

(No Model.)

J. S. McGRAW.  
CAR COUPLING.

No. 272,294.

Patented Feb. 13, 1883.

Fig. 1.

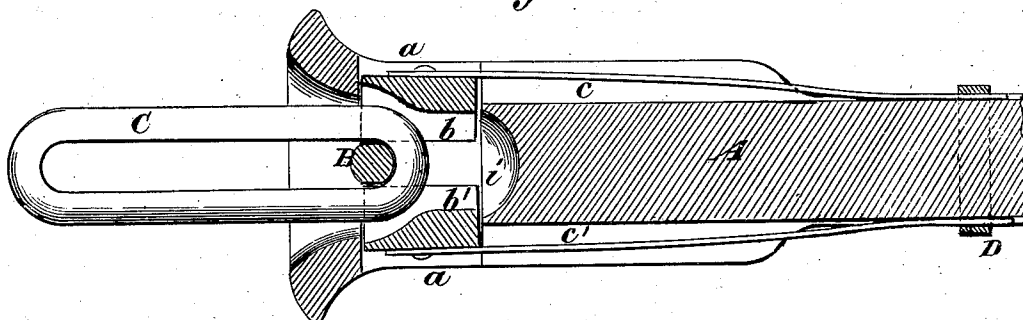


Fig. 2.

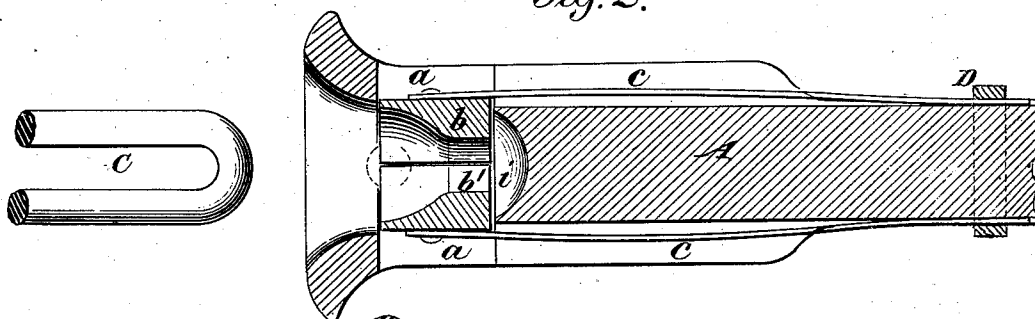


Fig. 3.

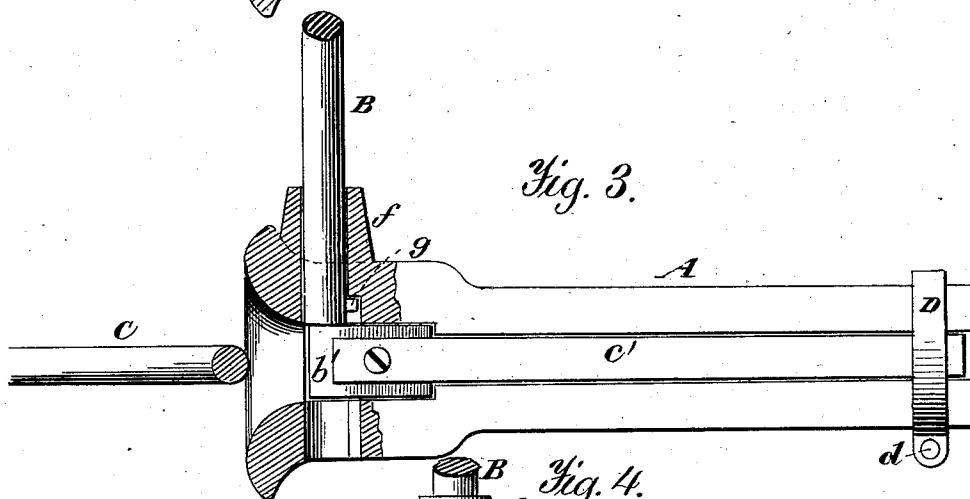
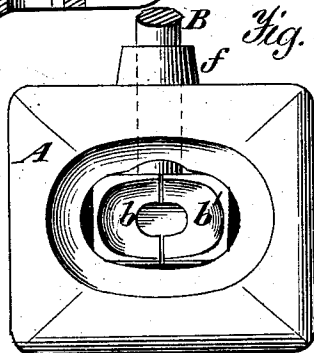


Fig. 4.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 272,294, dated February 13, 1883.

