

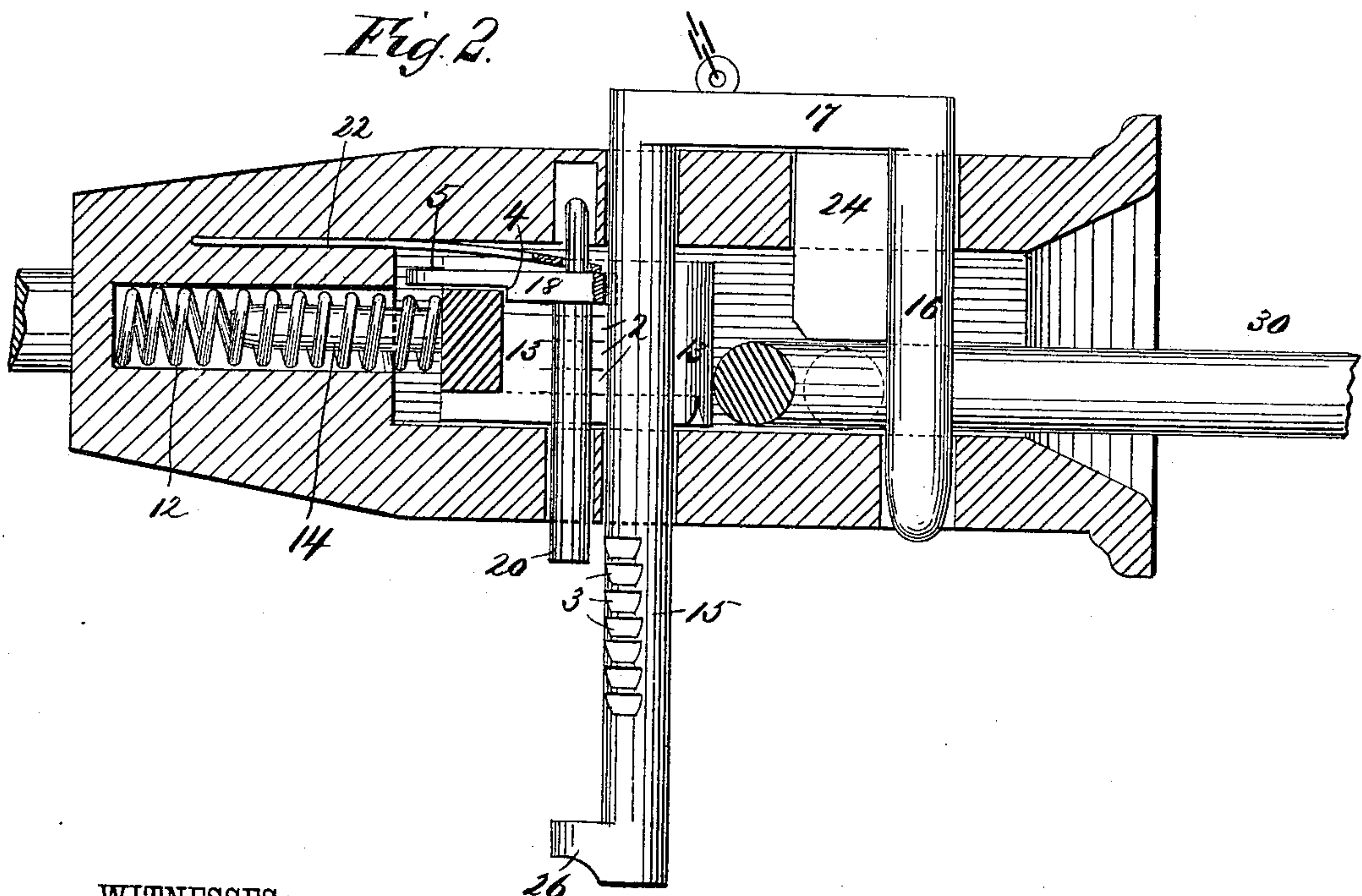
