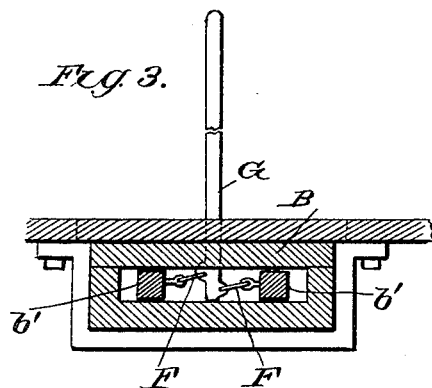
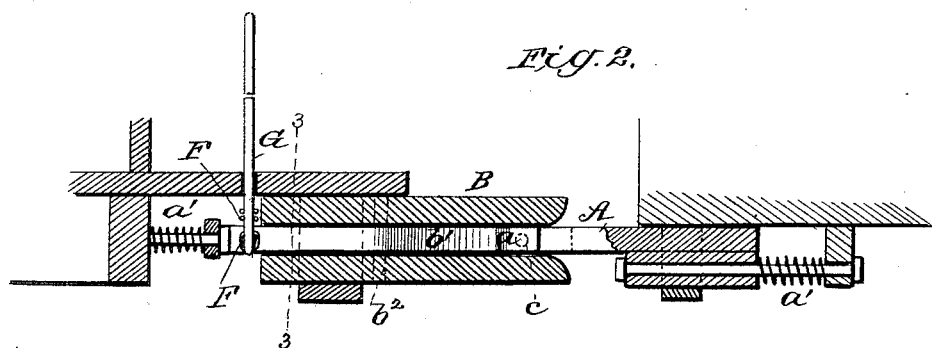
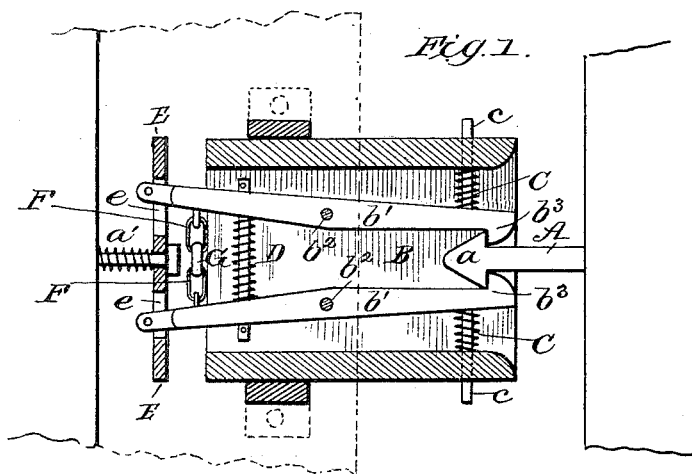


(No Model.)

A. E. JONES & T. F. FAGAN.  
CAR COUPLING.

No. 458,905.

Patented Sept. 1, 1891.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ALBERT E. JONES AND THOMAS F. FAGAN, OF DUQUESNE, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 458,905, dated September 1, 1891.

Application filed April 21, 1891. Serial No. 389,860. (No model.)

*To all whom it may concern:*

Be it known that we, ALBERT E. JONES and THOMAS F. FAGAN, of Duquesne, in the county of Allegheny and State of Pennsylvania, have  
5 invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

This invention relates, generally, to car-couplers, and more particularly to that class  
10 thereof known as "arrow-head" and "jaw" couplers, the object of our invention being to provide a coupler of this description that shall consist of a few simply constructed and assembled parts, which can be quickly and  
15 easily operated to effect a safe coupling; and a further object of our invention is to provide a simple and convenient mechanism for uncoupling.

With these objects in view our invention  
20 consists in the peculiar construction of the various parts and the novel combination or arrangement of the same, all of which will be fully described hereinafter, and pointed out in the claims.

25 In the drawings, forming a part of this specification, Figure 1 is a top plan view, the top of draw-head being removed. Fig. 2 is a vertical longitudinal section; and Fig. 3 is a transverse section on line 3 3, Fig. 2.

30 In carrying out our invention we employ the arrow-head draw-bar A and the jaw-coupler draw-head B. The draw-head A is secured beneath the end of the car in the usual manner, the forward end of said bar  
35 projecting beyond the end of the car, and is provided with an arrow-head *a*, and the rear end of the bar is provided with the usual spring-buffer arrangement *a'*.

