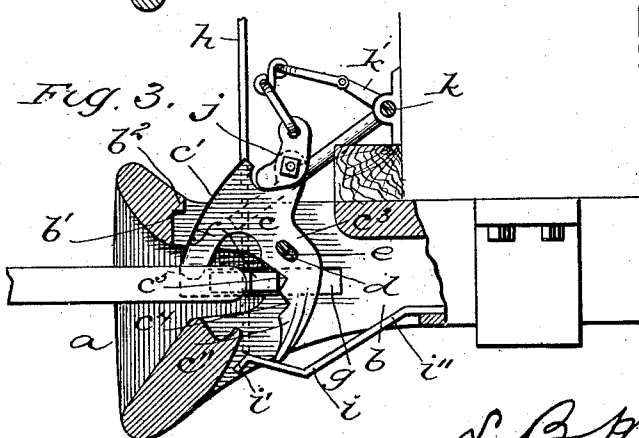
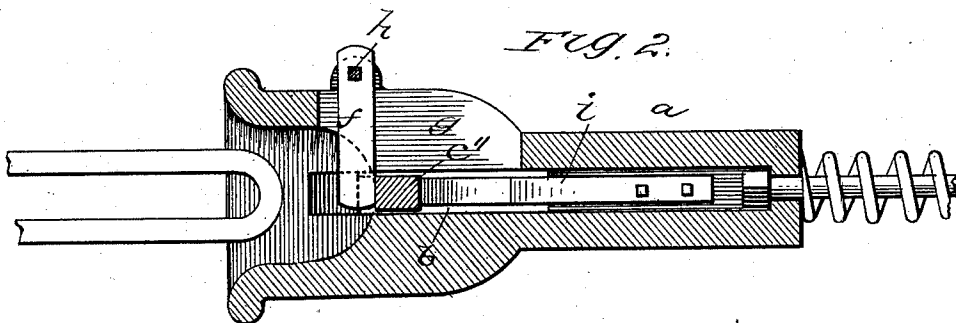
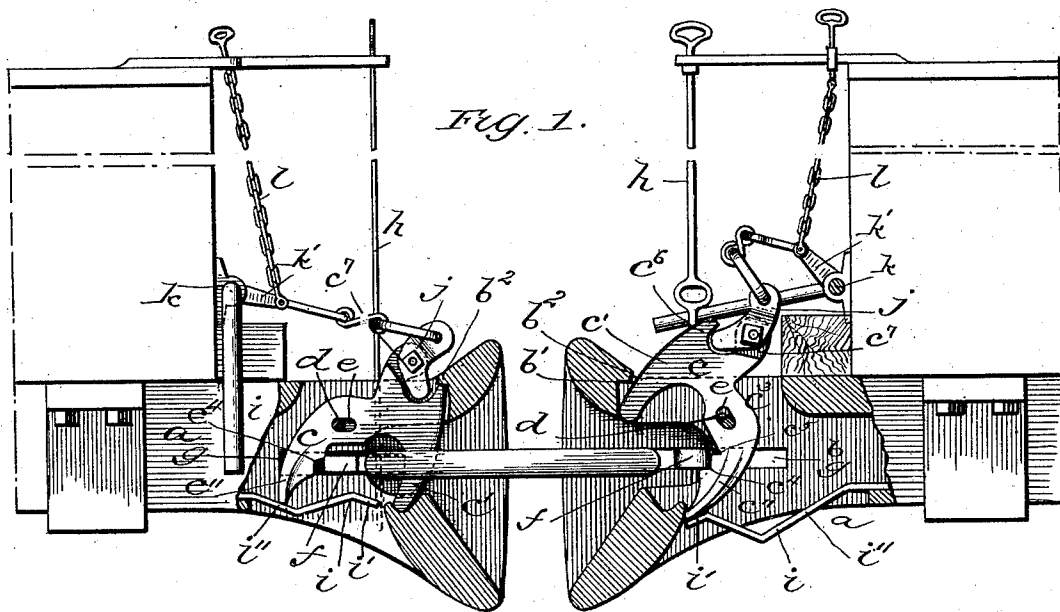


(No Model.)

L. B. KENNEY.
CAR COUPLING.

No. 468,662.

Patented Feb. 9, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

LESTER BRADNER KENNEY, OF MOUNT MORRIS, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 468,662, dated February 9, 1892.

Application filed October 16, 1891. Serial No. 408,957. (No model.)

To all whom it may concern:

Be it known that I, LESTER BRADNER KENNEY, a citizen of the United States, residing at Mount Morris, in the county of Livingston and State of New York, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improved car-coupling; and it has for its object to provide a device of simple construction, which will be positive and efficient in operation.

The invention consists in the novel construction and combination of parts, as will be more fully hereinafter described, and particularly pointed out in the claims appended.

In the drawings, Figure 1 is a vertical sectional view of two approaching draw-heads, a coupling-link being secured in one, its free end just entering the other. Fig. 2 is a horizontal sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is a vertical sectional view showing the link entering the draw-head and operating the coupling device.

In the drawings, *a* designates a draw-head, which may be secured to the car in any suitable manner and which has formed in it the central vertical opening *b*, in which the link-securing device *c* is loosely pivoted. This link-securing device is made of a single casting and is formed with the upper or coupling-hook *c'* and the lower curved portion *c''*, the two curved portions being connected by the body portion *c³*, which extends from the upper end on the inner side of the coupling-hook at approximately right angles thereto to the upper end of the curved portion *c''*.

