

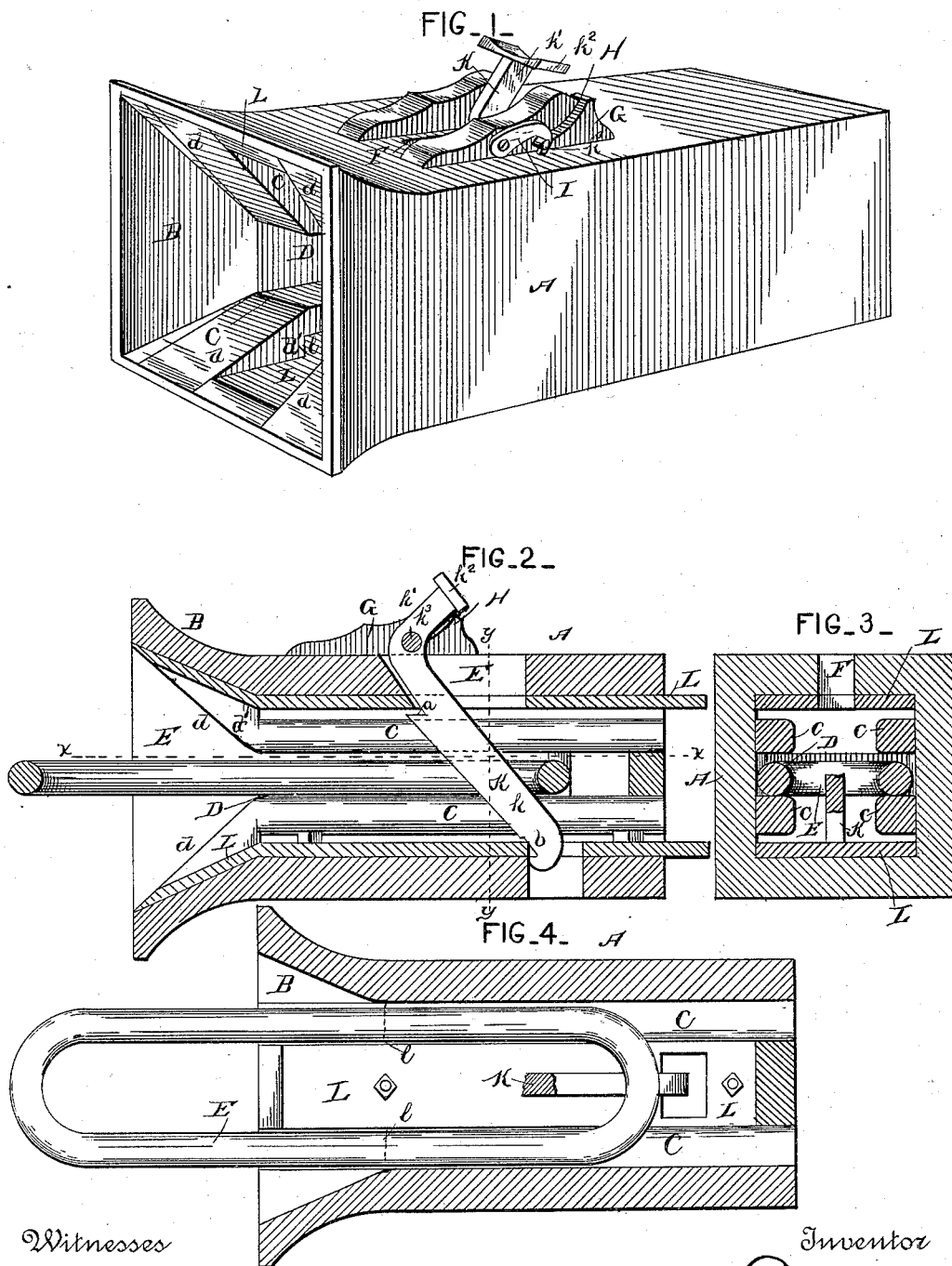
(No Model.)

H. H. CAMPBELL.

CAR COUPLING.

No. 344,719.

Patented June 29, 1886.



Witnesses

*W. P. Sill*  
*J. W. Garner*

Inventor

*H. H. Campbell*

By his Attorneys

*C. A. Snow & Co.*

# UNITED STATES PATENT OFFICE.

HAMILTON HOMER CAMPBELL, OF BLACKBURN, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 344,719, dated June 29, 1886.

Application filed April 16, 1886. Serial No. 199,113. (No model.)

