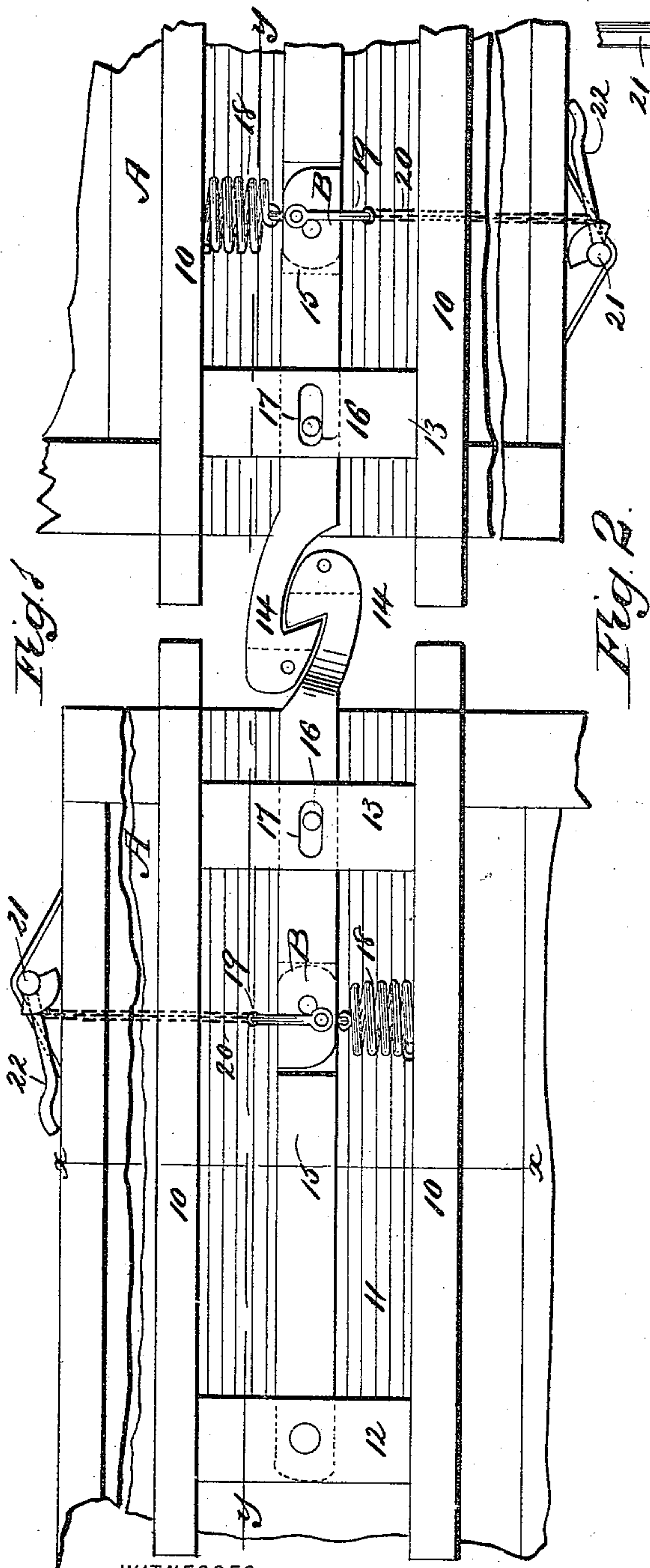


(No Model.)

B. J. FRENCH & J. H. CARROLL.
CAR COUPLING.

No. 442,772.

