

(No Model.)

S. J. MEEKER.
CAR COUPLING.

No. 538,338.

Patented Apr. 30, 1895.

Fig. 1,

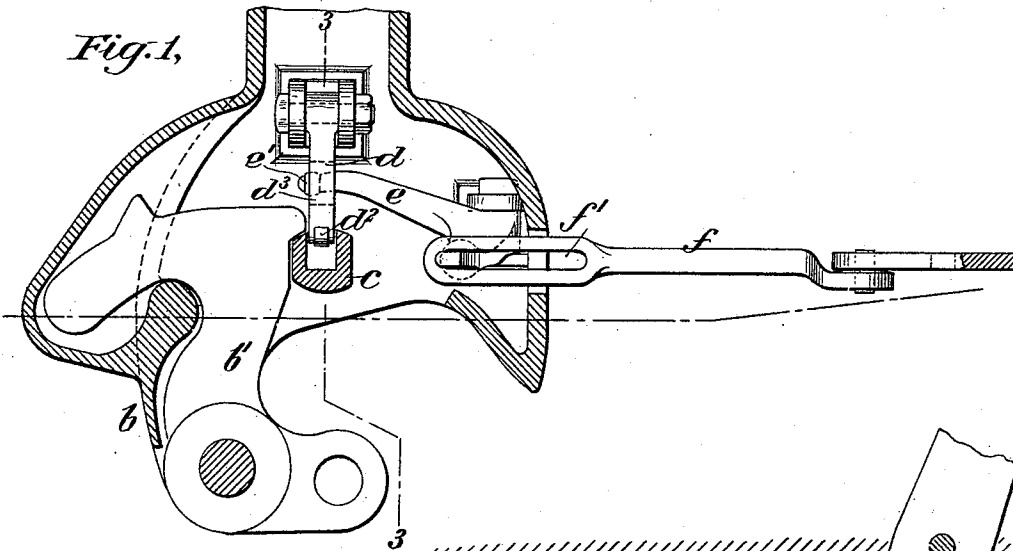


Fig. 2,

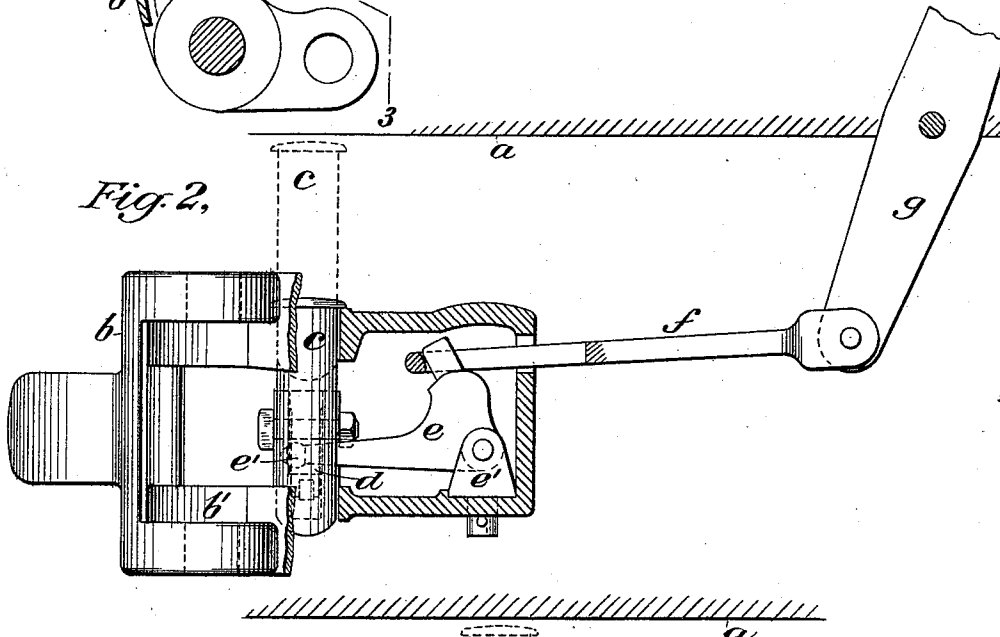
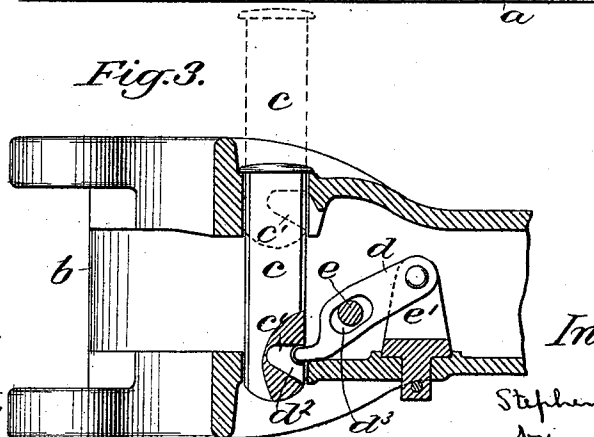


Fig. 3.



Witnesses:-

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Inventor:-

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by
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his atty.

UNITED STATES PATENT OFFICE.

STEPHEN J. MEEKER, OF NEWARK, NEW JERSEY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 538,338, dated April 30, 1895.