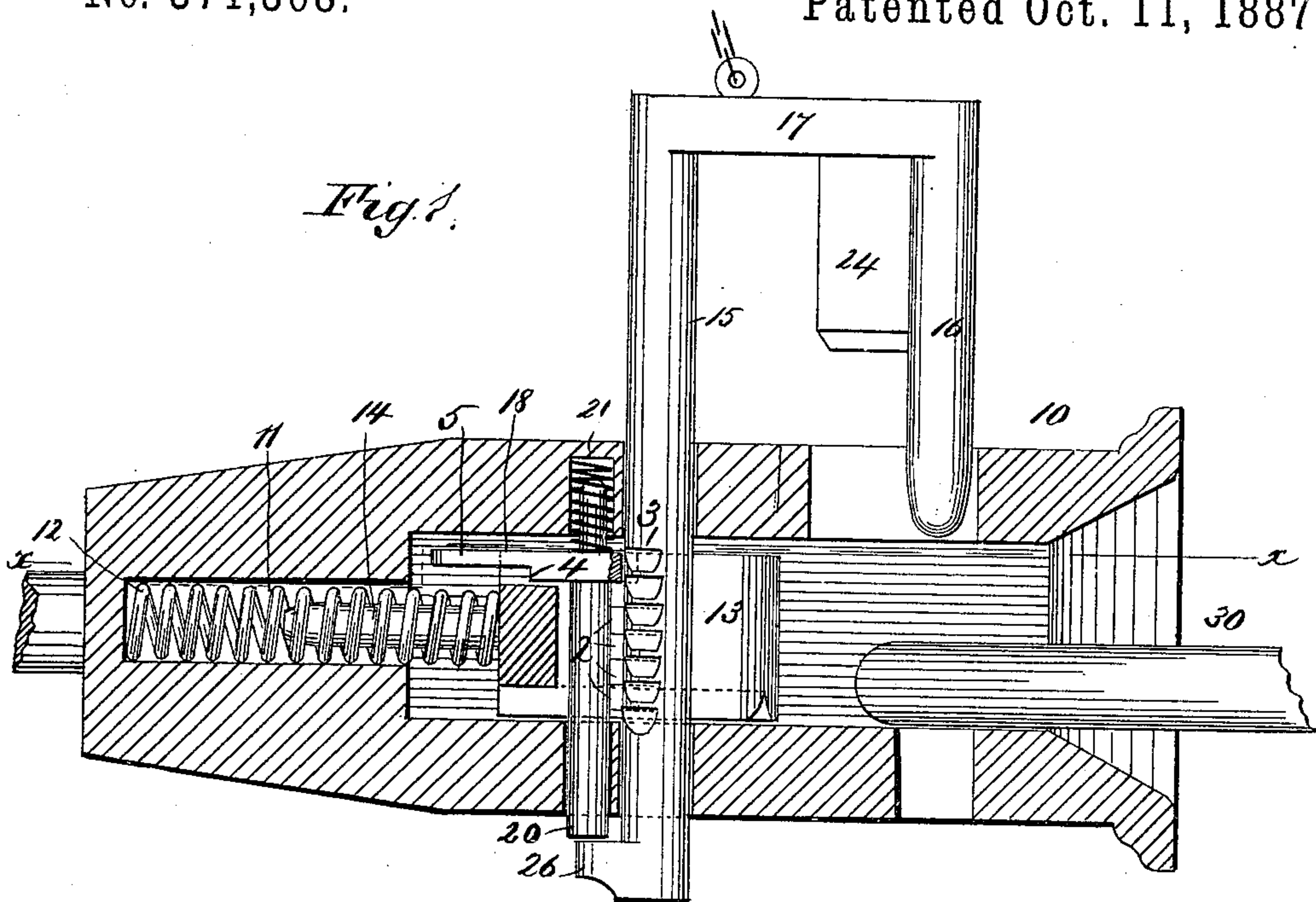
(No Model.)

