

(No Model.)

P. BROWN.  
CAR COUPLING.

No. 378,037.

Patented Feb. 14, 1888.

Fig. 1.

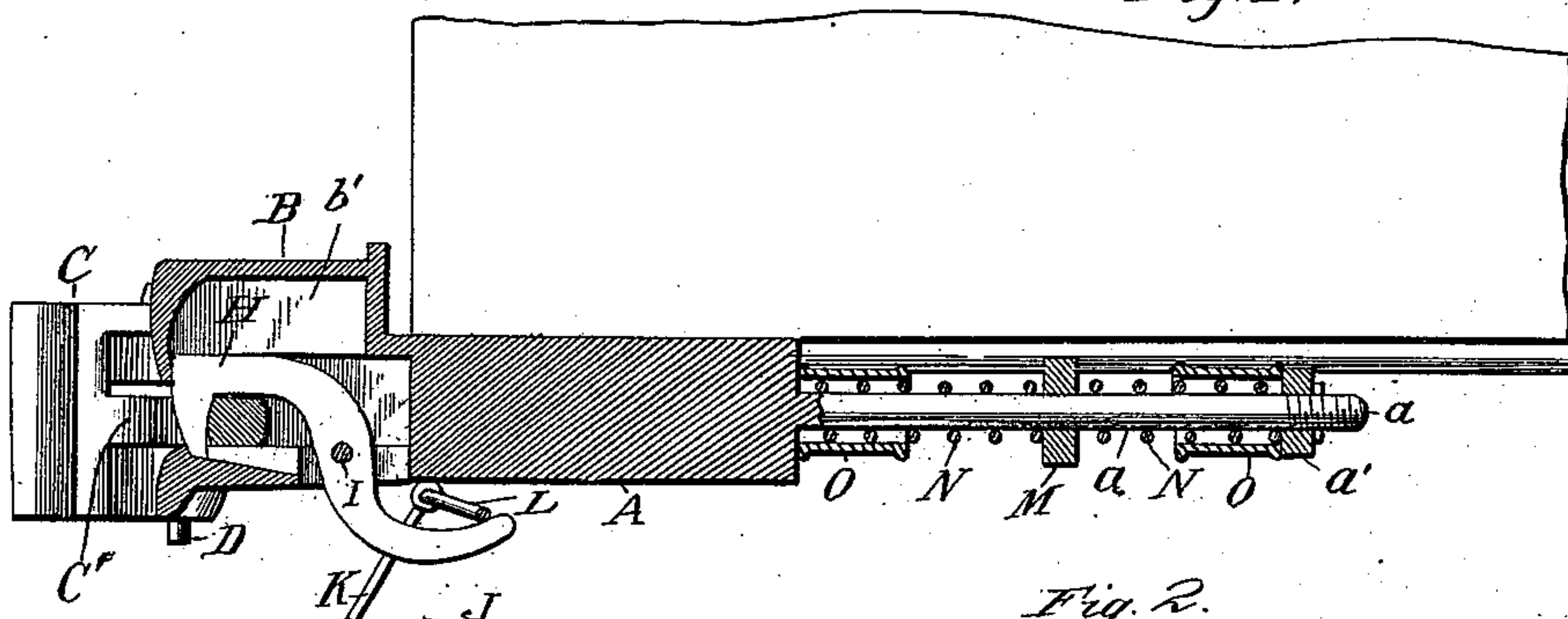


Fig. 2.