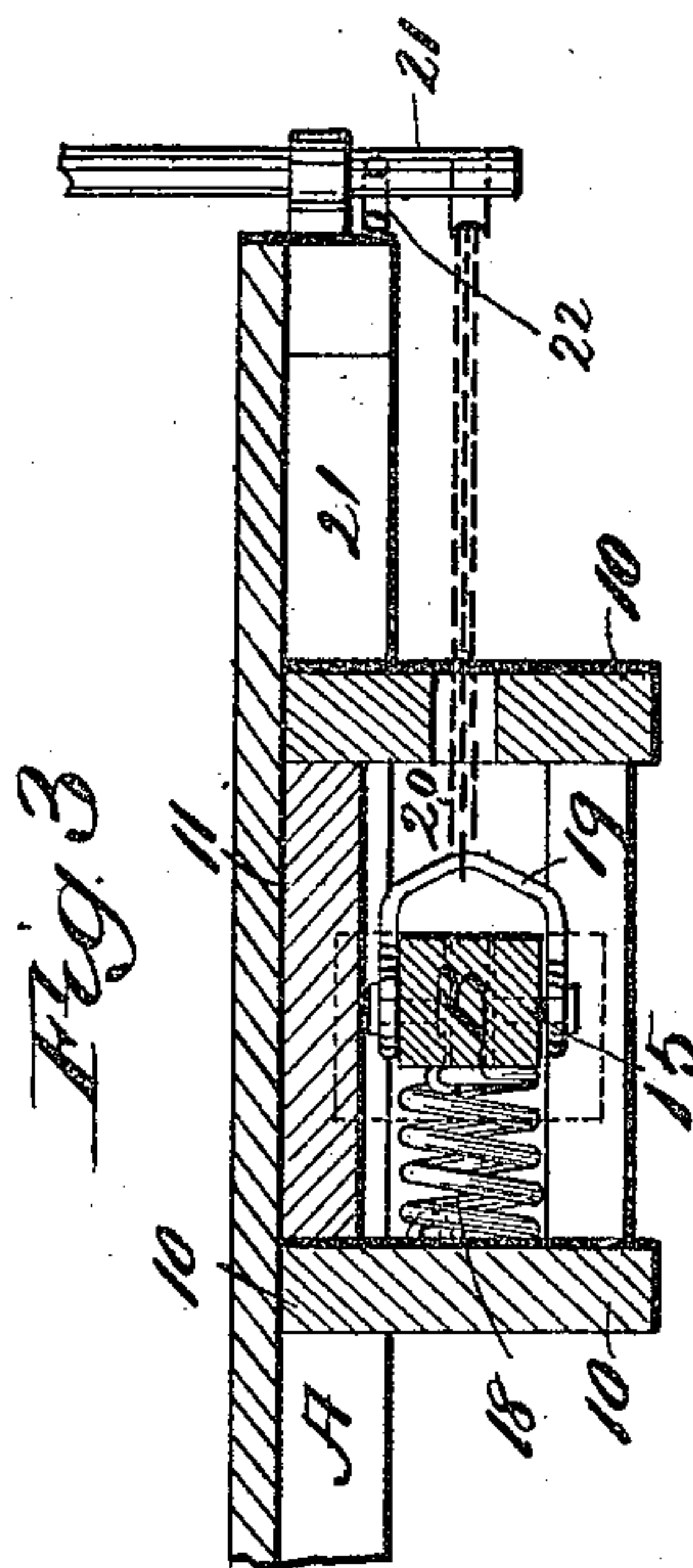
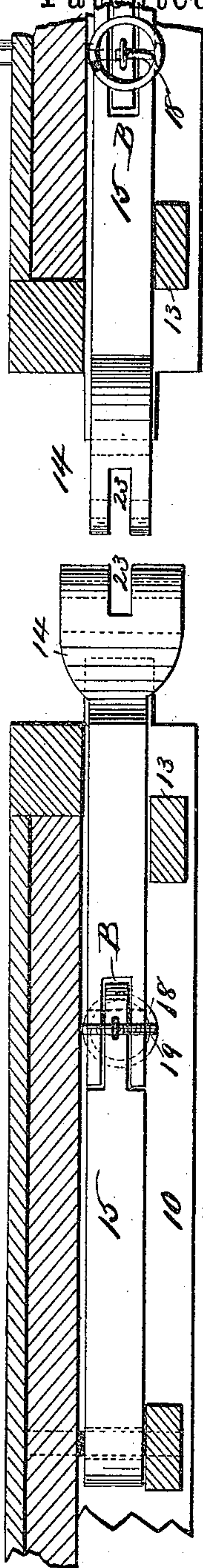
Patented Dec. 16. 1890.



WITNESSES:

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BENJAMIN J. FRENCH AND JOHN H. CARROLL, OF DE SMET, SOUTH DAKOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 442,772, dated December 16, 1890.

Application filed September 5, 1890. Serial No. 364,040. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN J. FRENCH and JOHN H. CARROLL, of De Smet, in the county of Kingsbury and State of South Dakota, have invented a new and useful Improvement in Car-Couplings, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in car-couplers, and has for its object to provide a coupling of simple and durable construction, capable of use in connection with an ordinary form of draw-head, and also capable of ready manipulation from the sides or ends of the car, or from the top of the car, or on the ground; and a further object of the invention is to so construct the coupling-hook of the coupler that it will effectually couple with an opposing coupler of greater or less height.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a bottom plan view of two opposed couplers in their coupled position. Fig. 2 is a longitudinal vertical section on line *y y* of Fig. 1, and Fig. 3 is a transverse section on line *x x* of Fig. 1.