Application filed December 1, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. MCGRAW, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Car-Couplings; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to car-couplings, and has for its object the construction of a car-coupling that can be easily coupled and uncoupled; that will, when the cars are jammed together, connect one car with the other automatically, without the dangerous necessity of a person standing between the cars to hold up and guide the link or place the pin in position after the link has passed inside the draw-head and under the point of the link-pin. I attain these objects by means of the following construction, that will be more fully pointed out in the specification and claims.

Figure 1 is a longitudinal sectional view, showing link in position and pin inserted. Fig. 2 is a longitudinal sectional view with link removed. Fig. 3 is a transverse sectional view, and Fig. 4 is a front end view of the same.

A is an ordinary draw-head, formed with angular aperture or opening *a* entirely through crosswise of the draw-head, and a short distance in rear of its outer end, on opposite sides, in a horizontal plane, is formed a longitudinal slot for the reception of long flat springs *c c'*.

Fitted to move loosely inside the aperture *a* are two clamping-jaws, *b b'*. To the back of each of said jaws is secured one end of a long metal spring, *e*, the opposite end of which is held in place against the sides of the draw-head A by means of a metal band, D. This metal band is formed with outwardly-turned ends in the form of ears, perforated to receive a clamping-bolt, *d*. By means of this band the springs *e c'* are held in place, and can be readily removed and replaced if either are broken.

The outer end of each of the clamping-jaws

*b b'* is beveled out or cut away on its inner face to conform to the inner face of the draw-head A and to receive the link. At the inner base of the bevels, rearward, the clamping-jaws *b b'* have parallel sides formed to hold the link C.

In rear of the clamping-jaws *b b'* a concave recess, *i*, is formed in the draw-head A, to receive the end of link C when pushed inward in the act of coupling. By this construction a concavity extends from the outer face of the draw-head A inward to the bottom of recess *i*.

On top of the draw-head A is formed a circular cone-shaped elevation, *f*, perforated and having two flat walls to receive the pin B. The perforation in the part *f* extends down into the aperture *a*, and from the aperture down through the lower half of the cross-head A. Through this perforation the pin B passes when the link C passes into the recess *i*.

The pin B is formed with two flat sides and with collar or shoulder on its outer end, said shoulder terminating in a perforated bail, to which a cord or chain may be attached for the purpose of operating the pin from the top or sides of the car. The lower end of this pin is formed with a projection or spline, *g*, that is formed to pass through a slot in the lower perforation of the draw-head, and it also forms a stop when it reaches the perforation in part *f* by withdrawing the pin B.

An ordinary car-coupling link, C, is used with my improved draw-head.

The operation of my device is as follows: When it is desired to couple two or more cars having my improved coupler, the pin B is drawn up until the projection *g* strikes against the under side of the part *f*, when the edges of the jaws *b b'* will be brought in contact with each other and form a bearing on which the inner end of the pin B rests, being in position as shown in Figs. 3 and 4. The opposite car to be coupled has the draw-head A, with jaws *b b'*, extended and link C inserted and held in a horizontal position between said jaws. As the two draw-heads come in contact the link held by one is forced between the jaws of the other, opening the same, and permitting the pin B to fall endwise down through the link C and perforation below, thereby holding the link and securely coupling the cars.

I am aware that car-couplings have been constructed with side springs, recessed draw-head, and connecting-plates bolted to wooden draw-bars, with shifting plates for pin-rests; also, a draw-head having springs, open jaws, and a sliding block operated by a spring for pin-rest; but none of these constructions do I claim broadly; but

What I do claim is—

1. A car-coupling device having a draw-head, A, formed as described, a cone-shaped perforated pin-guide, *f*, formed on the upper surface of said draw-head, the pin B, formed with stop or spline *g*, adapted to work in a

groove in said draw-head, the jaws *b* and *b'*, formed and operated as described, and the adjustable clamp-band D, all arranged and operated substantially as shown and specified.

2. The combination of the draw-head A, springs *c* and *c'*, band D, and link C, with the pin B, having spline *g*, and perforated cone *f*, all arranged substantially as shown and specified.

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

JOHN S. MCGRAW.

Witnesses:

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