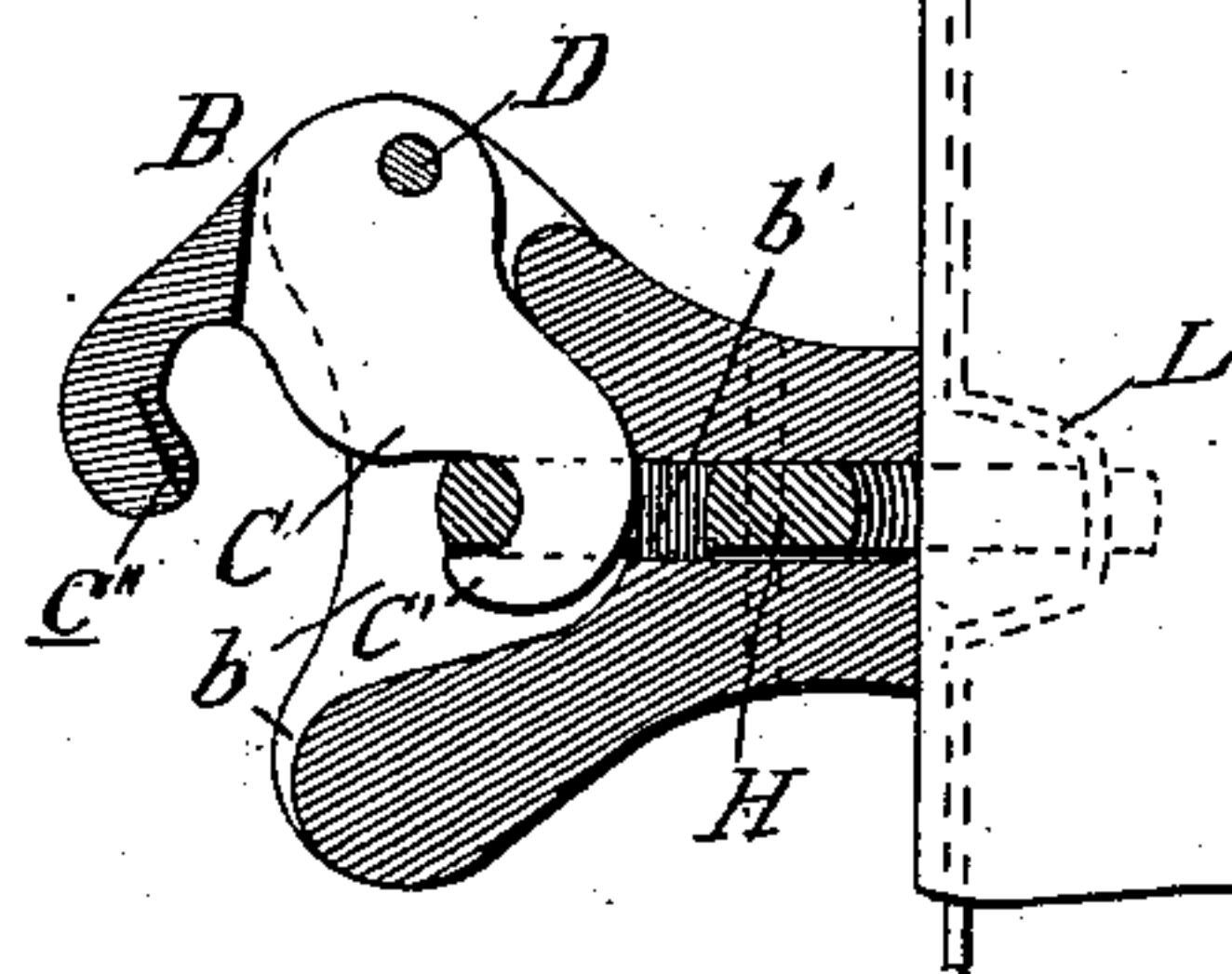


Fig. 3.