40 The jaw-coupler draw-head B, which is attached to the end of an opposing car, consists of a hollow box-like receptacle *b*, essentially rectangular in shape, open at the front and rear, and may be made in one piece or a plurality of pieces, as desired. The coupling or  
45 locking jaws *b' b'* are pivoted within the receptacle *b* upon opposite sides of the longitudinal axis of the same by means of the vertical shaft or bolts *b<sup>2</sup> b<sup>2</sup>*, which are journaled in the upper and lower faces of the box-like  
50 receptacle *b*. The forward ends of the jaws *b' b'* are provided with the heads *b<sup>3</sup> b<sup>3</sup>*, the inner opposing faces of the said heads being

beveled inwardly and rearwardly, as shown, to permit the arrow-head *a* to pass between the same and spring them apart. 55

In order to spring the jaws *b' b'* inwardly, locking the arrow-head between the jaw-heads and effecting the coupling after having been sprung outwardly by the said arrow-head, we employ the springs C C, said  
60 springs being preferably coiled around the horizontal rods *c c*, which are rigidly attached to the outer sides of the jaw-heads and work through apertures in the adjacent sides of the box, the coiled springs being arranged  
65 between the jaw-heads and the said adjacent sides. The springs C C normally hold the jaw-heads together, or in a closed position, and the springs C C, acting forward of the pivotal point, are aided by means of the spring D,  
70 which acts in rear of the pivotal points of the jaws to hold the jaw-heads together. The spring D is also preferably a coiled spring arranged between the inner faces of the jaws *b' b'*, the said spring being coiled upon a  
75 transverse rod *d*, which works in apertures made in the jaws *b' b'* near their rear ends, so that when the jaw-heads are separated to release the arrow-head the said rod will work  
80 freely in the jaws.

A bar E, having its opposite ends provided with longitudinally-elongated apertures *e*, is secured upon the rear ends of the jaws *b' b'*, the said rear ends being passed through the  
85 elongated apertures, said bar serving to limit the inward and outward movements of the rear ends of the coupling-jaws, and consequently the forward ends also. A short draw-bar E' is attached to the bar E, the said  
90 draw-bar being also provided with a spring-buffer arrangement *a'*. To effect a safe coupling, the arrow-head is brought in contact with the spring-actuated jaws and forced between them. The side springs at the forward ends and the central spring at the rear portions of  
95 the coupling-jaws allow the arrow-head to force the jaw-head apart; but the moment the arrow-head has passed the jaw-heads the springs act to throw the jaw-heads to their normal or closed position, thus securely locking  
100 the arrow-head between the said jaw-heads.

In order to separate the jaw-heads and release the arrow-head when desired, we em-

ploy the links F F, connected to the coupling-jaws  $b' b'$  near their rear ends, but preferably forward of the bar E, the inner ends of said links being connected with a lever G, one of said links being attached to the extreme lower end of the lever, while the other link is connected with the lever a short distance above. The lever extends upward from the rear end of the box-like receptacle, and may be made of any length to suit either a flat or box car, and it will be seen that this lever can be worked from either the top or side of the car. When the jaw-heads are closed, the lever will rest either to one side of the car or in a vertical position, and to uncouple the head the lever is simply reversed, thereby drawing the rear ends of the jaws together, separating the jaw-heads, and releasing the arrow-head.

Having thus described our invention, what we claim as new is—

1. The combination, with the box-like receptacle, of the coupling-jaws pivoted centrally within the same, of the forward springs bearing upon the outer faces of the jaws, and the rear spring bearing upon the inner faces of the rear portions of the jaws, and the slotted stop-bar, all arranged substantially as shown and described.

2. The combination, with the box-like receptacle, of the coupling-jaws pivoted centrally within the same, said jaws carrying beveled heads at their forward ends, the rods attached to said heads and working in the adjacent sides, the coiled springs arranged upon the rods between the said heads and adjacent sides, a rod arranged to slide in the rear portions of the jaws, and a coiled spring arranged upon the rod between the rear portions of the jaws, substantially as shown and described.

3. The combination, with the spring-actuated coupling-jaws pivoted centrally, of the links attached to the rear ends of the coupling-jaws, the lever connected with the said links, and the slotted stop-bar arranged upon the rear ends of the coupling-jaws, substantially as shown and described.

4. The combination, with the box-like receptacle, of the coupling-jaws pivoted centrally therein and provided with beveled heads at their forward ends, the springs bearing upon the outer faces of the said heads, the spring bearing upon the inner faces of the rear portions of the coupling-jaws, the links connected with the rear ends of the coupling-jaws, and the lever connected with the said links, substantially as shown and described.

5. The combination, with the box-like receptacle, of the coupling-jaws pivoted centrally therein and provided with beveled heads at their forward ends, the springs bearing upon the outer faces of the heads, the spring arranged to bear upon the inner faces of the rear portions of the coupling-jaws, the links attached to the rear ends of the jaws, the lever connected with the inner ends of the links, and the slotted stop-bar arranged upon the ends of the coupling-bar, substantially as shown and described.

6. The combination, with the arrow-head draw-bar, of the box-like receptacle, the coupling-jaws pivoted centrally therein, the rods attached to the heads of said jaws, the coiled springs arranged upon the rods, the rod working in the rear portions of the jaws, the coiled spring arranged thereon, the slotted stop-bar, the links, and the lever, all arranged and adapted to operate substantially as shown and described.

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Witnesses:

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