

(No Model.)

2 Sheets—Sheet 1.

J. BENDER.
CAR COUPLING.

No 418,676.

Patented Jan. 7, 1890

Fig. 1.

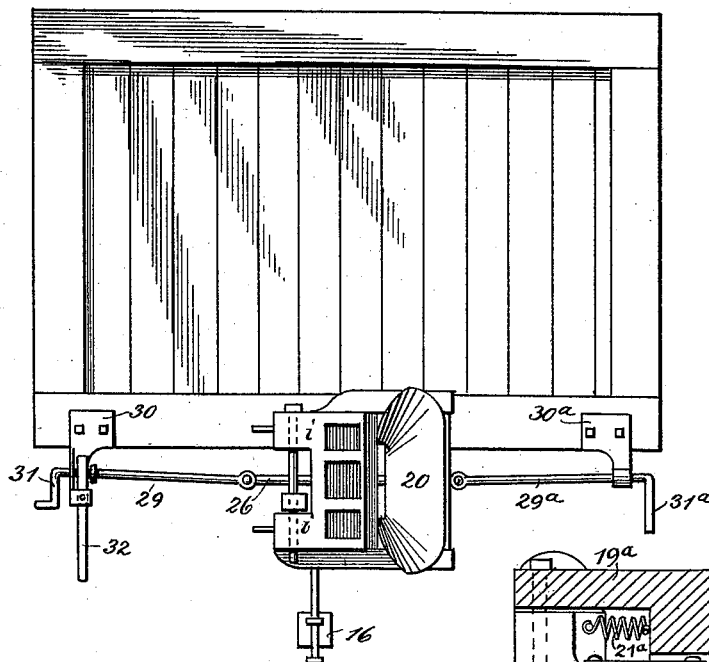


Fig. 3.

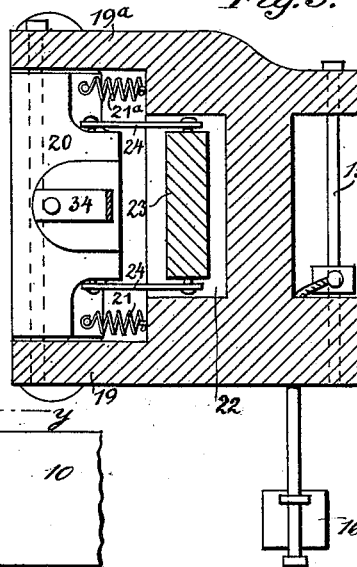
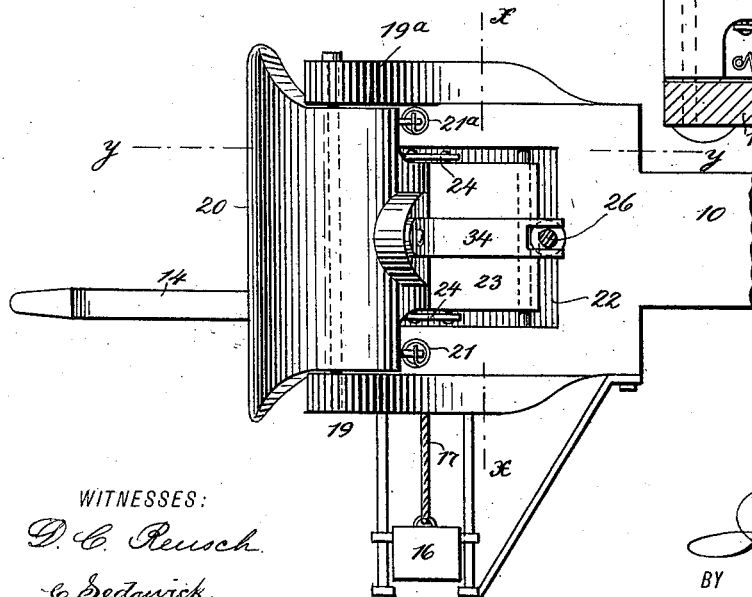


Fig. 2.



