(No Model.)

I. I. KEELY.

CAR COUPLING.

No. 276,141. Patented Apr. 17, 1883.

Fig. 1.

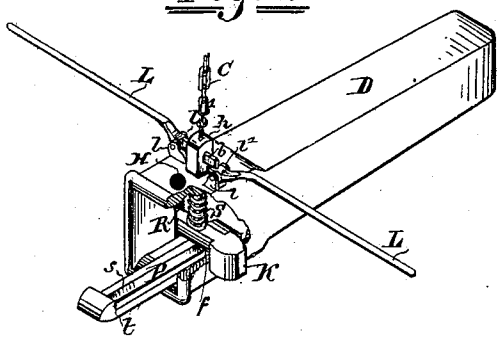


Fig. 2.

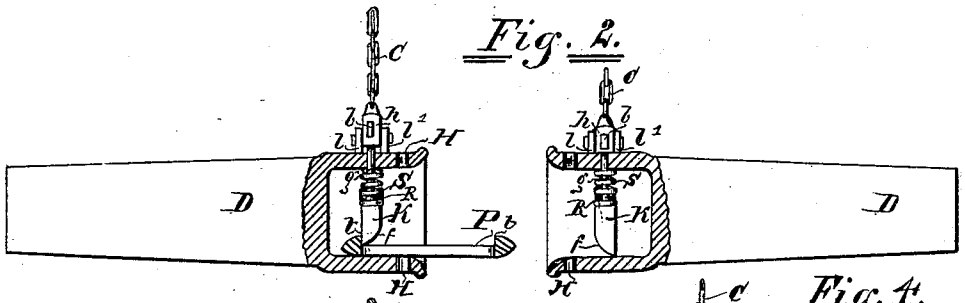


Fig. 3.

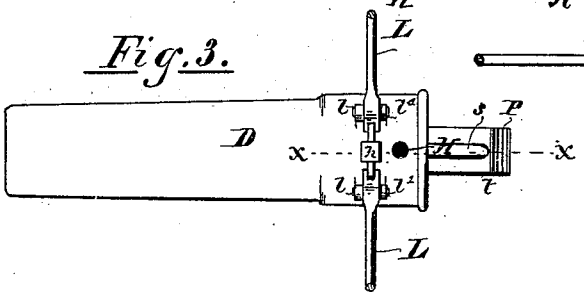
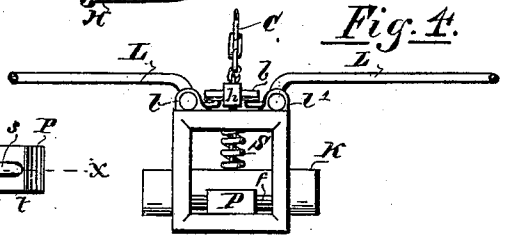


Fig. 4.



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ISAAC I. KEELY, OF ANDERSON, INDIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 276,141, dated April 17, 1883.

Application filed January 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, ISAAC I. KEELY, of the town of Anderson, county of Madison, and State of Indiana, have invented certain new and useful Improvements in Automatic Self-Closing Car-Couplings, of which the following is a specification.

The object of my invention is to provide an automatic self-closing car-coupling for the purpose of coupling cars of different heights, to be coupled while the cars are in motion or otherwise. Cars provided with my new device may be coupled as well as uncoupled in motion; but in case both cars are provided with my device the coupling of the same is automatic, while the uncoupling is effected by means of levers. The description of the same and also the automatic parts of my invention will be hereinafter described more fully.

Referring to the accompanying drawings and letters of reference thereto, all of which are made a part of this specification, Figure 1 is a perspective view of my coupling, showing a part of the iron broken off, disclosing the mechanical arrangements of my coupling. Fig. 2 represents the two corresponding couplings, the heads being a horizontal section at the dotted lines *x x* of Fig. 3, the left-hand coupling having the V-shaped link-bar P engaged, and the right-hand coupling being ready to engage the same. Fig. 3 shows the plan view of my invention, with the V-shaped link-bar B inserted. Fig. 4 represents a front view of my invention, taken from Fig. 3.

As shown in Fig. 1, the draw-head D is provided with a square mouth, similar to those of the ordinary draw-heads now in use, the under inner sides of which are formed on an inclined plane. A rectangular slot running vertically through both sides of the draw-bar head is provided to receive the sliding catch-bar K. The front portion, inside of the mouth-piece of this bar K, as shown in Fig. 2, is oval-shaped. The heads of the link-bar P are V-shaped, and provided behind the same with a right-angled shoulder, as shown in Figs. 1, 2, 3, and 4. As the link-bar P collides with the inclined face of the vertical sliding bar K, said bar K rises automatically, admitting the link-bar P to pass beyond the shoulder, and then is forced to fall down into engagement by its own gravity or by springs S, as shown in Figs. 1, 2, and 4. A guide-pin, *g*, is rigidly attached to the vertical sliding bar K, extending through and above the coupling-head *h*, and is provided at the upper end with a cross-head, *h*, and cross-pins *b*, as shown in Figs. 1 to 4, inclusive. The ears *l l'* are rigidly attached to the draw-head D, and are provided with pivots to support the levers L. The cross-head *h* is provided with a cross-pin, *b*, and made to extend over the fulcrums of levers L, as shown in Figs. 1, 3, and 4. A chain, C, attached to the cross-head *h*, extends to the top of the car, for the purpose of disengaging the coupler from the top of the car. The levers L are made of sufficient length to enable the coupling to be operated from the side of the car. The link-bar P is provided with a slot, S, as shown in Figs. 1, 2, and 3, to engage with cars not provided with my device. The holes H, as shown in Figs. 1, 2, and 3, are made to receive ordinary coupling-pins when necessary.

The operation of my invention is such as to enable the cars to be automatically coupled while in motion in case both cars are provided with my device, while in case one car is provided with my device and the other is not, my coupling-bar can be substituted for the ordinary link and pin, while the cars connected with my device can be uncoupled from the top of the car by means of the chain C, which is made to lift the catch-bar K, thus disengaging the coupling. The same result may be attained from the side of the car by pressing on the lever L, the fulcrum of which acts on the cross-pin *l* of cross-head *h*, lifting the catch-bar K, and thus disengages the coupling. When both cars are provided with my device, the V-shaped head of the link-bar P, colliding with the oval-shaped face *f* of the catch-bar K, lifts the catch-bar K and passes beyond the shoulder *t*, when the catch-bar K returns to position, and thus automatically engages, effecting a complete coupling, the whole to be made of cast or wrought iron, or any suitable material.

I do not claim in this specification those parts which are known to be old, and which it is unnecessary for me to enumerate; but

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

1. In a car-coupling provided with flaring-mouthed draw-head D, a gravitating catch-

bar, K, with oval face *f*, rectangular gravitating heads *k*, as shown in Figs. 1 and 4, upright guide-pin *g*, with cross-head *h*, said catch-bar working loosely in slots R, to be operated by means of levers L L, and chain C, substantially in the manner and for the purpose set forth.

2. A car-coupler consisting of flaring-mouthed draw-head D, with the ordinary pin-hole, H, the perpendicular slots R, and rigid ears *l l'*, said draw-head being also provided with an aperture to allow the guide-pin *g* to pass through the top thereof, the construction and combinations being substantially as described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 19th day of December, A. D. 1882.

ISAAC I. KEELY. [L. S.]

In presence of—

ALBERT W. WISHARD,

JOHN W. BROOKS.