(No Model.)

C. P. JACOBS.

CAR COUPLING.

No. 444,493. Patented Jan. 13, 1891.

Fig. 1.

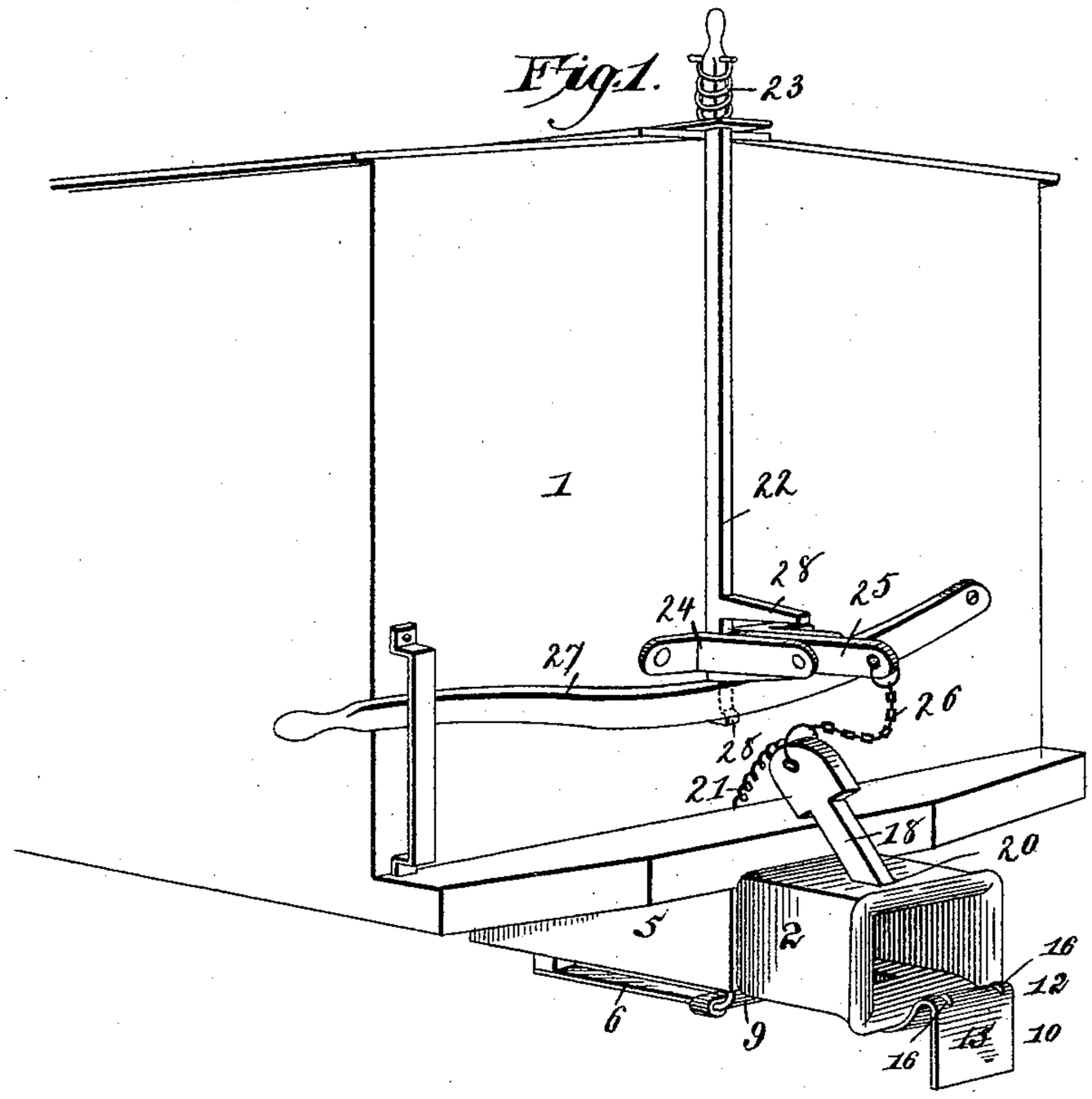


Fig. 2.