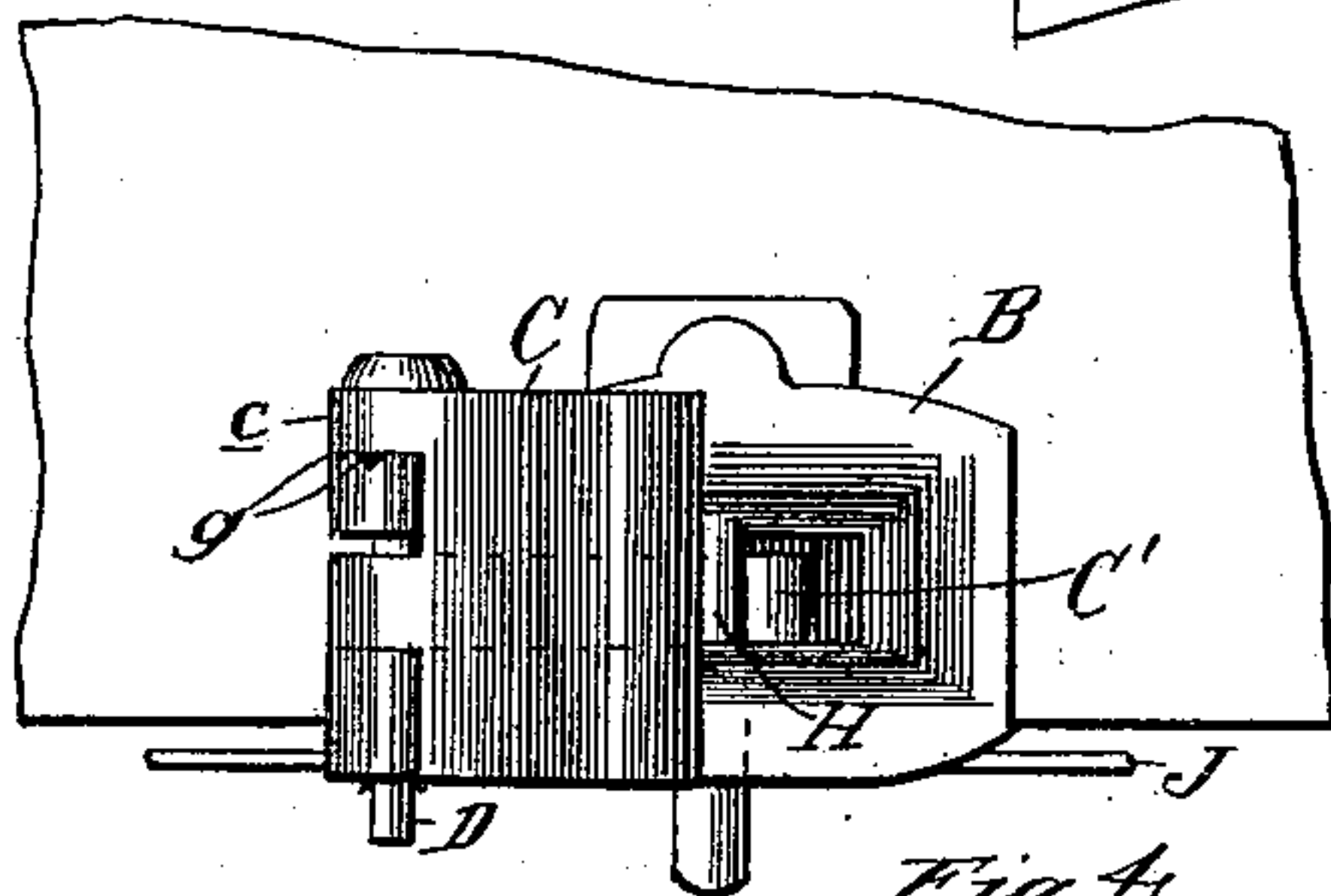