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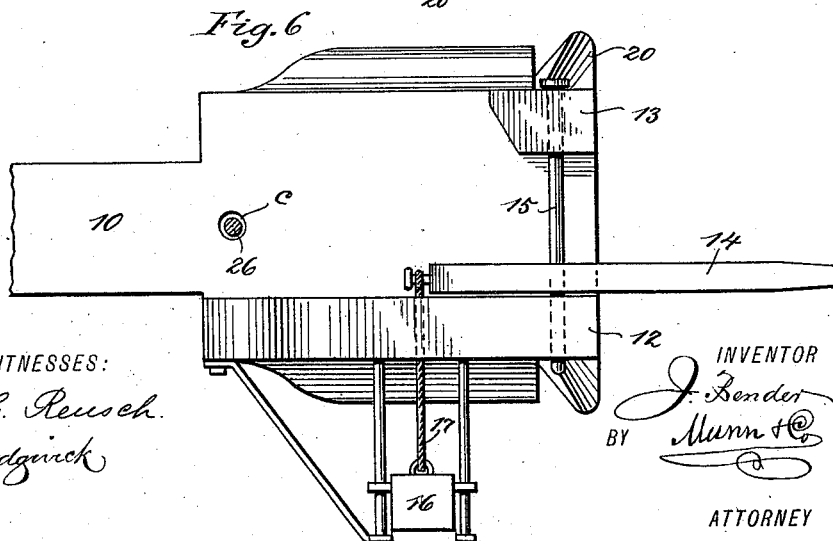
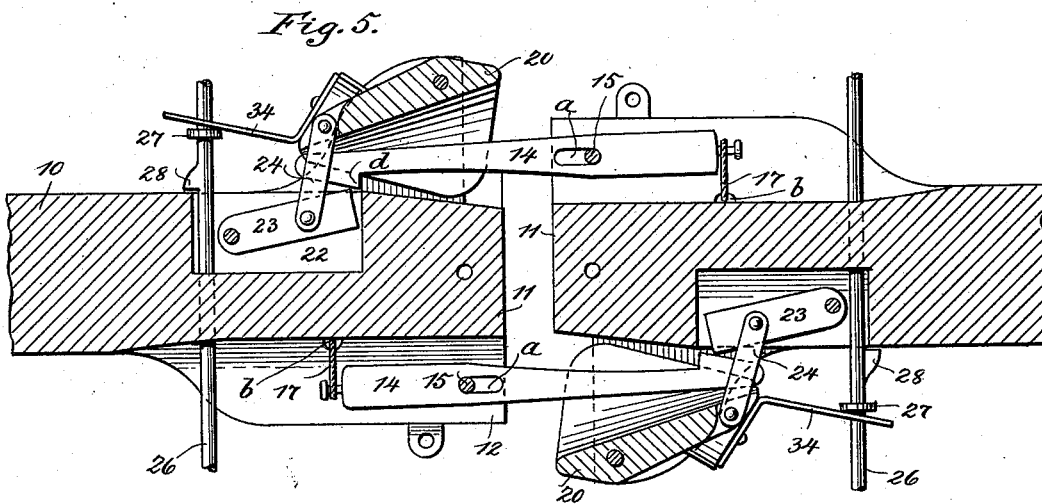
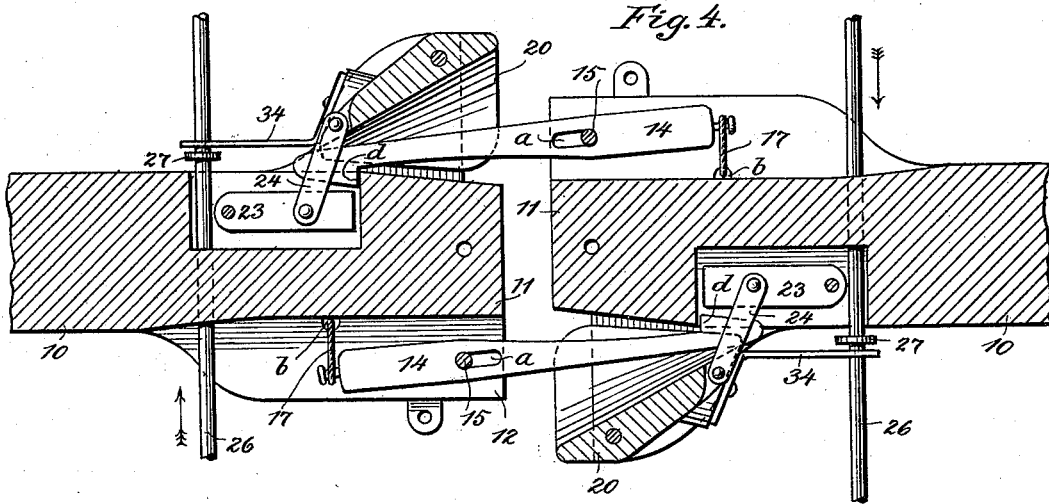
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UNITED STATES PATENT OFFICE.

JOHN BENDER, OF MARION, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 418,676, dated January 7, 1890.

Application filed May 6, 1889. Serial No. 309,791. (No model.)

To all whom it may concern:

Be it known that I, JOHN BENDER, of Marion, in the county of Marion and State of Kansas, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

My present invention relates to car-couplers of the class illustrated, described, and claimed in my prior application for Letters Patent of the United States, Serial No. 291,476, filed on the 22d day of November, 1888, the object of the present invention being to simplify and improve the construction heretofore presented in the application above referred to.