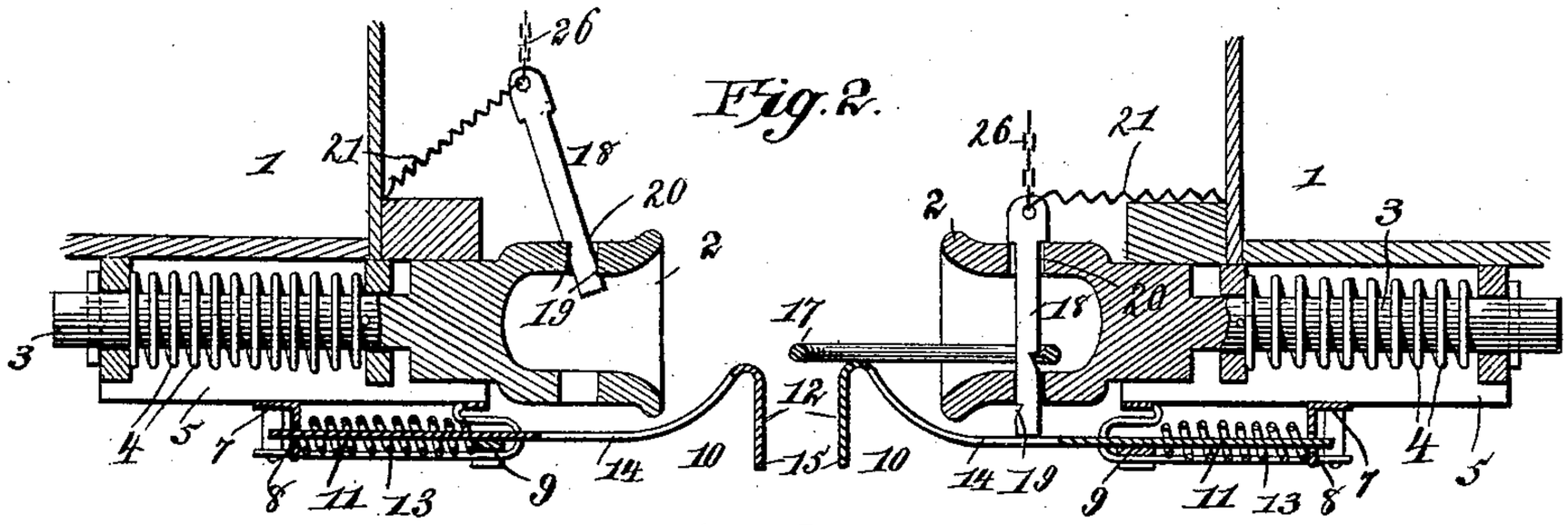
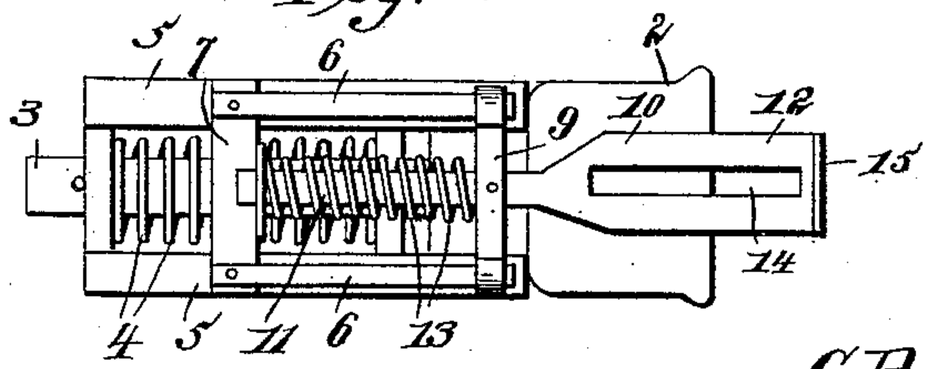


Fig. 3.



Witnesses
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C. P. Jacobs,

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UNITED STATES PATENT OFFICE.

COMODORE PERRY JACOBS, OF AURORA, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 444,493, dated January 13, 1891.

Application filed October 23, 1890. Serial No. 369,033. (No model.)

To all whom it may concern:

Be it known that I, COMODORE PERRY JACOBS, a citizen of the United States, residing at Aurora, in the county of Hamilton and State of Nebraska, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention relates to car-couplings of that class which are operated automatically when cars come together; and it has for its object to construct a device of this class which shall be simple, durable, and certain in operation, and which may be applied at a moderate expense to such cars as are already equipped with the ordinary pin-and-link coupling.