2 Sheets—Sheet 1.

L. B. SAMPSON.
CAR COUPLING.

No. 371,368.

Patented Oct. 11, 1887.



WITNESSES:

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C. Sedgwick

INVENTOR:

L. B. Sampson

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ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

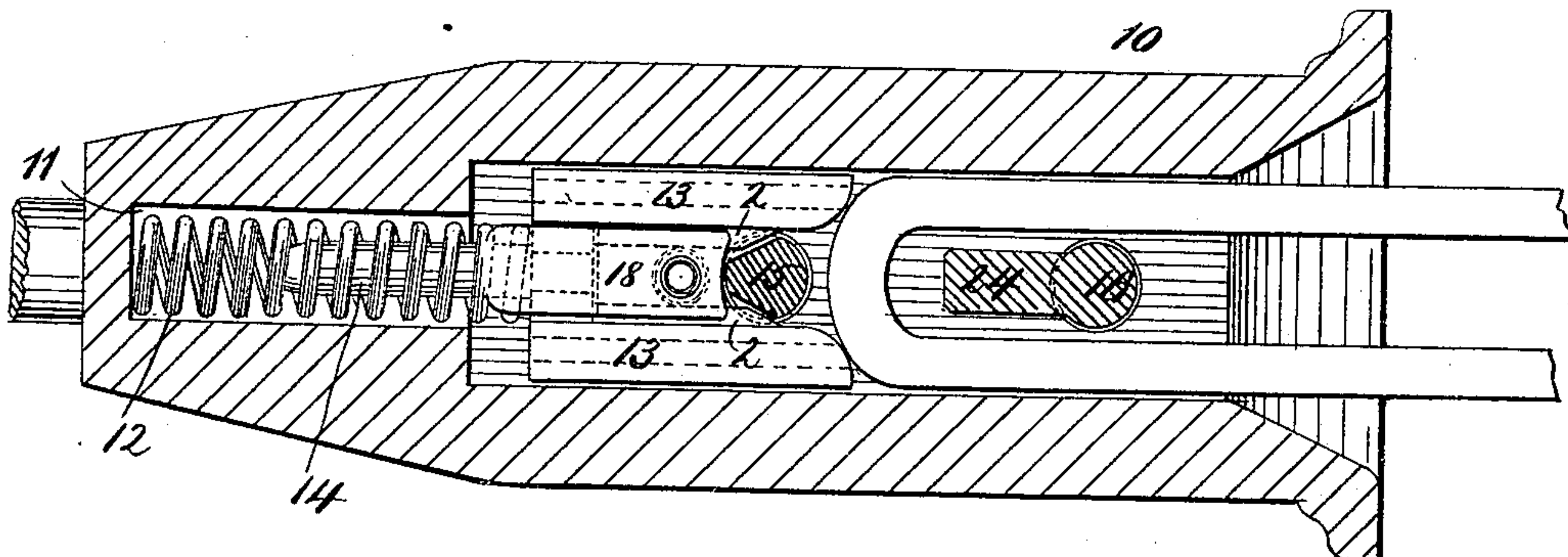


Fig. 4.