The coupling device *c* is loosely pivoted in the opening *b* on the transverse rod *d*, which passes through the slot *e*, formed in the body portion *c³* of said device. When the coupling device is in an uncoupled or raised position, the inner or forward side of the lower curved portion *c''* is slightly in the rear of the link-receiving opening in the draw-head, for a purpose which will be hereinafter described. In the forward side of the lower curved portion are formed the recesses or notches *c⁴* *c⁵*, in which the transverse lever *f* bears when operating the coupling device. This transverse lever is formed of a broad flat bar of

metal of sufficient thickness to give it the required strength, and is pivoted between ears formed on the side of the draw-head on the squared lower end of a vertical rod *h*, which extends to the top of the car, where it is provided with a handle. It is also provided with a handle just above the draw-head to enable a train-hand standing on the ground to operate the lever *f*.

The lower end of the coupling device bears on a leaf-spring *i*, which is secured in the draw-head and extends forwardly into the vertical opening *b* and is formed with the bends *i'* and *i''*.

When the device is in an uncoupled position, the lower end of the link-securing device bears on the incline *i'* of the spring, the tension of the spring holding it against the front wall of the opening *b* in its raised position, as clearly shown in Fig. 1 of the drawings.

The upper end of the coupling-hook *c'* is provided with the extension *c⁶*, which fits in the recess *b'*, formed in the front wall of the opening *b* near the upper end thereof, when the device is in a coupled position and prevents the hook being jarred out of said coupled position.

From the upper side of the link-securing device extends the lug *c⁷*, on which is pivoted the knuckle or dog *j*. The upper end of this dog is connected with the transverse rock-shaft *k*, which is secured to the car above the draw-head by a chain or any suitable connection and operates to release the upper end of the coupling-hook from the recess *b'* when the rock-shaft is operated by its lower end coming in contact with the shoulder *b³*, as will be clearly understood by reference to Fig. 1 of the drawings.

To an arm *k'*, secured to the rock-shaft *k*, is secured one end of a chain *l*, which extends to the top of the car, by means of which the cars may be uncoupled or the coupling device placed in position for coupling from the top of the car. The rock-shaft extends to the sides of the car and is provided on each end with a crank-arm, by means of which the coupling device may be manipulated from either side of the car.

The operation of my device is as follows: The coupling-hook being raised and the trans-

verse lever *f* extending across and in front of the lower end of the coupling device, the coupling-link is inserted in the draw-head. The transverse lever, being directly in the path of the link, is forced to turn on its pivot when the link comes in contact with it, and said lever bearing against the lower end of the coupling device causes it to turn on its pivot. As the coupling device turns, its lower end is released from the end *i'* of the spring *i* and it falls downwardly the limit of the slot *e*. The lever *f* will then bear in notch *c⁵*, as shown in Fig. 3 of the drawings, and as the lower end of the hook *c'* reaches the limit of its downward movement the lower end of the curved portion *c''* reaches the inclined portion *i''* of the spring, and continued rearward movement of the said portion against the tension of the spring causes the upper end of the coupling device to move forward and the projection *c⁶* to fit into the recess *b'*, hereinbefore described. When it is desired to uncouple the cars, the knuckle or dog is operated by turning the rock-shaft by any of its connections, causing the lower end of the dog to bear on the shoulder *b²*, forcing the upper end of the coupling-hook out of the recess *b'*, permitting it to be raised by the further upward movement of the rock-shaft.

The opening *g* is too narrow to admit the coupling-link, so that it is evident the cars fitted with my coupling cannot be automatically coupled if the lever *f* is not transversely of the draw-head and in front of the coupling device, as the link, entering the draw-head, would strike the rear wall of the link-receiving opening and not come in contact with the coupling device.

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

1. In a car-coupling, the combination of a draw-head, a movable link-securing device working in an opening in the upper part of the draw-head and provided with a coupling-hook *c'* at its upper end, means for normally holding the hook *c'* in a raised position, and a movable bar arranged across the mouth of

the draw-head and adapted to bear upon the front side of the link-securing device, said bar being in the path of and adapted to receive the impact of the entering link, as and for the purposes described.

2. In a car-coupling, the combination of a draw-head, a link-securing device pivoted in a vertical opening in said draw-head, said link-securing device consisting of the coupling-hook *c'*, the lower curved portion *c''*, and the connecting body portion *c³*, a spring for supporting the link-securing device in a raised position, a lever arranged across and in front of the lower end of the link-securing device, and means for releasing and raising the link-securing device, substantially as described.

3. In a car-coupling, the combination of a draw-head, a link-securing device pivoted in a vertical opening in the draw-head and constructed as described and provided with the extension *c⁶*, adapted to fit in the recess *b'*, formed in the draw-head, a lever arranged across the front of the link and in the path of the coupling-link, a spring secured in the draw-head for supporting the link-securing device and provided with the inclines *i'* and *i''*, as described, and means for releasing and raising the coupling device, substantially as described.

4. In a car-coupling, the combination of a draw-head, a link-securing device constructed as described and pivoted in a vertical opening in the draw-head, the forward side of the lower curved portion being slightly in the rear of the rear wall of the link-receiving opening in the draw-head, a transverse lever secured on the lower end of an upright rod and extending through a horizontal opening in the draw-head, a spring for supporting the link-securing device, and a dog pivoted on the upper side of the link-securing device and operating substantially as described.

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

LESTER BRADNER KENNEY.

Witnesses:

C. J. PERRY,
C. D. CHILSON.