

(No Model.)

2 Sheets—Sheet 1

E. T. HALL.  
CAR COUPLING.

No. 328,584.

Patented Oct. 20, 1885.

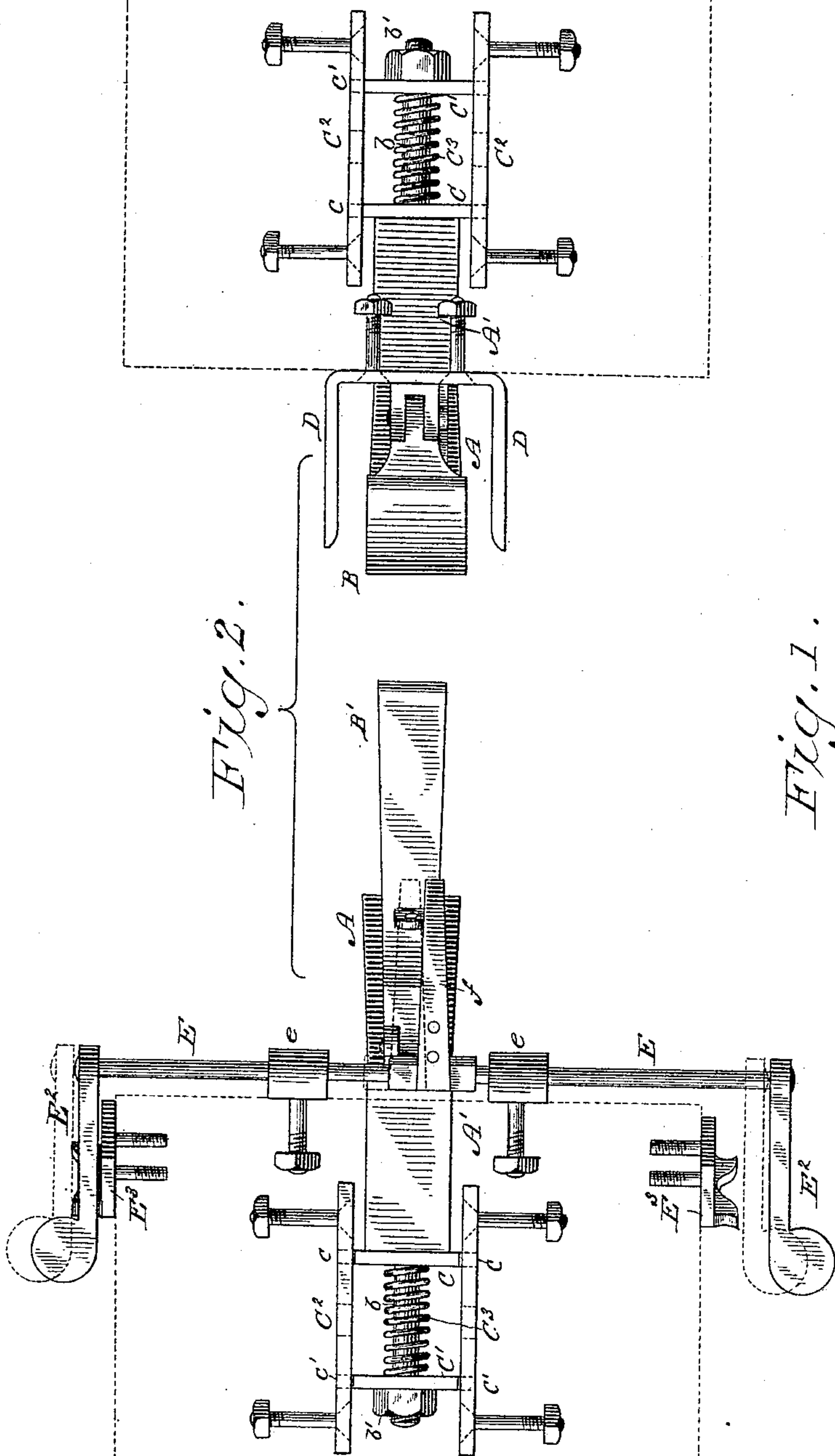


Fig. 2.

