

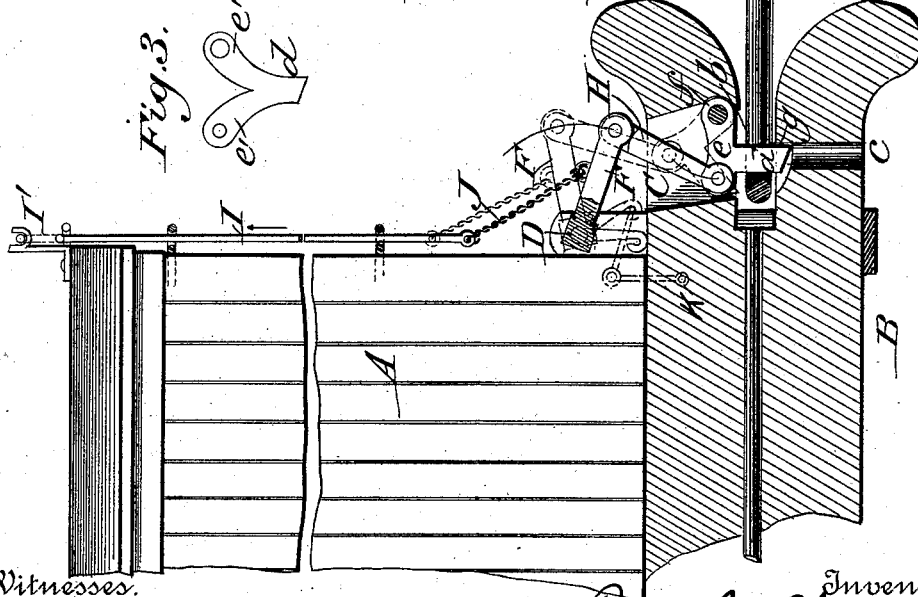
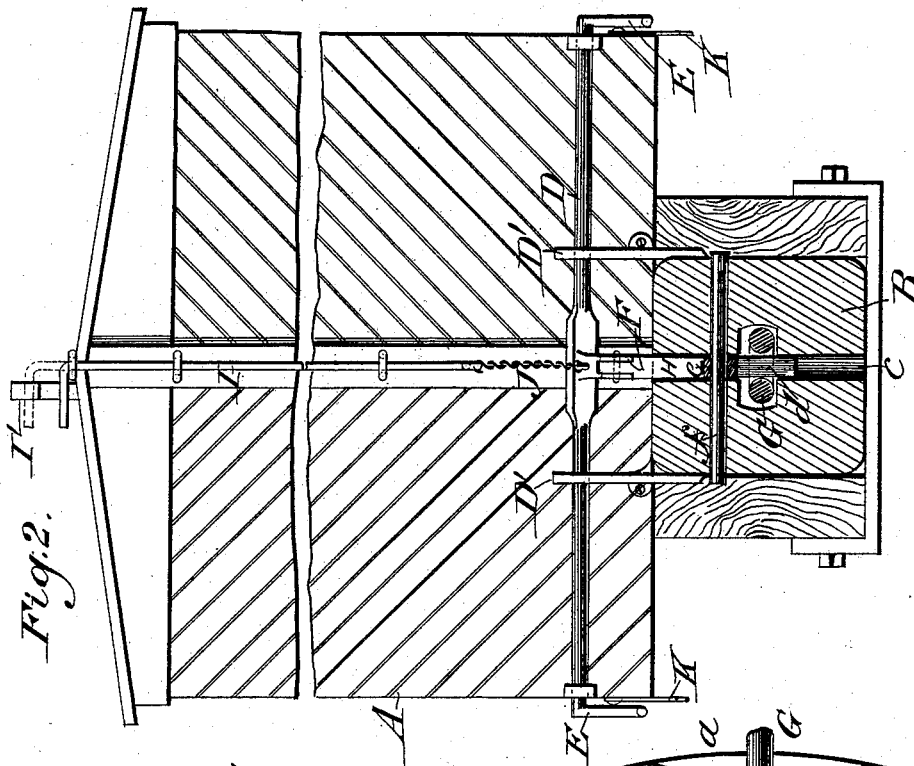
(No Model.)

