(No Model.)

H. G. HARRINGTON.

CAR COUPLING.

No. 590,150. Patented Sept. 14, 1897.

Fig. 1.

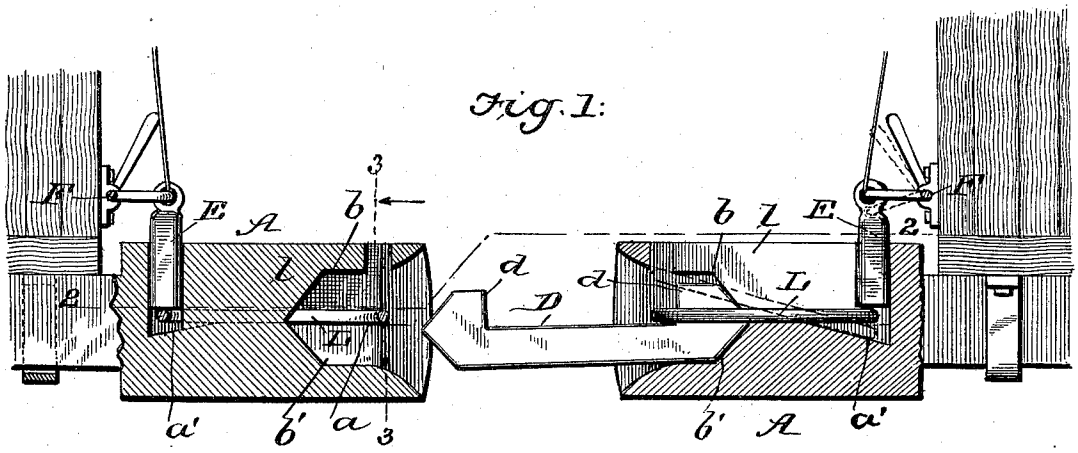


Fig. 2.

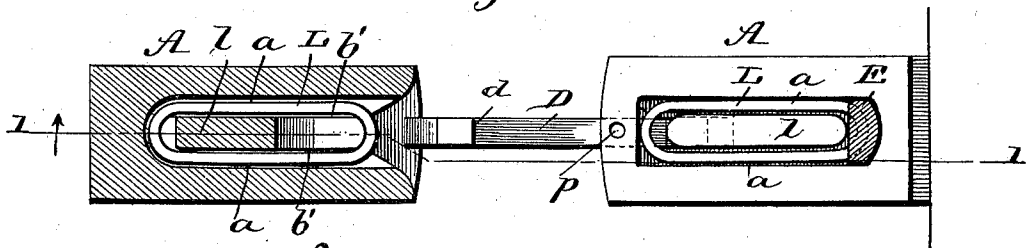


Fig. 3.

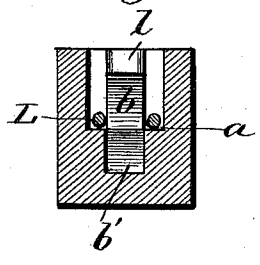


Fig. 4.

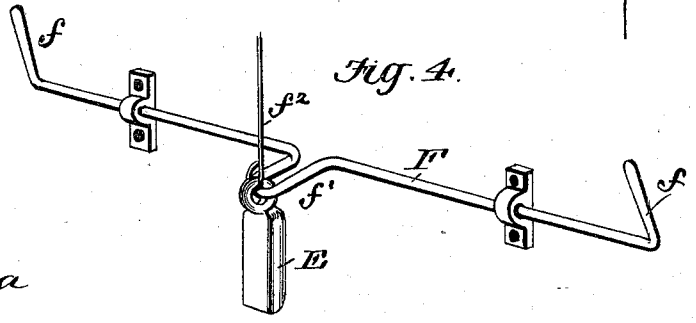
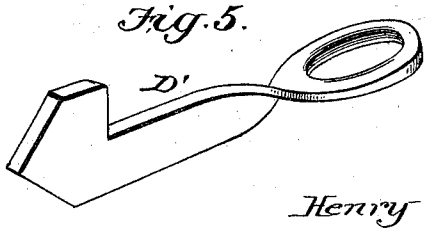


Fig. 5.



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UNITED STATES PATENT OFFICE

HENRY GREEN HARRINGTON, OF MAGNOLIA, ARKANSAS, ASSIGNOR OF TWO-THIRDS TO BEN LEE JEAN AND JABEZ D. JAMESON, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 590,150, dated September 14, 1897.

Application filed May 19, 1897. Serial No. 637,234. (No model.)

To all whom it may concern:

Be it known that I, HENRY GREEN HARRINGTON, of Magnolia, in the county of Columbia and State of Arkansas, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

The object of my invention is to provide a simple, convenient, and effective car-coupling which shall secure the automatic coupling of cars without incurring the danger of going between them, and which shall also be adapted to coupling with cars having the ordinary draw-head and pin; and it consists in the peculiar construction and arrangement of the draw-head, links, and coupling-bar, as will be hereinafter shown and described, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section, on line 1 1 of Fig. 2, through two draw-heads about to be coupled together. Fig. 2 is a horizontal section through line 2 2 of Fig. 1. Fig. 3 is a vertical transverse section through line 3 3 of Fig. 1. Fig. 4 is a perspective view showing the means for uncoupling, and Fig. 5 is a detail of a modified form of coupling-bar adapted to connect my improved draw-head with one of the ordinary construction.

