

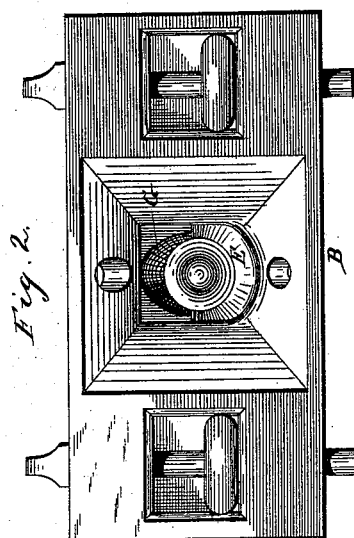
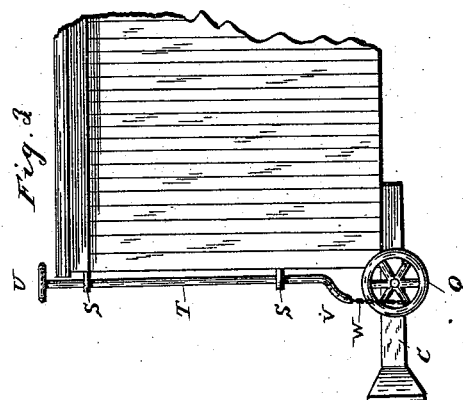
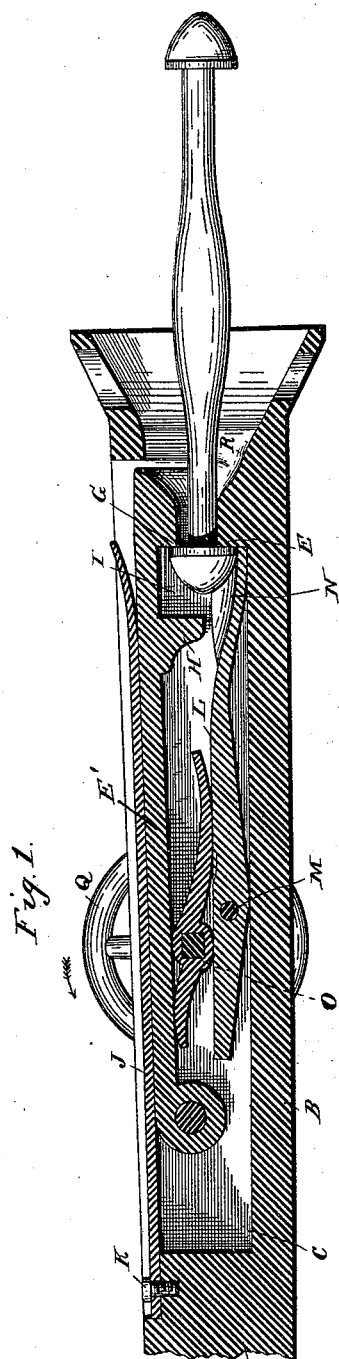
(No Model.)

J. G. HORNBERGER.

CAR COUPLING.

No. 386,012.

Patented July 10, 1888.



WITNESSES,

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# UNITED STATES PATENT OFFICE.

JOHN G. HORNBERGER, OF EMPORIA, KANSAS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 386,012, dated July 10, 1888.

Application filed February 21, 1887. Renewed March 21, 1888. Serial No. 263,453. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN G. HORNBERGER, a citizen of the United States, residing at Emporia, in the county of Lyon and State of Kansas, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in car-couplers, the peculiarities and novel arrangement of which will be hereinafter more fully set forth in the specification, and pointed out in the claims.

In the accompanying drawings, forming a part of this specification, and on which similar letters of reference indicate the same or corresponding features, Figure 1 represents a longitudinal vertical sectional view taken through my improved coupler. Fig. 2 is a view looking at the face or mouth of the coupler, and Fig. 3 is a view showing the manner of working the coupler from the top of the car.

The letter A designates the draw bar, mounted, as usual, upon the under surface of the car, and provided with a coupler which consists of a body, B, and sides C. The forward lower portion of the body extends upwardly and at right angles to the bottom, as seen at E, and then flares outwardly and divergently to form the mouth or face of the coupler. The lower side of the head of the pin falls over and is held by this rectangular portion or bend, which thus forms a jaw. The other jaw is composed of a metallic bar, E', of iron or steel, mounted on a shaft extending through the sides of the coupler, and provided at its extreme forward end with a depending lug, G, and somewhat rearwardly with another depending lug, H, the recess I between which lugs forms the other jaw to hold the coupling-pin. This lever or bar E' is kept normally depressed by means of a spring, J, secured to the rear end of the coupler by a stud or bolt, K.