Application filed December 29, 1893. Serial No. 495,055. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN J. MEEKER, a citizen of the United States, and a resident of the city of Newark, county of Essex, and State of New Jersey, have invented new and useful Improvements in Car-Couplers, of which the following description, taken in connection with the drawings herewith accompanying, is a specification.

My invention relates to the uncoupling mechanism for car-couplers, and has for its object to provide a simple and positively operating device or mechanism for operating the knuckle locking device with which the coupler is provided, which is more especially adapted for use in connection with couplers on passenger cars, although it may be applicable to any style of car.

The invention consists in the construction and combination of parts as will hereinafter be set forth in detail and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a horizontal sectional view of a coupler provided with my improved uncoupling mechanism. Fig. 2 represents a front view of the same, with the draw-head partly in section; and Fig. 3 represents a sectional view of the coupler, with the knuckle removed, through line 3 3 of Fig. 1.

To explain in detail,—*a* represents a section of a car-platform; *b*, a car-coupler in position beneath the same; *b'*, the horizontally rotating hook or knuckle, and *c* the vertically movable locking-pin for locking the knuckle in a closed position. In order to operate or raise this locking-pin from its position in engagement with the knuckle to allow the latter to be opened, and according to my present invention, I provide a short arm or lever *d* which is pivotally connected at one end with a stud or projection *e'* located within the draw-head, and at its opposite free end extends within an opening or depression *c'* formed in one side of the locking-pin which is adapted to receive the same. This lever *d* is operated to raise the connecting-pin *c* by means of an elbow-lever *e* which is also pivotally supported upon a stud or projection *d'* located within the draw-head, with one end having connection with the lever *d* and its opposite end connect-

ing lever *g* secured upon the platform of the car. That end of the lever *d* which connects or engages with the locking-pin, moving in the arc of a circle, necessarily has a horizontal movement in its relation to the pin when operated to raise the latter, and in order to obviate any friction that might be caused by such movement and to otherwise facilitate the operation of the parts, I have provided said lever with an antifriction-roll *d²* supported thereby, which is adapted to traverse the wall of the opening in the pin horizontally, as will be readily understood.

The connection between the elbow-lever *e* and the lever *d*, in order to allow for the respective movements of the same, is secured in the present instance shown, by means of an elongated slot or opening *d³* formed in the lever *d* into which the connecting end of the lever *e* extends and operates, and the latter is provided with an anti-friction roll *e'* thereon having a rounded or curved surface adapted for traversing the walls of said opening with a minimum degree of friction. The opposite end or arm of the elbow lever *e* has a loose connection with the connecting rod *f* of the operating lever *g*, in a manner to move independently of the same in one direction as will hereinafter be set forth, by means of a longitudinal slot or opening *f'* formed in the rod *f* into which the end of the lever *e* extends. When the lever *g* is operated in one direction to raise the locking-pin in order to permit the opening of the knuckle and disconnection of the cars, the elbow lever *e* is engaged and operated by the connecting rod *f* to secure such result, and when the pin is thus raised it is adapted to be supported upon the inner arm of the knuckle or otherwise until the latter has been closed, at which time the pin automatically drops into position to lock the knuckle in the usual manner. After the pin has been raised by the lever *g* and intermediate mechanism as described and supported in its raised position, the lever *g* falls or is moved back to its normal position and the connecting rod *f* thereby moved from engagement with the connecting arm of the elbow lever. The locking pin is then free to automatically drop into position to lock the knuckle when the latter is closed, as will be readily under-

stood. This point of loose connection between the rod *f* and elbow-lever *e* formed to secure an independent movement in one direction between the operating lever *g* and the coupling-pin, might be made between the operating lever *g* and the rod *f* or at some other suitable point to secure a like result; and the particular manner of connection between the several operating parts might also be more or less modified without departing from the spirit of my invention:

Another feature of my invention also consists in the manner of supporting the levers *d* and *e* in their relation to each other and the pin *c*, whereby the combined weight of said levers operates upon the pin *c* to insure its dropping into position when the knuckle is moved from under the same.

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination with the locking-pin or device of a car-coupler, of a device or mechanism for operating the same, consisting of a pivoted elbow-lever having connection with said pin through the medium of a connecting lever, and means for operating said elbow-lever, substantially as described and for the purpose set forth.

2. The combination with the locking-pin or device of a car-coupler, of a device or mechanism for operating said locking-pin, consisting of a pivoted lever connecting with said

pin, an elbow-lever connecting with said pivoted lever, and an operating lever having connection with said elbow-lever in a manner whereby the latter may be moved thereby in one direction, and have an independent movement in the opposite direction, substantially as described and for the purpose set forth.

3. The combination with the locking-pin or device of a car-coupler, of a device or mechanism for operating the same, consisting of a pivoted lever having connection at one end with the locking-pin and provided with an opening therein, an elbow-lever provided at one end with an anti-friction roll thereon which extends and operates within the opening in said pivoted lever, and means for operating said elbow-lever, substantially as described and for the purpose set forth.

4. The combination with the locking-pin or device of a car-coupler, of a device or mechanism for operating the same, consisting of a pivoted elbow-lever having connection at one end with said pin through the medium of a connecting lever, and a pivoted operating lever having a loose connection with said elbow-lever through the medium of a connecting rod in a manner substantially as described and for the purpose set forth.

STEPHEN J. MEEKER.

Attest:

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