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CAR COUPLING.

No. 384,174.

Patented June 5, 1888.



Witnesses.

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Fig. 1.

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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 384,174, dated June 5, 1888.

Application filed January 20, 1888. Serial No. 261,342. (No model.)

To all whom it may concern:

Be it known that we, RUGENE M. OLMSTEAD and JOHN V. WEMPLE, citizens of the United States, residing at Schenectady, in the county of Schenectady and State of New York, have invented certain new and useful Improvements in Car-Couplers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in car-couplers; and it consists in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and claimed.

In the accompanying drawings, illustrating our invention, Figure 1 is a side elevation of the end portion of a car provided with our improved coupler, which is shown in section. Fig. 2 is a front end elevation of a car provided with our improved coupler, the latter being shown in cross-sectional elevation. Fig. 3 is an outline view of a modification in the form of the upper portion of the coupling-pin.

Like letters of reference designate like parts in all the figures.

A represents a car-body, and B the draw-head, arranged in the usual manner in connection with the car-body and of the same general shape as the ordinary draw-head. The draw-head is preferably formed with a bell-mouth, *a*, and a link-opening, *b*, extending centrally through the draw-head for a greater or less distance. The draw-head B is further provided with a slot, C, in the upper side thereof and communicating with the link-opening *b*. Vertically beneath the slot C, in the upper side of the draw-head, there is a pin-hole, *c*, which extends downward through the lower portion of the draw-head.

The coupling-pin which we use with our improved car-coupler is located in the slot C and the link-opening *b*, and is arranged to swing up into the slot C out of the link-opening and then fall back again by the action of gravity into its former position. The pin comprises a part, *d*, which is designed to rest normally in a vertical position across the link-opening, as shown in Fig. 1, but adapted to be moved out of this position when the link comes in

contact with said part *d* in the act of coupling the cars, as will be hereinafter stated.

Integral with the portion *d* is a head, *e*, at right angles to the part *d*. The construction of the pin may vary considerably without departing from our invention. It may have the form shown in Fig. 1, where the head *e* is a straight portion at right angles to the part *d*. Instead, however, of the head *e*, there may be integral with the part *d* prongs *e' e'*, as shown in Fig. 3, making the pin of a Y shape. Thus the pin may be T shape or Y shape; or it may have various other forms not herein shown or described, it being only essential that the pin shall have its head so formed that two pivotal points may be provided—the one for pivoting it to the draw-head and the other for enabling it to be pivotally connected with the device whereby the pin is manipulated.

In Fig. 1 the pin is pivoted to the draw-head, forward of the central line of its main portion, at *f*. It will be observed that this pivoting of the pin is such as to enable said pin to be so located that the portion *d* will be normally vertical, the lower end of it bearing against a shoulder, *g*, formed in the lower portion of the draw-head near the upper end of the pin-hole *c*. Thus, should a link, as G, of an opposing coupler come in contact with the pin, the latter would swing upon its pivotal point *f* and be thrown upward to permit the link to pass into the position shown in Fig. 1, after which the pin would fall back through the action of gravity, and, lying across the link-opening, would effectually prevent the removal of the link. In this manner the cars could be automatically coupled.

Various modes of pivoting the pin at the point *f* may be devised. One way (shown in the drawings) is to pass a horizontal rod, *f'*, (see Fig. 2,) through the opening *f* in the head of the pin, and likewise through the draw-head. In order to enable the pin to drop back more easily into the position where it will be inclosed by the link, the bottom end of the pin has an inclined face, as shown.