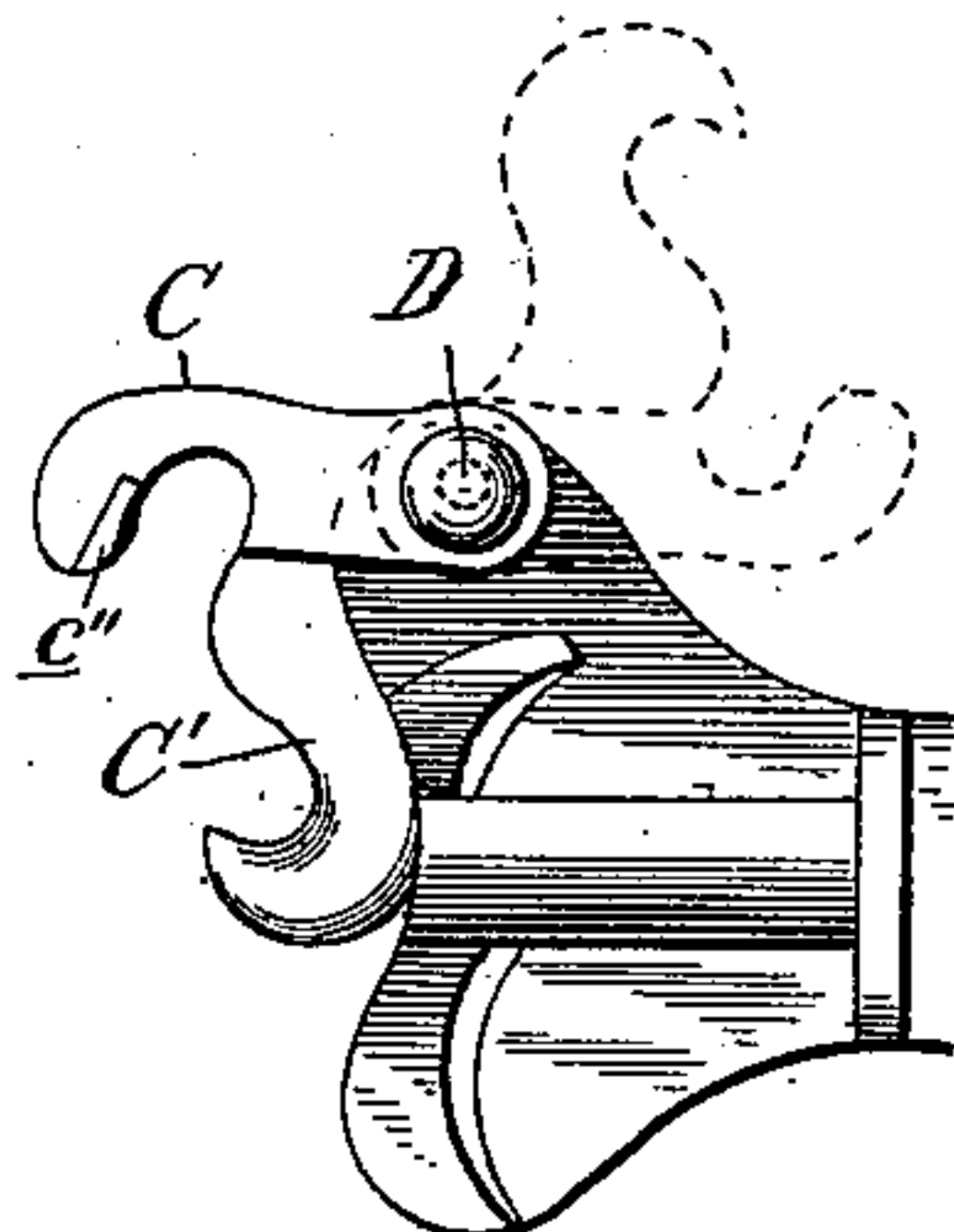


