(No Model.)

J. J. FLYNN.

CAR COUPLING.

No. 571,155. Patented Nov. 10, 1896.

Fig. 1.

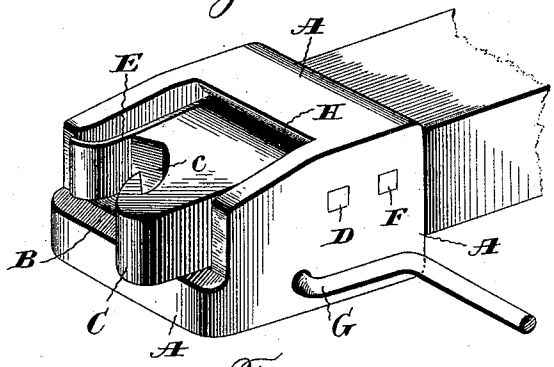


Fig. 2.

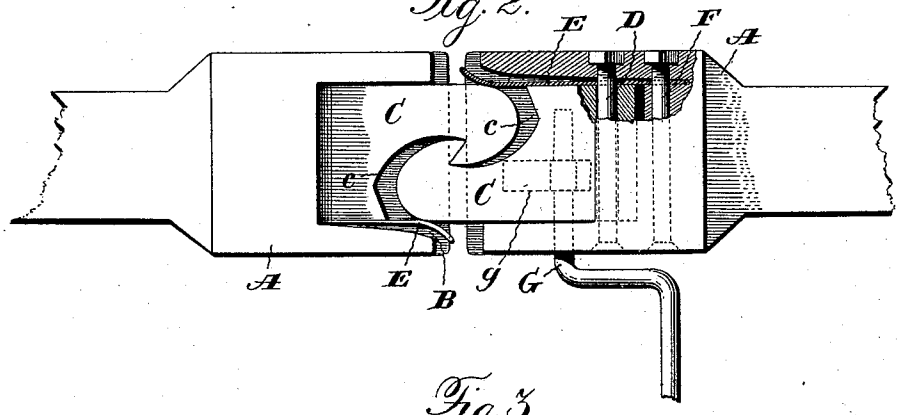


Fig. 3.

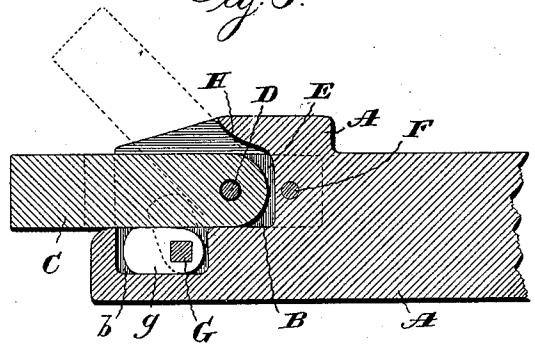
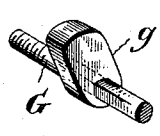


Fig. 4.



Witnesses:
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John J. Flynn
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his Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN J. FLYNN, OF AURORA, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 571,155, dated November 10, 1896.

Application filed April 1, 1896. Serial No. 585,800. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. FLYNN, of Aurora, in the county of Kane, and in the State of Illinois, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of one of my car-couplers; Fig. 2, a top plan view, partly in section, showing two thereof coupled together; Fig. 3, a vertical longitudinal section through one of the couplers; Fig. 4, a detail perspective view of the hook-lifting device.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to provide a car-coupler possessing the characteristics of extreme simplicity, great durability, and cheapness of manufacture; and to these ends said invention consists in the car-coupler having the construction substantially as and for the purpose hereinafter specified.

In the drawings, A designates the draw-head of my coupler, having at its front or outer end in its upper side a cavity B, between the side walls of which is pivoted a coupling-hook C, the pivot being a horizontal bolt D, passing from side to side of the draw-head.

The width of the rear part of body of the hook is sufficiently less than the width of the cavity B to accommodate a flat spring E, interposed between the side wall of the cavity and the hook side, and having its free end curved slightly outward and projecting alongside of the notch or cavity *c* of the hook that is provided for the reception of the outer end or nose of an engaging-hook, and with the side of which nose said spring is adapted to engage to hold the two hooks in engagement.

The rear end of the spring is fastened by means of the pivot-bolt D, which passes through an opening in the same, and a second bolt F, extending through the draw-head in rear of and parallel with said bolt D.

Normally the hook C lies horizontally, resting on the bottom of the cavity B, and in a coupling operation it yields laterally a sufficient distance to permit the passage of the nose of the coöperating hook. To uncouple the hook from a coupled hook, its free end is swung upward. To enable this to be easily done, a shaft G is journaled transversely in the draw-head just below the bottom of the cavity B, which at a point beneath the hook is provided with a radial arm *g*, that is adapted to work through a slot or opening *b* in the draw-head and engage the under side of the hook. The arm *g* is provided with a square or angular opening to receive a correspondingly-shaped portion of the shaft. Outside of the draw-head said shaft is cranked and then extended to the car side to enable it to be manipulated without the necessity of a man going between the cars.

To insure the dropping of the hook by gravity to coupling position as soon as the arm *g* is moved out of the way, I prevent the hook from being raised on its pivot to a vertical position by providing the top of the draw-head with an overhang or lip H, against which the upper side of the hook will strike when it has been turned to an angle of about forty-five degrees. Of course other means than said lip may be used to form the stop for the hook.

Instead of placing a spring only at one side of the hook, there may be one at each side thereof.

The draw-head may be made of charcoal-iron by drop-forging, or it may be made of cast-steel, and, if preferred, the hooks may be made of the same material and in the same manner. All holes can be cast or punched.

My coupler is, as will be apparent, extremely simple, thoroughly efficient, not coming uncoupled in rounding the sharpest curves, durable, and easy and cheap of manufacture.

Having thus described my invention, what I claim is—

1. A car-coupler comprising a draw-head, a coupling-hook pivoted thereto, and a hook-engaging spring attached to the draw-head, whose movement is in a direction at a right angle to that in which the hook is swung to couple and uncouple, substantially as and for the purpose specified.

2. A car-coupler comprising a draw-head, a hook mounted on a horizontal pivot, and a flat spring secured to the draw-head at the side of the hook and having its free end pro-

jecting forward to engage the side of a connected hook, substantially as and for the purpose set forth.

3. A car-coupler comprising a draw-head having a cavity in its upper side, at the front end, a hook pivoted within and normally resting on the bottom of the cavity, a flat spring interposed between the side of the hook and the side wall of the cavity, and having its free end projecting forward to engage the side of a connected hook, the overhang or lip on the draw-head to engage and stop the hook when swung upward, a shaft extending through the draw-head beneath the hook, and an arm carried by said shaft to engage the under side of the hook, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of February, A. D. 1896.

JOHN J. FLYNN.

Witnesses:
J. P. CALLAN,
ALICE M. CALLAN.