*To all whom it may concern:*

Be it known that I, HAMILTON HOMER CAMPBELL, a citizen of the United States, residing at Blackburn, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention relates to an improvement in car-couplings; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a vertical transverse sectional view. Fig. 4 is a horizontal sectional view taken on the line *x x* of Fig. 2.

A represents the draw-head, which is provided with the usual bell-shaped mouth, B. On the inner sides of the draw-head, and either formed integrally therewith or secured thereto, are suitable guides, C, which are arranged on the lower and upper sides of opposite sides of the draw-head, thereby forming longitudinal horizontal grooves D on the sides of the draw-head, to receive the coupling-link E, which latter is of the ordinary construction. The front ends of the guides C are beveled in opposite directions, as at *d*, thereby forming inclines against which the outer end of the link strikes when the cars are being coupled, the function of the said inclines being to guide the link into the groove B. The upper side of the draw-head is provided at its center with a longitudinal vertical slot, F, at the front end of which, on opposite sides, are brackets G, which rise vertically from the top of the draw-head. These brackets are provided with curved open slots H, and pivoted to the brackets are hooks I.

K represents the coupling-pin, which is bent substantially at right angles, thereby forming the lower arm, *k*, and the upper arm, *k'*. To the upper end of the latter is secured a head, *k''*. The coupling-pin is provided on opposite sides with projecting trunnions *k'''*, which enter the slots H of the brackets G, and thereby pivot the coupling-pin to the said brackets. In order to prevent the pin from becoming accidentally released from the brackets, the

hooks I are moved downwardly and caused to engage with the projecting ends of the trunnions, thereby securing them in the lower front ends of the slots H. The arm *k'* of the coupling-pin is provided near its upper end, on its front side, with a notch, *a*, and at its lower end, on its front side, with a notch, *b*.

L represents re-enforce plates, which are made of wrought iron or steel and secured on the upper and lower sides of the draw-head, on the inner sides thereof. These plates are bolted to the top and bottom of the draw-head, and are provided with shoulders *l* at their front ends, which bear against shoulders *d'*, formed by the guides C, and thus prevent the plates L from being moved forwardly and disengaged from the draw-head under great strain. The upper plate, L, has a slotted opening through which the upper portion of the coupling-pin passes, and a notch, *a*, of the said pin engages with the front side of the said slot. The lower plate, L, also has a slot or opening to receive the lower end of the coupling-pin, and the notch *b* of the latter engages with the front side of the said opening, thereby locking the coupling-pin in the position shown in solid lines in Fig. 2, and preventing it from being moved forwardly.

The operation of my invention is as follows: When two cars provided with my improved form of coupling come together, the coupling-link B strikes against the incline *d* of the guides, and is directed thereby into the grooves D, where it comes in contact with the front side of the coupling-pin and raises the latter to the position shown in dotted lines in Fig. 2, and as the end of the link passes beyond the coupling-pin the latter, by its gravity, drops to its normal position, and thus secures the coupling-link in the draw-head against the possibility of being accidentally withdrawn therefrom. In order to uncouple the cars they are first jammed together by reversing the engine, thereby causing the coupling-link to move rearwardly sufficiently far to release the coupling-pin. The brakeman places his foot on the head *k''* and moves the latter forward, thereby raising the coupling-pin and releasing the link and uncoupling the cars.

A car-coupling thus constructed is cheap and simple, and strong and durable, is not

likely to get out of order, is automatic in operation, and prevents the necessity of going between the cars in order to couple them and thus endangering life and limb.

5 Having thus described my invention, I claim—

1. The combination, in a car-coupling, of the draw-head having the brackets provided with an open slot, H, and the hooks I, and the  
10 coupling-pin having trunnions bearing in the slots H, and engaged by the hooks I, for the purpose set forth, substantially as described.

2. The combination of the draw-head and the coupling-pin pivoted therein, the said  
15 coupling-pin having the upper arm, k', provided with a head, k<sup>2</sup>, for the purpose set forth, substantially as described.

3. The combination of the draw-head having the guides C, and the re-enforce plates L in the upper and lower sides of the draw-  
20 head, and provided with shoulders l, bearing against shoulders formed by the guides, and the coupling-pin adapted to bear against the re-enforce plates to resist the strain on the coupling-link, substantially as described. 25

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

HAMILTON HOMER CAMPBELL.

Witnesses:

HARRY BLACKBURN,  
A. O. P. GUFFEY.