Fig. 4.

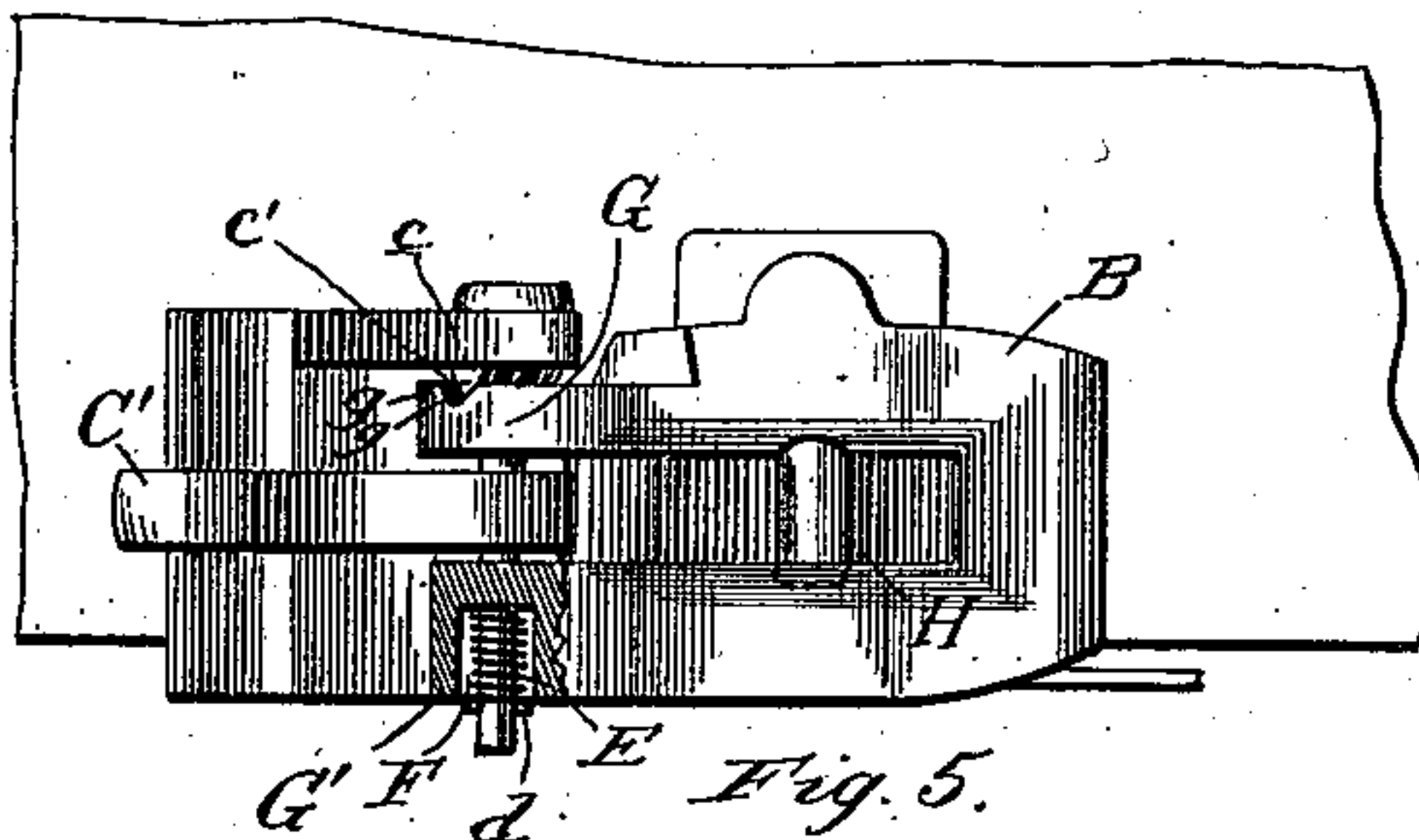


Fig. 5.

Witnesses  
*Chas. Haeder*  
Thos. E. Robertson.

Inventor,  
*Perry Brown.*  
By his Attorney,  
*T. W. Robertson.*



# UNITED STATES PATENT OFFICE.

PERRY BROWN, OF LOUISVILLE, KENTUCKY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 378,037, dated February 14, 1888.

Application filed May 3, 1887. Serial No. 236,912. (No model.)

*To all whom it may concern:*

Be it known that I, PERRY BROWN, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents a vertical section of my coupling in position. Fig. 2 is a horizontal section. Fig. 3 represents a plan of the draw-head (with parts broken away) ready for coupling with a corresponding coupling in full lines and for use with a link in dotted lines. Fig. 4 is a front view with the hook closed. Fig. 5 is a similar view with the hook thrown back for coupling with a link.

This improvement relates to that class of couplings having a swinging hook and designed to be used with either a corresponding hook or another coupling or a link; and the invention consists in the peculiar construction, arrangement, and combination of parts, hereinafter more particularly described, and then definitely pointed out in the claims.

Referring now to the details of the drawings, A represents the body of the coupling, B the draw-head, and C the hook, which is pivoted to the head B by a pin, D, having around its lower end a spiral spring, E, inclosed in a recess, F, in the under side of the ear G', through which the lower end of the pin passes, and which spring finds its points of resistance between the top of the recess F in the ear G' and a key, d, set in the lower end of the pin D, and tends to force the pin D downward, so that its head will press down upon the ear c of the hook C.

The ear G has a series of notches, g g, cast or otherwise formed on its upper surface, and the underside of the ear c has two projections, c' c', formed on its under side, which projections catch into the notches g g, for a purpose hereinafter explained.

The hook C is provided with a hook-shaped arm, C', which swings into the horizontal opening b in the head B, and is held in that position by a hook, H, pivoted in the head by the pin I, and working in a vertical recess, b', formed across the opening b, which recess is so formed that its bottom slopes downward from

the front to prevent dust, &c., from accumulating therein, and its front forms a support for the hook H against the strain which may be exerted against it when in use.

Under the car is arranged a shaft, J, having each end turned at right angles to form handles K, by which the shaft may be conveniently turned. In the center of the shaft is a crank, L, which bears on the lower end of the hook H, so that by partially turning the shaft J the forward end of said hook H may be raised clear of the arm C'.