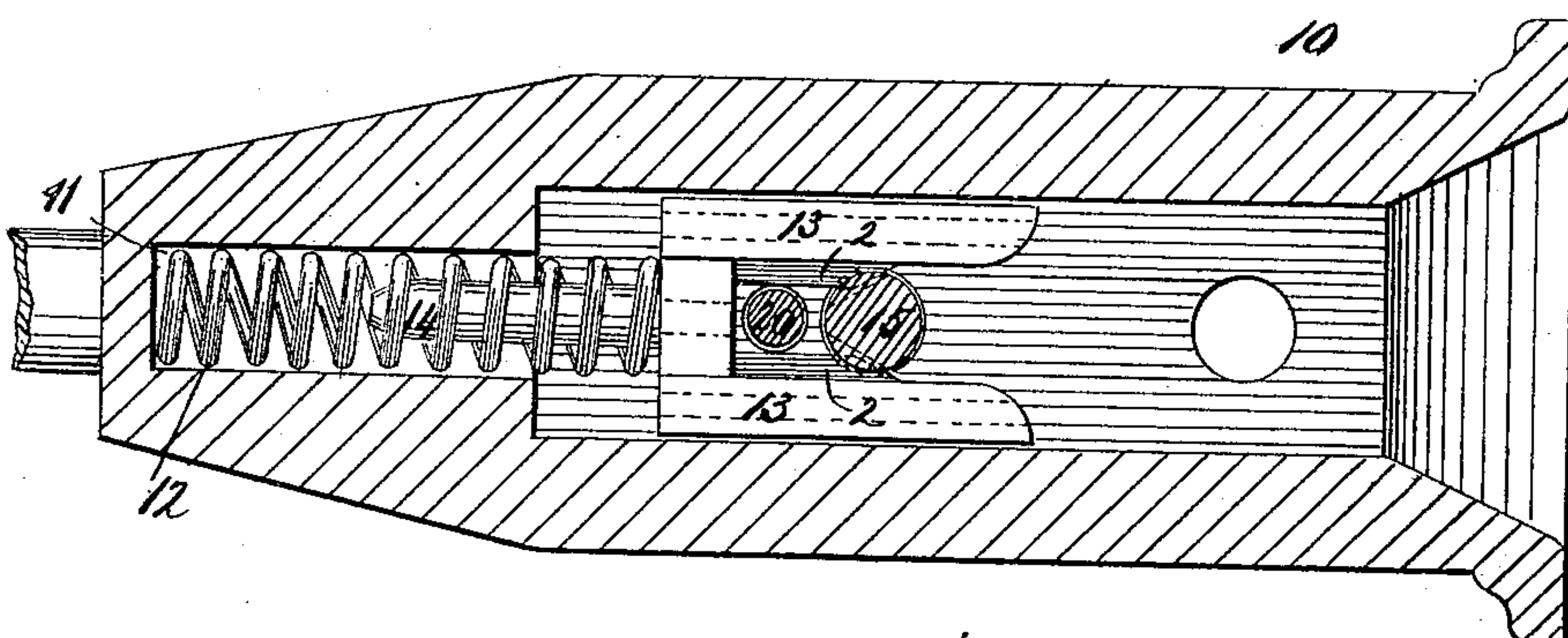


Fig. 5.

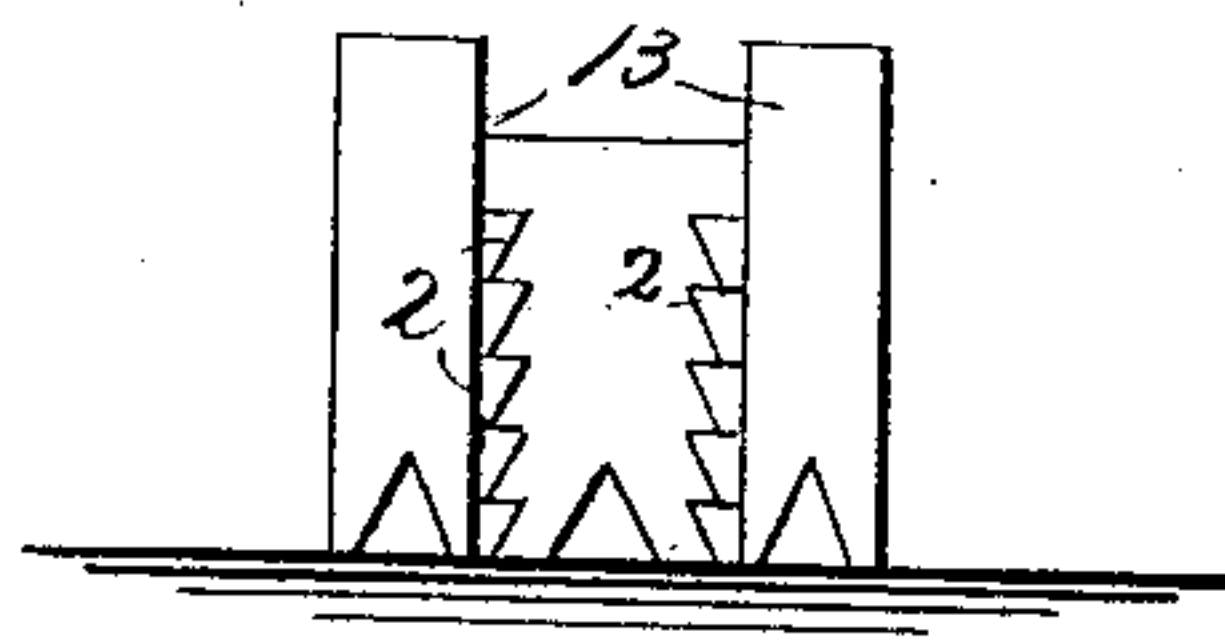


Fig. 7.