The mechanism for lifting the pin in the operation of uncoupling or for any other purpose consists, essentially, of a horizontal bar or rod, D, journaled in suitable bearings—as, for instance, the supports D' D'—on the car,

and having crank ends E E, whereby the horizontal rod may be oscillated or partially rotated in the manner desired. Fixed centrally to the horizontal rod D is a projecting arm, F, which extends outward at right angles to said rod D and in a position above the slot C in the draw-head, and consequently above the coupling-pin. The arm F is rigidly secured to the horizontal rod D, and hence when said rod is oscillated by any means the arm F will vibrate. A link or connecting-rod, H, is pivotally connected to the outermost end of the arm F, and likewise to the head of the coupling-pin. The point of attachment to the head of the coupling-pin is opposite to the point where said head is pivoted to the draw-head. (See Fig. 1.) The rod D and its cranked ends E E and the other parts just specified serve to enable the pin to be removed from the link, and thus the act of uncoupling performed by a person or persons standing upon the ground on either side of the car. Sometimes, however, it will be desirable to uncouple the pin by a person on top of the car. In order to accomplish this, we have provided a rod, I, arranged in guides on the end of the car. The lower end of the rod I connects by a chain, J, with the arm F, near the middle point of the latter. The upper end of the rod I is cranked to enable it to be easily grasped by the one using it. A socket, I', is preferably affixed upon the top of the car, so that when the rod I has been drawn upward by the person on top of the car, and the pin lifted in consequence, the pin may, if desired, be retained in an uplifted position by placing the crank end of the rod within the socket I'. A similar retention of the coupling-pin in its uplifted position may be accomplished by the person standing on the ground, if it is so desired, by making use of a pivoted rod, K, which is adapted to engage the end of the crank E, and thus hold the same in the position, as shown by dotted lines in Fig. 1, which it is caused to assume at the moment that the pin is in the uplifted position consequent upon the rotation of the rod D.

The further operation of the coupler will be readily understood from the foregoing description of the construction and arrangement of the several parts without need of further additional details. When the link of an adjacent car enters the bell-shaped mouth of the draw-head and slides along into the link-opening, it will strike the pin, displace the same sufficiently to enable it to enter the rearmost

part of the link-opening, and thus permit the pin to fall back again and thereby lock the link against withdrawal from the link-opening. When it is desired to uncouple the cars, this can easily be accomplished by a person standing on the ground through the agency of the mechanical devices just described; or it can be accomplished by a person on top of the car by laying hold of the devices provided for that purpose.

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

1. In a car-coupler, the combination of the draw-head having a slot in the upper portion and a horizontal link-opening located centrally therethrough, the coupling-pin consisting of the main portion or body and the head portion having two pivotal points, at one of which, forward of the main portion or body of the pin, it is pivoted to the draw-head, the rotative horizontal rod suitably journaled, the rigid arm affixed to said rod centrally, and the pivotal connection between said arm and the other pivotal point of the coupling-pin, all arranged to operate substantially as set forth.

2. In a car-coupler, the combination of the draw-head B, having the horizontal centrally-located link-opening *b* and the slot C in the upper portion of the draw-head, the coupling-pin comprising the main part *d* and the head *e*, which is pivoted at *f* to the draw-head, the rotative rod D, having the rigid arm F, and the pivotal connection H between said arm and coupling-pin, all arranged to operate substantially as shown and described.

3. In a car-coupler, the combination of the draw-head having the horizontal centrally-located link-opening *b* and the slot C, the coupling-pin having a main portion or body, *d*, and a head, *e*, said head being pivoted to the draw-head at *f*, the rotative rod D, cranked at either end and having the rigid arm F, the connecting-bar H between said arm F and the body *d* of the coupling-pin, the rod I, and the chain J, connecting said rod I with the arm F, all arranged substantially as and for the purposes described.

In testimony whereof we affix our signatures in presence of two witnesses.

RUGENE M. OLMSTEAD.

JOHN V. WEMPLE.

Witnesses:

JACOB W. CLUTE,

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