The draw-bar extends backward in the form of a pin, a, having on its end a nut, a', and is supported in a guide-bar, M, attached to the car in any convenient manner, and having on the opposite sides of said bar M buffer-springs N N, partially inclosed in tubes O O connected to the draw-bar and nut a'. As this part forms no part of my present invention and is fully shown and described in the allowed joint application of myself and Daniel E. Doherty, filed October 30, 1886, No. 216,746, it is unnecessary to further describe it here.

The inner face of the hook C is provided with a steel lining-piece, c'', which may be attached in any convenient way and serves to prevent the wear at this point.

The operation is as follows: Supposing the parts in the position represented by full lines in Fig. 3, when the opposite draw-head comes in contact with the hook C and arm C', the latter swings on its pivot, and as the arm C' comes in contact with the front of the hook H it lifts the latter, and thus the hook C assumes the position shown in Figs. 1 and 2, and the hook falls down again in front of the arm C', as shown therein, and securely locks the hook C in position. If a car provided with the link form of coupling is to be coupled, the hook C is swung backward, as shown in dotted lines in Fig. 3, so as to be out of the way. As the link enters the draw-head, it strikes the front of the hook H and raises it until the hook has passed in far enough, when the hook H falls and thus secures the link. When it is desired to uncouple the cars, it is only necessary to turn the shaft J, so as to cause the crank to bear on the lower end of the hook, which will raise the front end of the same, and thus liberate the link or the hook C, as the case may be.

The object of the spring E, projections c' c',



and notches *g g* is to hold the hook C in whatever position it may be placed, whether in position for coupling with a hook, as shown in full lines in Fig. 3, or for coupling with a link, as shown in dotted lines in the same figure, and yet allow them to be readily moved when desired. An inspection of the drawings will show that the spring tends to press the projections *c' c'* into the notches *g g*, and thus holds the arm in whichever of the two positions it may be placed, and yet when it is desired to move the hook the projections *c' c'* will readily rise out of the notches and allow the hook to move as required.

From the above it will be seen that my coupling can be used either with a link or a hook-coupling on the opposite car without change, or even the use of a pin to couple the link, which I consider an important advantage, as it saves the expense of the pins and their liability of getting lost or misplaced. It will also be seen that the coupling is a very simple one and not likely to get out of order, as there are but few working parts, and while it may be used with the horizontally-swinging hook for coupling with similar cars it is so constructed as to still leave the sides of the head for bumpers in coupling with links.

Having thus shown one way of carrying out my invention, but without limiting myself to the exact construction, I claim—

1. The combination, in a coupling, of a draw-head and a swinging hook, as C, with a locking-hook, as H, constructed to perform the double function of locking the hook C and engaging with a link, substantially as described.

2. The combination, in a coupling, of a draw-head and a swinging hook provided with an arm arranged substantially at right angles to said hook and entering the draw-head, with a pivoted hook having its point constructed to drop in front of said swinging arm, substantially as described.

3. The combination, in a coupling, of a draw-head adapted to receive a link, an automati-

cally-locking hook, as C, and a hook, as H, constructed to hold a link, substantially as described.

4. The combination, in a coupling, of a swinging hook, C, having arm C', a vertically-acting lock provided with a rear extension, and a shaft, as J, constructed to operate the hook from the side of the car, substantially as described.

5. The combination, in a coupling, of a draw-head having a horizontal opening and a vertical recess crossing said opening, and a hook, as C, provided with an arm at right angles thereto and constructed to swing into said opening, with a pivoted hook constructed to lock said hook C, and supported by the front walls of the recess, substantially as described.

6. The combination, in a coupling, of a draw-head, A, having ears G G', and a hook swinging on a pivot set in said ears and provided with projections catching into notches on one of said ears, substantially as and for the purpose specified.

7. The combination, in a coupling, of a draw-head, A, having ears G G', one of said ears being provided with notches, a hook swinging on a pivot set in said ears and provided with projections catching into said notches, and a spring constructed and arranged to press said projections into said notches, substantially as described.

8. The combination, in a coupling, of a draw-head having ears G G', said ears having notches *g g* and a recess, F, and a hook swinging on a pin forced downward by a spring around said pin and concealed in said recess and provided with projections catching into said notches, substantially as shown and described.

In testimony whereof I affix my signature, in presence of two witnesses, this 29th day of April, 1887.

PERRY BROWN.

Witnesses:

CHARLES J. DOHERTY,  
DANIEL E. DOHERTY.