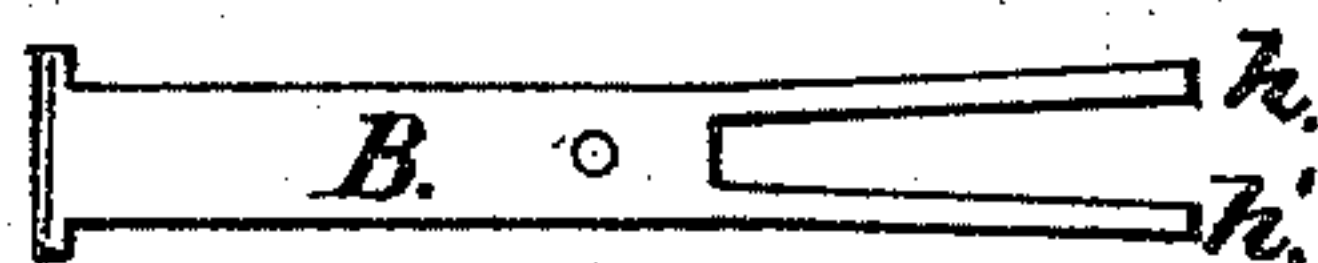
W. C. T. DAVIDSON.  
Car-Couplings

No. 156,917.

Patented Nov. 17, 1874.



Witnesses  
*Alford*  
*Edw. W. Dunn*



Inventor  
*W. C. Davidson*  
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# UNITED STATES PATENT OFFICE.

WILLIAM C. T. DAVIDSON, OF HANNIBAL, MISSOURI.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **156,917**, dated November 17, 1874; application filed October 24, 1874.

*To all whom it may concern:*

Be it known that I, WILLIAM C. T. DAVIDSON, of the city of Hannibal, county of Marion and State of Missouri, have invented certain new and useful Improvements in Railroad-Car Couplers; and that I do hereby declare the following to be a full and accurate description of the same, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to that class of car-couplers which is automatic or self-acting, as I shall hereinafter describe.

The drawings represent the car-coupler when united and coupled, as well as sectional views, showing the several parts of the same.

A reference to the drawings, and to the following description and specification, will enable the skilled mechanic to construct and operate this coupler.

A is a metallic draw-head, properly chambered to receive and conveniently hold all the necessary pieces to enable the couplers to couple automatically. These pieces, however, may be made of any desired form or shape, as well as the chamber of the draw-head; and I do not limit my principle and invention to the particular forms or proportions as shown in the drawings. *b* represents an opening vertically through the upper plate of the draw-head A, near its forward end. *c* is a slot in the lower plate of draw-head A, commencing at the opening *b'* and running back toward the rear of the draw-head, to allow the free working of the trigger L. *f' f'* are notches to hold the journals of the holding-bar B and allow its free working. D is a metallic pin, having projecting flanges *g g'* and a notch or shoulder, *n*, near the point. This pin passes through the holes *b* and *b'* in the top and bottom plates of the coupling-head for the purpose of securely holding the coupling-link when the cars are coupled up. B is a metallic holding-bar with journals at its rear end, and a slot at its forward extremity, which enables the points *h h'* to pass freely on each side of the coupling-pin D, and to be caught on the projecting flanges *g g'* when the said pin is raised to allow the uncoupling of the cars. The said slot is also of sufficient length to en-

able the trigger L to work freely. H is a metallic movable dead-weight, secured to the holding-bar B by a connecting-rod passing through the slot *c*, said dead-weight causing the points *h h'* of the holding-bar B to press upon the end of the coupling-link, (when it is in its proper position,) in order to hold it in a horizontal position, ready to couple the cars when desired. L is a metallic trigger, having journals X X on its sides near its midlength, which rest and properly work in notches on sides of slot *c*. The outer or lower end of the trigger L, being much the heavier, brings the trigger into a vertical position when unobstructed, so that the point *o* will rest under the retreating shoulder *n*, and hold the pin D in position to allow the cars always to be coupled.

To make a coupling of the cars, insert one end of the coupling-link into the open end of the draw-head A, pressing against the self-acting trigger L until the joint *f* leaves the retreating shoulder *n* of the pin D to fall into its proper position, and the joints *h h* of the holding-bar B to press upon the inner end of the entered link to hold the said link horizontally, so that it will readily enter the corresponding draw-head, striking its trigger and allowing its pin to drop into position, which operation effects the coupling automatically without the necessity of any person passing between the cars.

To uncouple the cars, raise the pin, by means of any suitable levers extending to the sides of the cars, until the trigger L assumes a vertical position and the point *o* rests under the shoulder *n*. The cars can now be pushed apart and automatically uncoupled without the necessity of any person's passing between the cars at the imminent risk of life and limb.

The whole of the above-described mechanical devices forms a cheap, safe, and desirable automatic coupler, and one that can be used and universally adapted to the coupling of any class of cars using a coupling-link connection.

When it is desired that the cars should stand together without being coupled, the levers extending to the sides of the cars are made so that their ends upon the side of the

car will, at a certain point, when so placed, form a balance, which holds the pin up and prevents its dropping till relieved, even though the trigger is thrown back.

What I claim, and desire to secure by Letters Patent, is—

1. The holding-bar B, the trigger L, and the dead-weight H, in combination with the pin D and draw-head A, as described.

2. The holding-bar B, the trigger L, and dead-weight H, all combined for the purposes described.

WM. C. T. DAVIDSON. [L. S.]

Witnesses:

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