

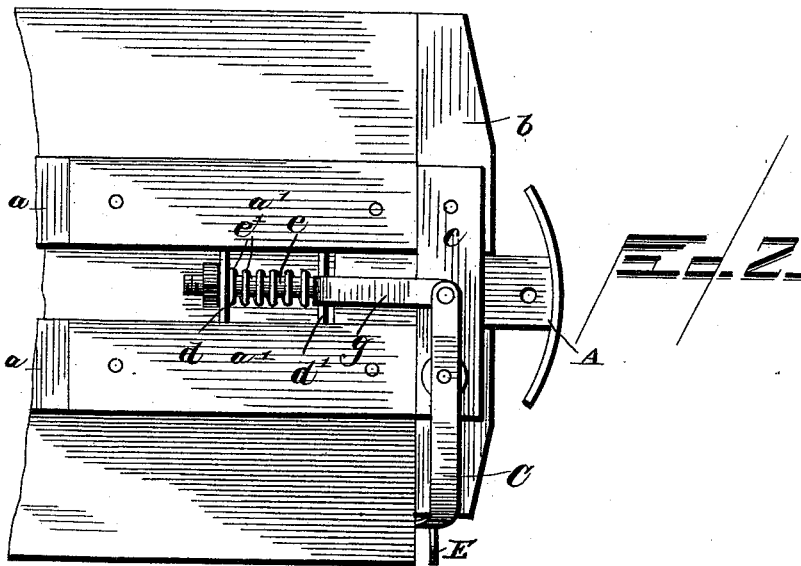
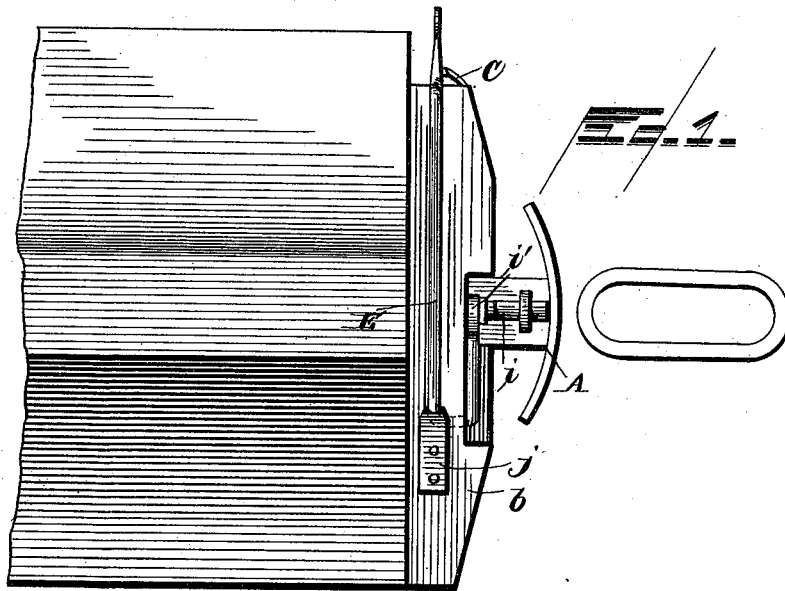
(No Model.)

2 Sheets—Sheet 1.

R. T. HENRY.  
CAR COUPLING.

No. 418,564.

Patented Dec. 31, 1889.