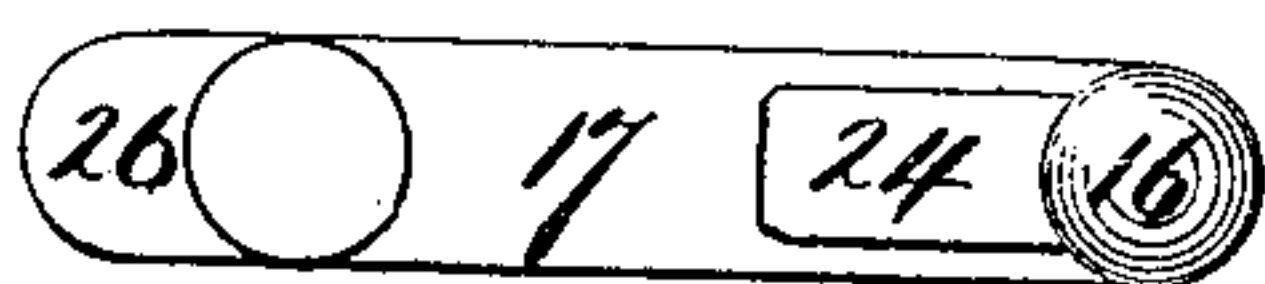
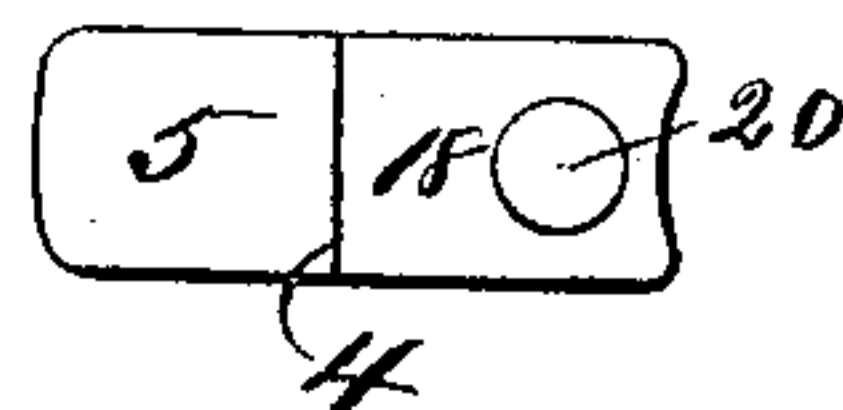


Fig. 6.



Fig. 8.



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UNITED STATES PATENT OFFICE.

LUTHER B. SAMPSON, OF ROCHESTER, NEW HAMPSHIRE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 371,368, dated October 11, 1887.

Application filed June 28, 1887. Serial No. 242,780. (No model.)

To all whom it may concern:

Be it known that I, LUTHER BRADFORD SAMPSON, of Rochester, in the county of Strafford and State of New Hampshire, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

This invention relates to car-couplers, the object of the invention being to provide a coupler which shall be automatic in its action and one wherein the coupling-pin, when raised to uncouple the cars, will be upheld in a position from which it is automatically released by the action of an entering coupling-link.

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 a central longitudinal sectional view of my improved coupler, the parts being represented as they appear when the coupling-pin is raised to a position to couple automatically with an entering link. Fig. 2 is a similar view representing the parts as they appear when the coupling-pin has fallen to engage with the link, a modified form of catch-spring being represented in this view. Fig. 3 is a sectional plan view taken on line *xx* of Fig. 1, the parts being represented as they appear when in the coupled position. Fig. 4 is a similar view with the catch removed, the parts, however, being represented as they appear when in the uncoupled position. Fig. 5 is a view of the grip removed from the draw-head. Fig. 6 is a view of the rear side of the lower portion of the coupling-pin shaft. Fig. 7 is an inverted plan view of the coupling-pin, the coupling-pin shaft, and the cross-head; and Fig. 8 is an inverted plan view of the spring-catch.

