(No Model.)

V. LARSON.

CAR COUPLING.

No. 458,631. Patented Sept. 1, 1891.

Fig. 1.

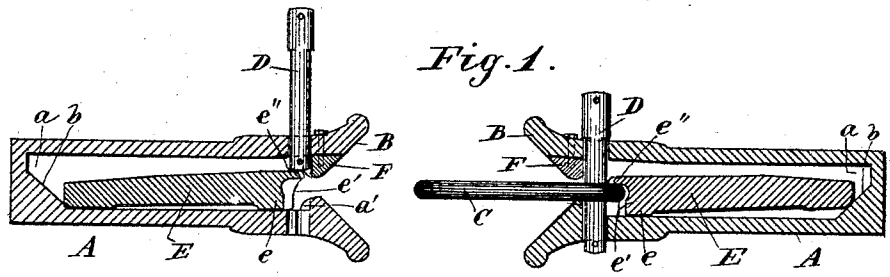


Fig. 3.

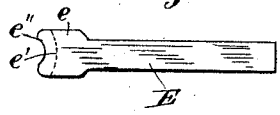
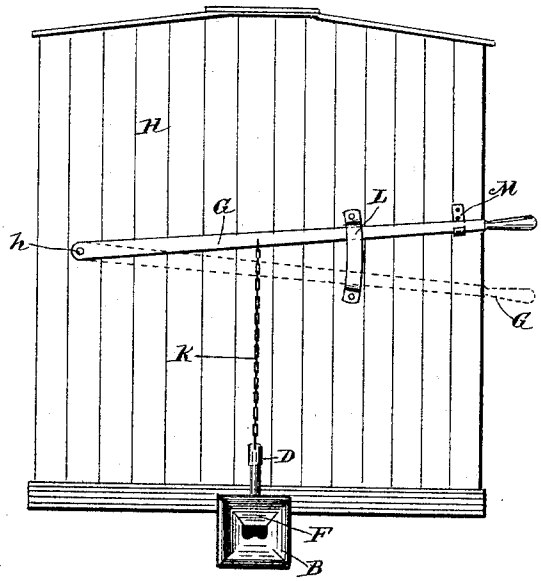


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

VICTOR LARSON, OF MINNEAPOLIS, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 458,631, dated September 1, 1891.

Application filed April 17, 1891. Serial No. 389,274. (No model.)

To all whom it may concern:

Be it known that I, VICTOR LARSON, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Automatic Car-Couplers; and I 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.

My invention relates to that class of car-couplers which employ the ordinary link and pin, and comprises a device for rendering the coupling automatic and effecting the release or uncoupling from the side of the car. To these ends, within a recess in the ordinary draw-bar, extending backward from the mouth of the coupling-head, I mount a gravity-slide adapted to move forward when the pin is raised and hold the same from falling back into its seat. In the coupling action the link carried by the other draw-head and pin will strike the front end of the gravity-slide, forcing the same backward in its seat and permit the pin to drop into its position through the link. For the better holding of the link in alignment and to permit the link to enter far enough into the mouth of the coupling-head to insure the pin dropping through the link when the slide is moved backward the slide is provided at its forward end with a projecting lip or flange, which holds up the pin, while permitting the end of the link to pass inward beyond the pin-seat. For lifting the pin from the side of the car a hand-lever is pivoted to the end wall of the car and projects outward beyond the side of the same or within reach of the brakeman without passing between the car, and the pin is connected to the lever by a chain or other suitable connection.

The device is illustrated in the accompanying drawings.

Therein like letters referring to like parts throughout, Figure 1 is a longitudinal vertical section through a pair of draw-heads and couplers. Fig. 2 is an end elevation of the body of a car, showing one of the couplers in position, together with a lever for lifting the pin; and Fig. 3 is a detail showing the gravity-slide detached.

A B is a draw-bar and coupler-head of the ordinary form, except that it is provided with an extended recess, as shown at *a*, provided with an inclined surface *b* at its rear end.

C and D are the ordinary link and pin.

E is the gravity-slide located in the recess *a*, and provided with an enlarged or broadened head *e*, concave on its face for receiving the end of the link, as shown at *e'*, and provided with a projecting lip above its face, as shown at *e''*. The draw-head is preferably cast in a single piece, as is also the gravity-slide, and provision is made for the introduction of the slide into its seat through the mouth of the coupler-head by a removable lug F. The rear wall of this lug, together with a shoulder *a'* on the lower floor of the coupler-head, serves as a stop to limit the forward motion of the slide.

G is the hand-lever pivoted to the car H, as shown at *h*, and connected to the pin by a chain K. For keeping the free end of the lever in proper position it works through a keeper L, secured to the car, and for holding the lever in its uppermost position a hook M may be provided, with which the end of the lever may be made to engage.

The operation is obvious. When the link is in position in the coupler-head, the slide will rest with its rear end on the inclined surface *b* at the back part of the recess *a*, as shown on the right in Fig. 1. The instant the pin is lifted the slide will move forward into the position shown on the left in Fig. 1 and hold up the pin. When the two draw-heads are brought together, one with and the other without a link, the slide holding up the pin will be forced backward to its limit and the pin permitted to drop into its seat, engaging the link. Of course it will be understood that just as in handling cars with the common link and pin, if both of the approaching draw-heads happen to be carrying a link one must be removed. Some uniform rule might be adopted whereby one end of the car will always carry a link and the other be without one.

This device has the merit of extreme sim-

plicity, ready adaptation to existing conditions without material change in the parts already in use, and would last indefinitely under the roughest uses.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

The combination, with the draw-bar and coupler-head A B, having recess *a*, inclined surface *b*, and stop-shoulders *a'* and F, of the gravity-slide E, having the head *e*, with concave face *e'*, and the projecting lip *e''*, substantially as described.

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

VICTOR LARSON.

Witnesses:

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E. F. ELMORE.