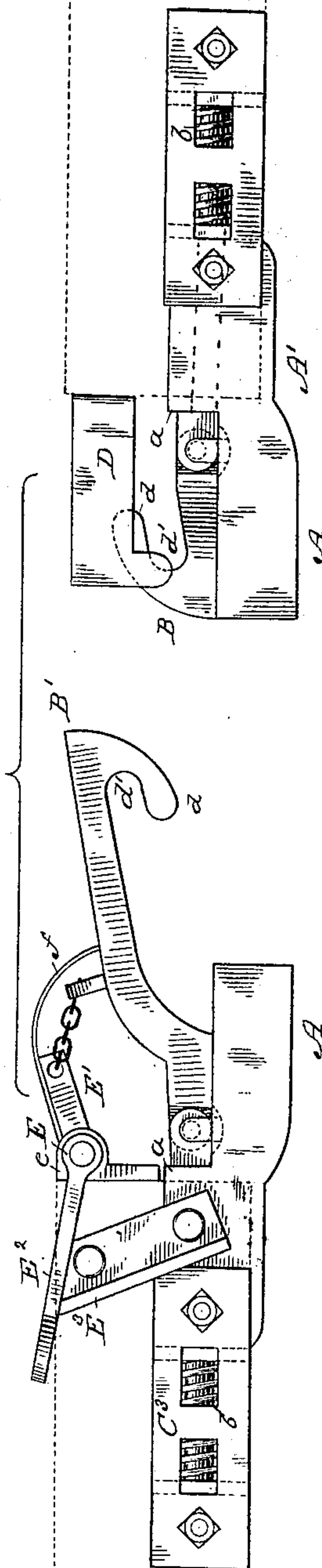


Fig. 1.

WITNESSES

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Al. C. Newman.

By his Attorney.

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INVENTOR

Enos T. Hall,

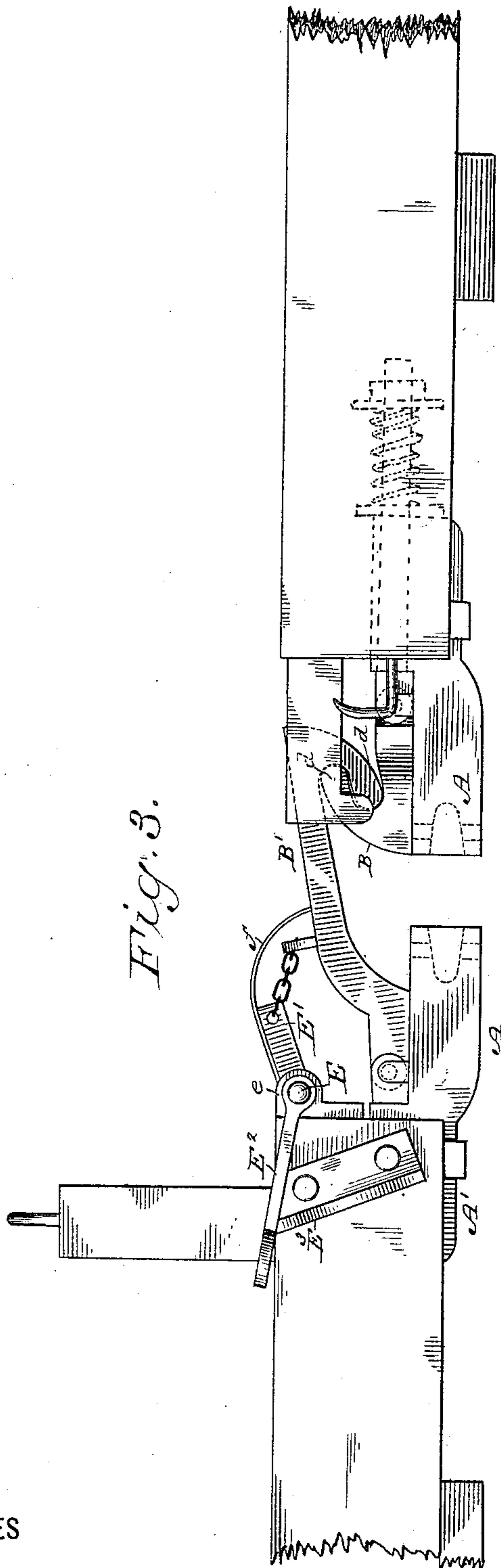
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*Ed. A. Newman.*  
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# UNITED STATES PATENT OFFICE.

ENOS T. HALL, OF SCRANTON, PENNSYLVANIA, ASSIGNOR TO GEORGE A. HIGHFIELD, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 328,584, dated October 20, 1885.

Application filed June 11, 1885. Serial No. 168,337. (No model.)

*To all whom it may concern:*

Be it known that I, ENOS T. HALL, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and  
5 useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and  
10 to the figures and letters of reference marked thereon.

This invention relates to certain new and useful improvements in the construction of car-couplings, as hereinafter described, and pointed  
15 ed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation; Fig. 2, a top plan view of my improved coupling devices. Fig. 3 is a side view showing the coupling as applied.

20 Similar letters in the several figures indicate the same parts.

A A represent buffers applied to the end of the draw-bar A', and provided with sockets and pins, as in ordinary coupling-bars, for the  
25 reception of a link-coupling, if from any cause it should become necessary or desirable to employ the same.