Witnesses

*Henry J. Dietrich,*  
*Wm. J. Little,*

Inventor

*Robert T. Henry,*

By his Attorney

*J. R. Littell,*

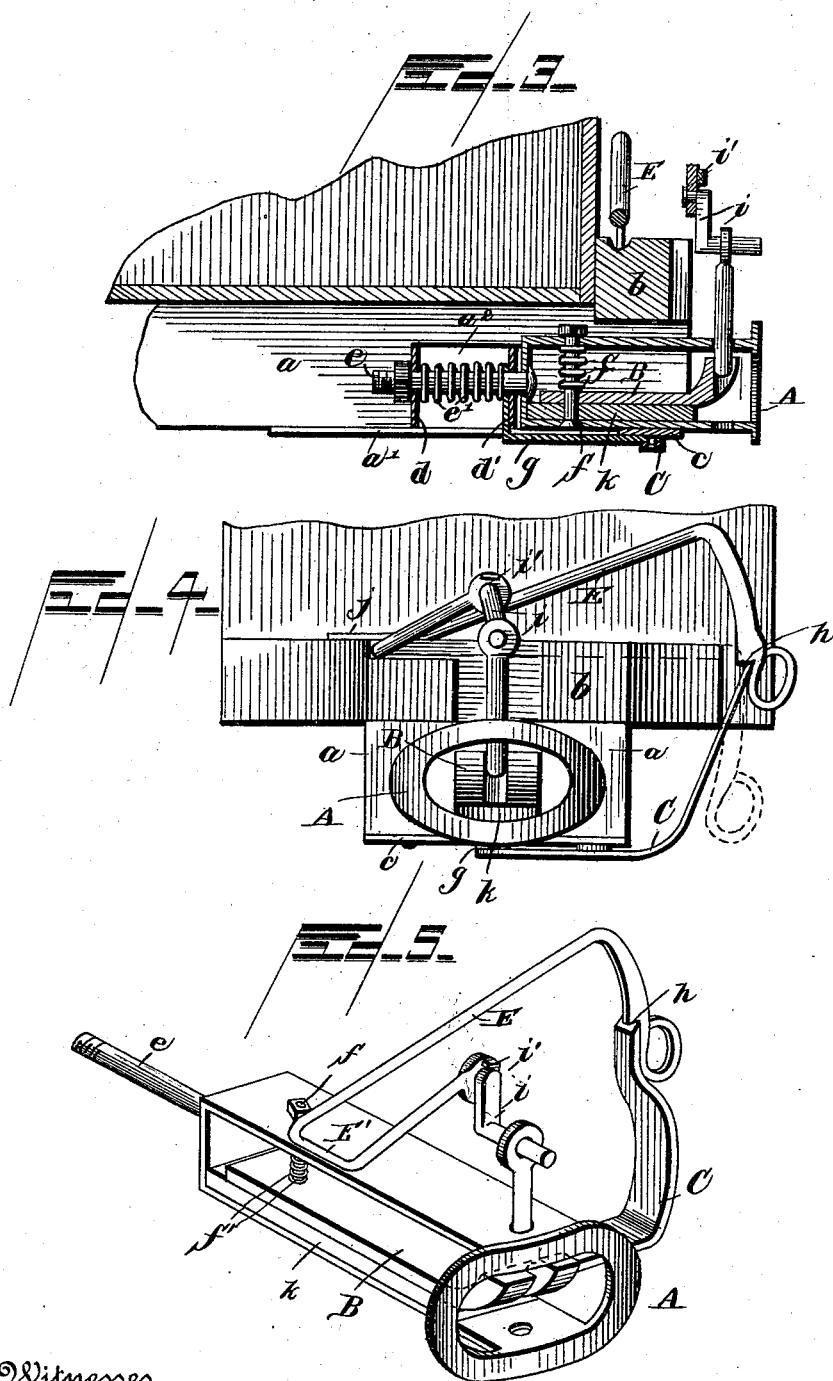
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Inventor

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# UNITED STATES PATENT OFFICE.

ROBERT THOMPSON HENRY, OF ROANOKE, VIRGINIA, ASSIGNOR OF ONE-HALF TO HIRAM A. SIMS, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 418,564, dated December 31, 1889.

Application filed June 19, 1889. Serial No. 314,801. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT THOMPSON HENRY, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to car-couplings; and it has for its object to provide a simple and improved device of this character which will be automatic in its operation, and, furthermore, possess advantages in point of simplicity, durability, and general efficiency.

In the drawings, Figure 1 is a top or plan view of a draw-head and a portion of a car embodying my improved coupling. Fig. 2 is a bottom or inverted plan view of the same. Fig. 3 is a longitudinal sectional view thereof. Fig. 4 is an end elevation. Fig. 5 is a detailed perspective view of the coupling, showing the special features of novelty thereof.

Corresponding parts in the figures are denoted by the same letters of reference.