In the drawings, 10 represents the draw-head, which may be of any of the well-known forms. In the rear of this draw-head there is formed a bore, 11, in which there is housed a spring, 12, which bears against a bifurcated grip, 13, said grip being formed with a rearwardly-extending shaft, 14, about which the spiral spring 12 is coiled. Upon the approaching faces of the grip-arms there are formed ribs 2, that are arranged to enter and engage with shoulders 3, that are formed upon a vertical shaft or bar, 15, a coupling-pin, 16, being

connected to this bar by a cross-head, 17; or the coupling-pin and the bar or shaft 15 could be connected in any other way desired.

Above the grip 13, I mount a catch, 18, which is formed with a shoulder, 4, and with a rearwardly extending tongue, 5, which passes over the web of the grip, the shoulder 4 being arranged so that it will bear against the forward face of said web. This catch 18 is connected to a short shaft or bar, 20, which is mounted in vertical apertures just to the rear of the shaft or bar 15, and the shaft and its catch are normally held depressed by a spring, 21, arranged as shown in Fig. 5; or, instead of the spiral spring, a flat spring, 22, might be employed, as illustrated in Fig. 2.

Just to the rear of the coupling-pin and beneath the cross-head I arrange a weight or block, 24, and to the lower end of the bar or shaft 15, I connect a toe, 26.

Such being the general construction of the coupler, the operation is as follows: By raising the coupling-pin and the parts connected thereto, which may be done in any of the well-known ways from the sides or top of the car, the toe 26 of the shaft or bar 15 will strike against the lower end of the bar 20 and raise said bar, so that the spring 12 will be free to force the grip forward, in order that the forward ends of the ribs 2 may engage with the notches 3 of the bar 15, and being so engaged the bar and the parts connected thereto will be held in the position in which they are shown in Fig. 1. If, when the parts have been so adjusted, the draw-head is entered by a link, as 30, this link will strike against the forward rounded faces of the grip 13, and said grip will be forced back against the tension of the spring 12, the ribs 2 being at this time carried from engagement with the notches 3, so that the bar 15 and the parts carried thereby will be free to drop to the position in which they are shown in Fig. 2. As the parts drop to the position in which they are shown in Fig. 2, the weight 24 will bear upon the link 30 and will act to hold said link in a horizontal position—that is, in a position so that it will enter the draw-head of an approaching car.

Such a coupler as I have described is entirely automatic in its action and prevents the necessity of entering the space between the cars to couple and uncouple; and although I

have described a specific construction of coupling-pin and connections, I desire it to be distinctly understood that many other forms of pin, cross-head, or shaft could be employed without departing from the spirit of my invention.

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

10 1. In a car coupling, the combination, with a coupling-pin and a bar connected thereto, of a sliding and spring actuated grip for engaging the said bar and holding the coupling-pin elevated, and a spring-actuated catch for en-
15 gaging the grip and holding it disengaged from the said bar, substantially as herein shown and described.

2. In a car-coupling, the combination, with a coupling-pin and a bar connected thereto and
20 provided with notches, of a sliding and spring-actuated grip provided with ribs for engaging the notches of the said bar, and a spring actuated catch above the grip and provided with a shoulder for engaging the grip and holding
25 it disengaged from the bar, substantially as herein shown and described.

3. The combination, with a coupling pin, of a bar formed with notches and connected thereto, a grip provided with ribs adapted to enter said notches, a spring arranged behind
30 the grip, a catch, a spring arranged in connection with the catch, a bar upon which the catch is supported, and a toe carried by the notched bar, substantially as described.

4. In a car coupling, the combination, with
35 a pin, of a weight, 24, connected thereto, a shaft or bar, 15, formed with notches 3, connection between said shaft or bar and the coupling-pin, a grip, 13, provided with ribs 2, a spring, 12, arranged in connection with the
40 grip, a catch, 18, formed with a shoulder, 4, and a tongue, 5, a bar, 20, upon which the catch is mounted, a spring arranged in connection with the catch, and a toe or projection
45 carried by the shaft or bar 15 and arranged to bear against the bar 20, substantially as described.

LUTHER B. SAMPSON.

Witnesses:

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