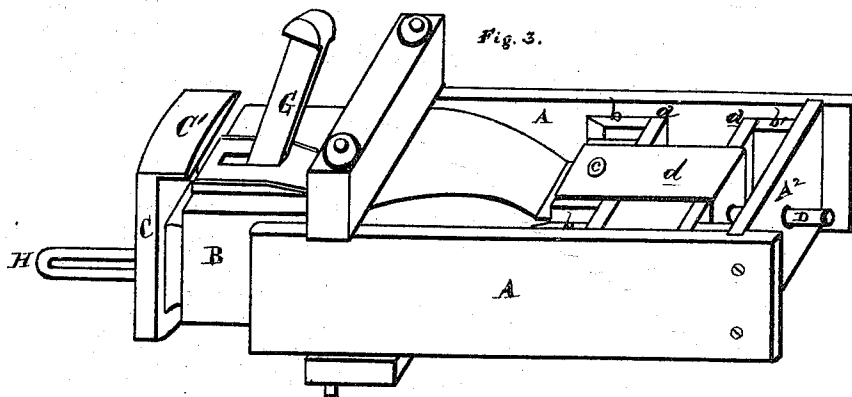
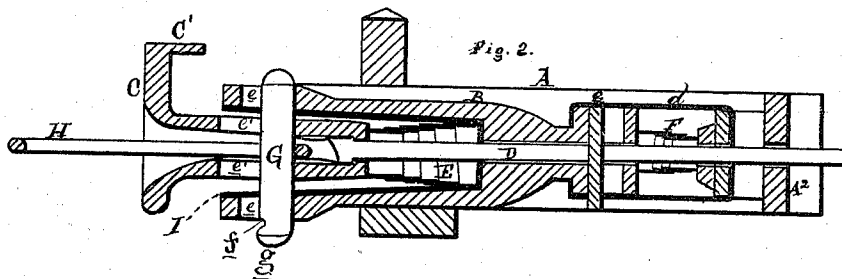
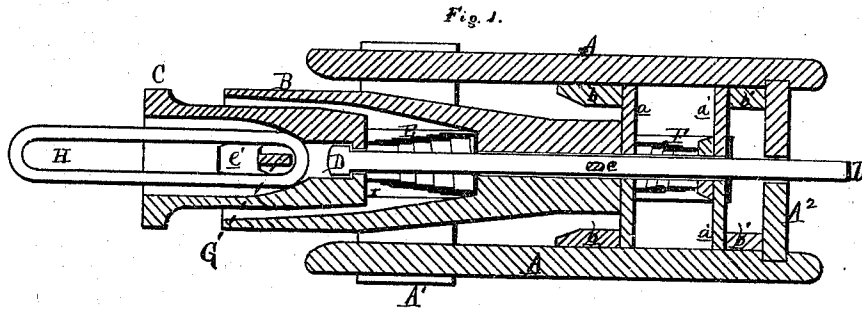


J. M. ENOS.
Car-Couplings.

No 142,219.

Patented August 26, 1873.



Attest:
H. P. Eberts
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Inventor:
John M. Enos.
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UNITED STATES PATENT OFFICE.

JOHN M. ENOS, OF ST. JOSEPH, MICHIGAN.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 142,219, dated August 26, 1873; application filed May 21, 1873.

To all whom it may concern:

Be it known that I, JOHN M. ENOS, of St. Joseph, in the county of Berrien and State of Michigan, have invented a new and useful Improvement in a Combined Draw-Bar, Spring-Buffer, and Coupler; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a horizontal section on the plane *x x* in Fig. 2, which is a longitudinal vertical section on the line *y y* in Fig. 1. Fig. 3 is a perspective view, showing the coupling-pin ready to engage with the link just entering the draw-bar.

Like letters refer to like parts in the several figures.