In the organization of my invention I employ a suitably spring-cushioned draw-head A, the same being held between timbers *a a* under the platform *b* and resting upon a bottom cross-plate *c*, bolted to the under side of said timbers. Also secured to the timbers *a a*, lengthwise of the car or platform, are parallel plates *a' a'* in a recess *a<sup>2</sup>*. In each timber between said plates *a' a'* and the upper surfaces of said recesses is arranged an edge-wise-disposed end plate *d*, bearing against the rear end walls of said recesses. A similar plate *d'* is also arranged in said recesses *a<sup>2</sup>*, but so as to normally stand at the front end walls of said recesses, and extending from the draw-head through said plates *d' d'* is a rod *e*, encircled by a spring *e'* between said plates. The draw-head A carries within it a link-retaining bevel-ended device or holder B, which is so arranged as to have a limited upwardly-yielding movement, having a retaining pin or bolt *f* passing through it, which is encircled by a spring *f'*.

C is a right-angled lever, which has its lower horizontal arm pivoted upon the under side of the cross-plate *c*. To one end of the lever C is connected a right-angled bar *g*, its

vertical or upturned portion engaging or having the rod *e* passing through it, and therefore receiving the pressure of the inner or forward plate *d'*, whereby when the draw-head is moved inward the bar *g* will in like manner be affected, and thus throw the lever C forward at its upper end. The upper end of the lever C stands nearly flush with the top of the platform, and is preferably beveled, for the purpose presently seen.

E is a hand or gravity lever having at the inner edge of its pendent handled portion a notch *h*, engaging the beveled upper edge of the lever C when the pin is in its uncoupled position. The lever E has a crank-shaft portion *E'*, which is journaled or has its bearing in the platform, while one arm thereof has connected to it a crank-arm *i*, which carries the coupling-pin D, arranged to stand in its elevated position in an opening in the holder B within the draw-bar. The crank-arm *i* has its upper pivoted end engaging a stop *i'* on the outer end of the arm of the crank-shaft portion of the lever E, to limit the upward movement of the coupling in the event of the rebound action thereof. A stop in the form of a plate *j*, bolted to the platform and having a notch in its upwardly deflected or inclined end in alignment with the lever E, prevents the vertical displacement of the latter. It will be seen that as two draw-heads come together the latter will move inward and trip the lever C, as above intimated, moving it out of engagement with the coupling-pin-retaining lever E, and thus causing the dropping of the pin, and consequently the automatic coupling of the cars. The coupling-pin can be readily withdrawn from the coupling-link of the opposite car by simply raising the lever E until engaged by the lever C. Connection can be effected between the pin-operating lever C and the top of a house-car by suitable means (not shown) to permit of the actuation of said lever from that point. A plate *k*, arranged directly below the link-holder B, limits the insertion of the link, while the spring-pressure of the holder holds the link in position, it (the holder) first yielding upward to permit the passage of the link beneath it.

I claim as my invention—

1. In a car-coupling, the combination, with  
spring-cushioned or inwardly-movable draw-  
head, of the right-angled lever connected to  
the latter and having its free end engaging a  
5 second lever connecting with or carrying the  
coupling-pin, substantially as set forth.
2. The herein-described car-coupling, com-  
prising the yielding draw-head provided with  
10 a spring-held link-support, a pin-lifting lever,  
and automatic trip mechanism adapted to  
retain the pin in elevated position and release  
the same by the rearward yielding of the  
draw-head, substantially as and for the pur-  
15 pose set forth.
3. The car-coupling comprising the in-  
wardly-movable draw-head, the right-angled  
lever having a right-angled bar connected to

a rod or extension of the draw-head, the up-  
per end of said lever being beveled, and the 20  
hand or gravity lever having a notch engag-  
ing the beveled end of the aforesaid lever  
and formed with a crank-shaft carrying the  
coupling-pin, substantially as set forth.

4. In a car-coupling, the combination, with 25  
a yielding draw-head, of a pin-lifting lever,  
and automatic trip mechanism adapted to re-  
tain the pin in elevated position and release  
the same by the rearward yielding of the  
draw-head, substantially as set forth. 30

In testimony whereof I affix my signature  
in presence of two witnesses.

ROBERT THOMPSON HENRY.

Witnesses:

M. C. THOMAS,  
C. M. TURNER.