Situated above and resting upon each of the buffers A is a coupling-hook, B or B', constructed and applied in the following manner:  
30 The draw-bars A', provided near their forward ends with a shoulder, *a*, pass under or through the end timbers or sill of the car, and are supported to slide thereon in any suitable manner. The coupling-hooks or draw-heads B B'  
35 are each pivotally connected on a horizontal plane to the end of a rod, *b*, passing through the shoulder *a* on the draw-bar A', said rod *b* being extended rearwardly through the plates  
40 C C', the latter provided with bearings *c c'*, riding in slots in the side pieces, C<sup>2</sup>, which are secured to the longitudinal timbers or other part of the car-body. Between the plates C C' is arranged a spring, C<sup>3</sup>, preferably embracing the rod *b*, to which latter is also secured  
45 a nut, *b'*, or like adjustable collar at a point in rear of the plate C'.

As thus constructed and applied, the spring C<sup>3</sup> serves not only to hold the head of the bolt  
50 *b* and its coupling-hook or draw-head back

against the shoulder *a* of the draw-bar A' and in position for coupling, but it also operates to receive the thrust of the draw-bars and the pull of the coupling-hooks or draw-head, as in either case one of the plates C C' being supported by its lugs at the extremity of the slots  
55 in the side pieces, C<sup>2</sup>, will resist the movement of the spring in either direction.

The coupling-hooks or draw-heads B B' are each formed with a rearwardly-projecting and  
60 curved engaging-point, *d*, and correspondingly-curved throat *d'*. The coupling-hook or draw-head B rests normally upon the upper surface of the buffer A, with engaging-point *d* projecting above, whereas the draw-head B'  
65 is arched or curved and has its point *d* projecting downward and in position to ride over the opposite point until both points *d* pass each other and enter the throat *d'* of the opposite draw-head, and are thereby held securely  
70 in engagement. By pivoting the draw-heads B B', as described, and uniting them by the curved hooks, I am enabled to securely and readily couple and hold together cars of different heights.  
75

In order to properly direct the coupling-hook or draw-head B' into position above the draw-head B, and to prevent lateral displacement of the hooks after coupling, suitable  
80 guide-plates, D, may be arranged on the sides of the draw-head B.

For the purpose of uncoupling the draw-heads B B', I mount a shaft, E, in bearings *e*, and connect the arm E' attached thereto to the draw-head B', whereby the latter can be  
85 elevated by the movement of said shaft.

The shaft E extends to one or both sides of the car, and is provided with a handle or handles, E<sup>2</sup>, and said shaft is movable longitudinally in its bearings *e*.  
90

Secured to the side of the car and in proximity to the handle or handles E<sup>2</sup> is a catch or retaining plate, E<sup>3</sup>, and by moving the said shaft endwise until the handle engages one of the projections or shoulders on said plate E<sup>3</sup>  
95 the draw-head B' may be held elevated or depressed, as desired.

In order to insure the proper engagement of the draw-heads, and to retain them in position, a spring, *f*, may be attached to the arm  
100



E', so that its outward or free end shall stand above and in position to engage the draw-head B' when elevated.

Having thus described my invention, what I claim as new is—

1. In combination with the buffers A, and the draw-bars provided with shoulders *a* upon their upper faces, the coupling-hooks or draw-heads B B', with curved interlocking and engaging points and throats *d d'*, located above the buffers, the rods *d*, to which the said coupling-hooks are pivoted, passing through perforations in the shoulders *a* and extending in rear of the buffers, the plates C C', engaging slots in the frame applied to the car-body, and the spring C<sup>3</sup>, interposed between said plates, substantially as described.

2. In a car-coupling such as described, the combination of the draw-bars provided with buffers and vertical shoulders in rear thereof, the rods passing through the draw-bars and extended beyond the shoulders thereon and above the buffers, springs applied to said rods

to hold the latter retracted, and the vertically-movable interlocking coupling-hooks or draw-heads sustained on pivots attached to the rods and above the buffers, one of said coupling-hooks being arched and held above or at a higher level than the opposite hook, substantially as described.

3. In combination with the vertically-movable coupling-hooks or draw-head B', engaging the opposite coupling-hook, B, the shaft E, provided with spring *f*, arm E', and connecting-chain, substantially as and for the purpose set forth.

4. In combination with the pivoted coupling-hook B', the longitudinally-movable shaft E, for elevating said coupling-hook, said shaft carrying the handle E<sup>2</sup>, and the retaining-plate E<sup>3</sup>, for engaging said handle, as and for the purpose set forth.

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Witnesses:

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FRANK P. AMSDEN.