This invention has for its object to combine, with a spring draw-head for railway-cars, a spring-buffer and a self-coupling device, so arranged as to not interfere with the legitimate functions of the draw-head, while the buffers will keep the coupled cars crowded apart as far as the link will allow, thus avoiding the objectionable results experienced in a train of loosely-coupled cars. The coupling-pin is so arranged that it cannot be entirely withdrawn from the draw-head; it is also so constructed and arranged that to couple with a link entering the draw-head it can be so set as to engage with it automatically on the coming together of the buffers. The link, when held by the pin in a draw-head, is supported in a horizontal position by the action of the buffer, ready to enter the draw-head of an approaching car.

In the drawing, *A A* represent the draw-head sills under a car, whose cross-bar *A¹* supports my improved draw-head *B*, which is formed with a bell-mouthed cavity to receive the buffer *C*, a headed draw-bar, *D*, extending from the back end of the cavity in the buffer through its base, also through a volute spring, *E*, interposed between the end of the buffer and the base of the cavity of the draw-head, through the shank of the latter and the spring-plates *a a'* and the volute draw-head spring *F*; and the back cross-bar *A²* connects the whole, and holds them in place. The open-

ing in the cross-bar *A²* is a guide for the draw-bar *D*, which plays through it. Two stops, *b*, on the inner sides of the sills *A*, arrest the forward movement of the plates *a*. Similar plates *b'* arrest the backward movement of the plates *a'*. A stirrup, *d*, passing behind the plate *a*, has its ends brought forward to grasp the T-shaped rear end of the draw-head, and is secured thereto by a bolt or pin, *c*, passing down through the ends of the stirrup, the draw-head, and the draw-bar. *G* is a T-headed coupling-pin passing down through a slot, *e*, in the top and bottom of the draw-head jaw, and also through a longer slot, *e'*, in the top and bottom of the jaw of the buffer, to engage with the link *H*. *I* is a strap or stirrup placed in the bell-mouth, and filling the entire cavity of the draw-head, except at the sides. It is necessarily provided with an opening at the rear end for the draw-bar to pass through, and also with slots at the fore ends for the coupling-pin. These slots, unlike those of the draw-head and buffer, are just large enough to pass the pin freely.

It will be noticed that the back end of the buffer-spring has the strap-base *I* interposed between it and the bottom of the cavity in the draw-head.

The lower end of the coupling-pin has formed in its front edge a notch, *f*, and the extremity below the notch is a T-head, *g*, so that it cannot be drawn up through the slot in the stirrup. The notch is for the purpose of sustaining the pin in the position shown in Fig. 3, by engaging with the stirrup at the front edge of its upper slot. When a car approaches the link enters, and, as the buffers come together, the pin is thrown off the stirrup and falls through the entering link.

The rear spring acts as the ordinary draw-spring does to arrest the concussion of a sudden pull forward, or the sudden arrest of a forward movement of the car. The forward spring tends to crowd the buffer out of the draw-head against the opposing buffer; hence the link is constantly under a tensile strain, and consequently there is no play between the couplings. The long slots of the buffer allow the latter to be forced into the draw-head without disturbing the link and pin, as the latter is kept in place by the stirrup; conse-

quently a train of cars coupled together with these devices moves as one car, there being no play between their buffers.

It will be noticed that the headed end of the draw-bar plays in the base of the buffer-cavity whenever the buffer-spring is compressed. The buffer-head is flanged back at the top, as at C', to protect the mouth of the draw-head from the entrance of snow during the winter season. When the buffers are driven back the entire surface ends of the draw-heads receive shock, by reason of the buffers adjusting themselves thereto.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The draw-head B, buffer C, draw-bar D,

springs E F, and stirrup I, constructed and arranged to operate substantially as and for the purposes set forth.

2. The combination of the draw-head B, buffer C, draw-bar D, springs E F, and stirrup I, with the plates *a a'*, stops *b b'*, strap *d*, pin *e*, and sills A, substantially in the manner and for the purpose set forth.

3. The combination, with the slotted draw-head B, buffer C, stirrup I, and spring E, of the pin G, having the notch *f* and stop *g*, as set forth.

JOHN M. ENOS.

Witnesses:

HIRAM BROWN,

G. D. BROWN.