The lower end of the head of the coupling-pin does not rest upon the coupler itself, but rests within the grooved or concave surface of the ejecting-lever L. This lever is flat, or nearly so, on its upper surface, while its lower surface slopes upwardly on both sides from the pin or shaft M, on which it is mounted, and at its forward end is concave, as seen at N.

The letter O designates the actuating-lever, consisting of a longer and a shorter arm, the former extending toward the face of the coupler and the latter rearwardly. This lever is mounted upon a shaft which extends through the sides of the coupler, and is provided on one end with a hand or turning wheel, Q, by means of which the lever is actuated.

The operation of the coupler is as follows: When two cars are pushed against each other, the coupling-pin abuts against the end G of the depressing-lever, and by reason of the inclined surfaces of each overcomes the holding-down tendency of the spring J and forces an entrance. Now, when it is desired to uncouple cars, the wheel Q is turned in the direction of the arrow. The longer arm of the lever O strikes the under surface of the depressing-lever E', overcomes the resistance of the spring J, and lifts the forward end of the lever E' considerably above the head of the pin almost instantly therewith. The shorter arm of the lever O strikes the upper surface of the ejecting-lever L and pushes the head of the pin above the point E, so that it falls upon the outer face, R, of the coupler and the cars become detached.

As represented in Fig. 2, it will be observed that I provide apertures for the reception of the ordinary link-pins, as also mouths for the reception of the ordinary links. I do this in order to overcome any difficulty which might arise by reason of a car provided with one of my couplers meeting a car not so provided.

As represented in Fig. 3, I provide the end of the car with plates S, having apertures through which the rod T passes, the upper end of the rod being provided with a hand-wheel, U, and its lower end being slightly curved outwardly, as at V, the end of said curved portion having a chain connected therewith and with the spoke of the wheel Q. With this arrangement the coupler can be operated from the top of the car by simply catching hold of the hand-wheel U and raising it.

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

1. In a car-coupler, the combination, with the body thereof having a flaring mouth and formed with a recess for the head of the pin to

rest in, of a distinct depressing-lever mounted in the body of the coupler and having a recess which incloses the upper portion of the head of the pin, and means to free the pin when it is desired to uncouple the cars.

2. In a car-coupler, the combination, with the body thereof having a flaring mouth, an ejecting-lever for the head of the pin to rest in, pivoted in the bottom of the body of the coupler, and a distinct depressing-lever which incloses the upper portion of the head of the pin, pivoted in the upper portion of the body of the coupler, of an actuating-lever adapted to simultaneously operate the depressing-lever and the ejecting-lever and free the pin.

3. In a car-coupler, the combination, with the body thereof and the pivoted depressing and ejecting levers which hold the pin, of a distinct actuating-lever mounted upon a shaft intermediate the depressing and ejecting levers, provided with a longer and a shorter arm, the longer arm of which engages the depressing-lever, and the shorter arm of which engages the ejecting-lever, whereby when the shaft is turned the pin is ejected from its resting-place and the cars uncoupled.

4. In a car coupler, the combination, with the body thereof and a distinct depressing-lever pivotally mounted therein and normally

held down by a spring, so as to engage the head of the pin, of an actuating-lever mounted on a shaft situated immediately below the depressing-lever, and a hand-wheel on one end of said shaft, whereby when the wheel is turned the actuating-lever is thrown against the depressing-lever and the latter uplifted and the pin released.

5. In a car-coupler, the combination, with the body thereof and the pivotally-mounted depressing and ejecting levers which hold the pin, of a distinct actuating-lever mounted upon a shaft immediately below the depressing and ejecting levers, provided with a longer and a shorter arm, the longer arm of which engages the depressing-lever, and the shorter arm of which engages the ejecting-lever, and a hand-wheel mounted on the shaft of the actuating-lever, whereby when the wheel is turned the actuating-lever is thrown against the depressing-lever and the latter uplifted and the pin released.

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

JOHN G. HORNBARGER.

Witnesses:

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J. B. HINKLE.