In the drawings, A represents the draw-head, which is made of cast-iron cored out to form a link-seat *a* about its middle of an oblong shape exactly corresponding to the shape of an ordinary link.

L is the link, which is completely housed within said draw-head and is retained therein by an oblong rigid core *l*, rising from the bottom of the draw-head and forming a part of the casting, or otherwise rigidly attached. This core rises to the top of the draw-head and constitutes the anchorage upon which the pull of the draft strain comes.

The front edge of this core is undercut at *b*, and the draw-head is channeled or cored out below the overhang *b* of the core at its front end, with a slot *b'* equal to the thickness of said core and running out through the open and tapered mouth of the draw-head.

The back end of the link-seat *a* is formed with an incline *a'*, extending to a greater depth within the draw-head and into which the inner end of the link may be depressed, as hereinafter described.

D is the coupling-bar. This is made flat in vertical direction, with V-shaped ends and with shoulders *d*, that engage the links. The V-shaped end fits in a correspondingly-shaped recess beneath the overhang *b* of the core *l*.

E is an uncoupling-block which is arranged vertically in the back end of the link-seat, just behind the core, and occupies a position immediately above the rear end of the link and over the inclined recess *a'* of the link-seat. This uncoupling-block is loosely connected to a horizontal rock-shaft F, journaled in bearings on the car-body and extending to both sides of the same, and provided at the ends with operating-levers *f*, and having also a crank *f'*, connecting with a rod f^2, running to the top of the car, by which means the shaft may be rocked and the uncoupling-block operated from either side on the top of the car.

The operation of my coupler is as follows: Both draw-heads are provided with links in their link-seats, and one of the draw-heads being fitted with the coupling-bar D, which is held in a horizontal position by the upper part of its V-shaped end bearing against the overhang *b* of the core *l*, as shown on the right of Fig. 1, and when the cars come together the coupling-bar D enters the tapered mouth of the other draw-head and the inclined upper surface of the coupling-bar passes beneath and raises the link of that draw-head, which link then drops behind the shoulder or hook of the coupling-bar, and thus automatically couples the cars.

To uncouple the cars, the rock-shaft F is turned so as to throw down the uncoupling-block E, and this pressing upon the back end of the link forces it down into the inclined recess *a'* at the back end of the link-seat and raises its forward end to a point above the shoulder or hook of the coupling-bar D, as shown in dotted lines in Fig. 1, and the cars may then separate.

For coupling with cars having the ordinary link-and-pin couplings I use a special form of coupling-bar D', (see Fig. 5,) one end of which is made, in accordance with my invention, with a flat vertical V-shaped head and shoulder

and the other end of which is twisted ninety degrees and fashioned into an eye or loop like the ordinary link to receive a pin. I also make a pin-hole *p* through the front end of my draw-head to receive an ordinary coupling-pin when needed.

One great advantage of my coupling is that it gives the same ease of movement that is obtained with the old-fashioned link and pin, which is very much to be desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A draw-head for a car-coupling having a link-seat opening through the top of the draw-head and entirely housed within the draw-head, and adapted to receive and contain both ends of the link, and having a rigid link-core corresponding to the inner circumference of the link, and attached at its bottom only to the draw-head, said core having an overhang at its front end; in combination with a detachable link, and a coupling-bar having a hook or shoulder with a head fitting beneath the overhang of the said link-core substantially as and for the purpose described.

2. A draw-head for a car-coupling having a link-seat entirely housed within the draw-head with an incline or depression at the back end of said link-seat, and a central rigid core, a shouldered coupling-bar, and a depression-block arranged for vertical movement behind the link-core, with means for operating it to lift the link and uncouple the cars substantially as and for the purpose described.

3. A draw-head for a car-coupling having a link-seat opening through the top of the draw-head and entirely housed within the draw-head and adapted to receive and contain both ends of the link and having a rigid central core attached at its lower end only and provided with an overhang at its front end and a slot below it and also below the level of the link-seat; in combination with the detachable link, and the shouldered coupling-bar substantially as and for the purpose described.

4. A car-coupling composed of a coupling-bar D with a shoulder *d* and V-shaped head or end, a draw-head having a link-seat opening on its upper surface and entirely housed within the same and adapted to receive both ends of the link, and provided with a central rigid core attached at its lower end only and provided with an overhanging front end and a slot below it and the link-seat, said slot and overhang conforming to the end of the coupling-bar, and a detachable link arranged in said link-seat to exert a draft strain on the core substantially as and for the purpose described.

HENRY GREEN HARRINGTON.

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