The draw-head A may be of any suitable or approved construction. The draw-head represented consists of two parallel longitudinal bars 10, which may be attached directly to the bottom of the car or through the medium of a cover-plate 11, secured to the side bars, the side bars being further connected by transverse bars 12 and 13, arranged one at each end near the lower edges of the side bars. The coupling-hook 14 is formed integral with the outer end of a draw-bar 15, the said draw-bar being pivoted at its inner end to the rear cross-bar 12 of the draw-head, and is provided with a downwardly-extending pin 16 near its outer end, adapted to play in a transverse opening 17, produced in the front cross-bar 13, as shown in Fig. 1. The draw-bar is made in two sections hinged together,

as at B, so as to form a lateral elbow connection, the distance between the pintle of the hinge and the pin 16 being preferably equal to the distance intervening the said pin and the outer end of the hook 14, thus enabling the draw-head to break at its hinge in a small space. The draw-bar will also be provided with the usual buffer-springs.

To the knuckle of the rear section of the draw-head one end of a spring 18 is secured, the opposite end of the spring being preferably attached to the adjacent side of the draw-head. The spring 18 is illustrated in the drawings as a spiral spring; but any other form of spring may be substituted if in practice it is found desirable.

The members of a yoke 19 are attached, respectively, to the top and bottom of the forward section of the draw-bar at or near its hinge connection with the rear section, and to the yoke one end of a length of chain 20 is secured, which extends outward through an opening in one side bar of the draw-head, as is best shown in Fig. 3, or instead of said yoke a staple may be used on the side of the draw-bar. The chain is connected with a shaft 21, held to turn in bearings formed upon the outer side of the car. The spring 18 is upon one side of the draw-bar, and the yoke or staple projects in the direction of the opposite side of the said bar. Thus when the shaft 21 is turned the chain 20 is wound upon a quadrant formed upon the shaft, and by this action the jointed portion of the draw-bar is drawn laterally in the direction of the shaft against the tension of the spring 18 and the hook 14 of the draw-bar is carried in the direction of one side of the car or to the uncoupling position. When the shaft 21 is released by the operator, the spring 18 acts to restore the draw-bar to its normal position.

The shaft 21 is carried upward and manipulated in freight-cars through the medium of a hand-lever 22, projected forward at the lower edge of the car if worked upon the ground, and by a lever at the top of the car projecting backward if the coupling is to be worked from the top of the car.

The hook 14 is provided, preferably, in its outer end with a link-recess 23 and a vertical pin-opening to retain a link in said re-

cess through the medium of a pin, should occasion so demand.

Having thus described our invention, we claim as new and desire to secure by Letters
5 Patent—

1. In a car-coupler, a draw-bar constructed in two sections and having said sections hinged to move laterally and one of the sections provided at its outer end with a coupling-hook, and a spring attached to the draw-
10 bar at the hinge thereof, substantially as and for the purpose specified.

2. In a car-coupling, the combination, with a draw-head and a draw-bar located in the
15 draw-head and constructed in two hinged sections capable of lateral movement, the outer end of the bar terminating in a coupling-hook, of a spring attached to the draw-head and the hinge of the draw-bar, a shaft, and a
20 chain connection between the shaft and the draw-bar, substantially as shown and described.

3. In a car-coupler, the combination, with a draw-head and a draw-bar constructed in
25 two hinged sections capable of lateral movement and located in the draw-head, the outer extremity of the outer section being provided with a coupling-hook, substantially as shown and described, of a spring attached to the

draw-head and connected with the hinge of
30 the draw-bar, a yoke or staple connected with the hinge of the draw-bar, extending in an opposite direction to the spring, a shaft provided with an enlargement of diameter at a
35 point in its length, and a chain connection between the said enlargement of the shaft and the yoke or staple, substantially as and for the purpose specified.

4. In a car-coupling, the combination, with a draw-head having cross-bars located near
40 its ends, and a draw-bar located within the draw-head, consisting of two hinged sections capable of lateral movement, the outer section being provided with an integral coupling-hook and the inner section pivoted to
45 the rear cross-bar, of a spring attached to one side of the hinge of the draw-bar and to the draw-head, a yoke or staple also connected with the hinge of the draw-bar and extending
50 from the side opposite the spring, a shaft provided with a quadrant, and a connection between the quadrant and the yoke or staple, substantially as and for the purpose set forth.

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