My present invention consists of certain novel constructions, arrangements, and combinations of elements, to be hereinafter fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is an end view of a box-car, representing the same as it would appear when provided with my improved coupler. Fig. 2 is an enlarged side view of the left-hand side of the coupler. Fig. 3 is a cross-sectional view on line *xx* of Fig. 2. Fig. 4 is a sectional plan view of two couplers, the parts being represented as they appear when in coupled position. Fig. 5 is a similar view, the parts, however, being shown as they appear when moved to a position such that the cars may uncouple; and Fig. 6 is a view of the right-hand side of the coupler.

In the drawings, 10 represents a draw-bar made integral with the draw-head 11, which draw-head upon the right is provided with two substantially-horizontal flanges 12 and 13. The flange 12 serves as the support for a coupling-hook 14, which said hook is held in place by a bolt or pin 15, which passes through a slot *a*, formed in the body of the hook. In order that the hook may automatically free itself from engagement with the opposing draw-head, I connect a weight 16 to the inner end of the hook, the connection between the hook and the weight being established by means of a cord or chain 17, that passes down through an aperture *b*, formed in the flange 12.

Upon the opposite side of the draw-head

there are formed flanges 19 and 19^a, between which flanges I pivotally mount a jaw 20, which said jaw is normally held in the position in which it is shown in Fig. 4 by springs 21 and 21^a. In the left-hand side of the draw-head I form a recess 22, in which there is pivotally mounted a plate 23, such plate being connected to the rear end of the jaw 20 by links 24.

In order that the parts above described may be manipulated by the train attendants, I form a transverse aperture *c* through the draw-head, and in this aperture I mount a rod 26, that is provided with a collar 27 and formed with a boss or projection 28. To the ends of the rod 26, I connect other rods 29 and 29^a, which said rods are supported by brackets 30 and 30^a, arranged as shown in Fig. 1. The ends of the rods 29 and 29^a are provided with crank-arms or handles 31 and 31^a, and in connection with the rod 29, I arrange a lever 32. The jaw 20 is provided with an arm 34, which extends to the rear and straddles the rod 26, the end of the arm 34 being bifurcated to receive the rod.

In coupling, as two cars provided with my coupler approach, the several parts of the coupler being in the positions in which they are shown in Fig. 4, except that the inner ends of the coupling-hooks will be drawn inward against the sides of the draw-heads by the action of their weights 16, the extending ends of the hooks will strike against the inner faces of the jaws, and as the cars come together the rear ends of the jaws will be forced outward against the tension of their springs. Then after the shoulders *d* of the hooks 14 pass the forward defining wall of the recess 22 the springs 21 and 21^a will act to draw the jaws 20 to the positions in which they are shown in Fig. 4.

To uncouple the cars, the rod 26 is drawn if the uncoupling is done from the left-hand side of the car, or such rod is pushed if the uncoupling is done from the right-hand side of the car. Then as the rod moves in the direction of the arrows shown in Fig. 4 the plate 23 will be carried to the position in which it is shown in Fig. 5, and the shoulders of the coupling-hooks will be freed from engagement with the opposing draw-heads.

If at the time the parts are moved, as

just described, it be desired that they be prevented from returning to the position in which they are shown in Fig. 4, a quarter-turn is imparted to the rod 26, and its boss or projection 28 is thus brought to the position shown in Fig. 5, and all parts are locked to place. The lever 32 is provided in order that the rod 26 may be thrown from the right-hand side of the car, as above described.

10 In order that the coupler may be coupled with cars provided with the ordinary form of pin-and-link coupler, I form the draw-head with a number of recesses *i*, as shown in Fig. 1.

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

1. In a car-coupler, the combination, with the draw-head, of a coupling-hook pivotally connected thereto, a weight arranged in connection with the hook, a jaw pivotally connected to the draw-head, a plate mounted within a recess formed in the jaw, and links by which the jaw and plate are connected, substantially as described.

2. In a car-coupler, the combination, with
25 the draw-head, of a jaw pivotally connected

thereto, springs arranged in connection with the jaw, a plate mounted within a recess formed in the jaw, links connecting the plate and the jaw, a rod which extends at right angles to the draw-head, a collar carried by the rod, and an arm which extends from the rear of the jaw and engages the collar, substantially as described.

3. In a car-coupler, the combination, with the draw-head, of a jaw pivotally connected thereto, springs arranged in connection with the jaw, a plate mounted within a recess formed within the draw-head, links by which the plate and jaw are connected, a rod 26, formed with a collar 27 and with a boss or projection 28, an arm 34, which extends to the rear from the jaw and engages the rod, rods 29 and 29^a, formed with crank-arms 31 and 31^a, and a lever 32, all parts being arranged substantially as described.

JOHN BENDER.

Witnesses:

C. A. KING,

C. W. KELLER.