With these ends in view my invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view showing one end of a car to which my improved coupling has been applied. Fig. 2 is a longitudinal sectional view showing two cars in position for coupling. Fig. 3 is a bottom plan view.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 1 designate the ends of the cars, which are provided with the draw-heads 2, having a limited longitudinally-sliding motion, and the draw-bars 3 are provided with buffer-springs 4, which are constructed and arranged in the usual manner.

To the under side of the flanges 5, between which the draw-bars 3 are mounted, are secured suitable guide-strips 6, at the rear ends of which is mounted a guide-plate 7, having a slot 8. The front ends of the guide-strips 6 are suitably attached to or connected by a connecting-plate 9, the ends of which are secured to the under side of the flanges 5 at the front ends of the latter.

10 designates a link-supporter, having a shank 11, which is extended through the slot 8 in the guide-plate 7. The shank of said link-supporter is provided with a cross-head 12, which is mounted to slide upon the guide-strips 6, and upon the said shank, between the cross-head 12 and the guide-plate 7, is mounted a spring 13, whereby the link-supporter is automatically forced in a forward direction. The front end of the link-supporter is curved upwardly and provided with a longitudinal slot 14, which may receive the extreme lower end of the coupling-pin. The extreme front end of the link-supporter is provided with a downwardly-extending lip 15 to engage the link-supporter of the opposite car. I also prefer to provide each link-supporter in its upper side and at its extreme front end with notches 16 to accommodate the link.

The link, which is designated by 17, is of ordinary construction.

The pin 18 is provided at its lower end and in its front side with a notch 19, adapted to engage the front edge of a slot 20 in the top of the draw-head through which said pin passes. The pin is preferably somewhat flattened, so as to prevent it from turning in its bearings. The head of the pin is connected by a traction-spring 21 with the front end of the car. This device serves when the pin is lifted to force its upper end in a rearward direction, thus causing the notch 19 at the lower end of said pin to engage the slot 20.

For the purpose of raising the pin when desired, I may avail myself of a vertically-sliding rod 22, mounted to slide in suitable bearings upon the end of the car, a spring 23 being suitably arranged to force the said rod automatically in an upward direction. In suitable bearings 24 at the lower end of said rod is pivoted a lever 25, the outer end of which is connected by a chain 26 with the head of the coupling-pin. The vertically-sliding rod 23 is provided with forwardly-extending arms 28, that engage the rear end of the lever 25. A hand-lever 27, pivoted to the end of the car on one side of the vertically-sliding rod 23, is extended to the opposite side of the car and passes between lugs 28 at the lower end of the rod 22. The latter may thus be operated either from the side or from the top of the car, as may be found most convenient.

In operation, when cars are to be coupled, the link is mounted in one of the opposing draw-heads, and its projecting portion will rest upon the link-supporting device attached to said draw-head. The pin of the opposite draw-head is lifted until the notch 19 at its

lower end engages the slot 20 in the upper side of said draw-head. When the cars come together, the link will be guided into the draw-head, in which the pin occupies a raised position. When the draw-heads come into contact with each other, the inward movement of the draw-head having the raised pin will cause the notch at the lower end of said pin to become disengaged from the slot in the top of the draw-head, and the pin will consequently drop down and complete the coupling. It will be observed that the link-supporting devices have a longitudinal sliding movement which is amply sufficient to enable them to pass under the draw-bars and out of the way. The springs actuating the said link-supporters will also to some extent act as supplemental buffer-springs. For the purpose of uncoupling the cars, the vertically-sliding rod 23 may be easily operated, either directly or by means of a hand-lever 27, so as to raise the pin and disengage it from the link.

Having thus described my invention, what I claim is—

1. In a car-coupling, the combination of a longitudinally-sliding draw-head, a pin mounted in the same and having at its lower end the notch adapted to engage the front edge of the slot in the top of the draw-head, and a spring connecting the head of said pin with the end of the car, substantially as and for the purpose set forth.

2. In a car-coupling, the combination of the draw-head, the pin mounted in the same and having at its lower end a notch adapted to engage the front edge of the slot in the top of the draw-head, a spring connecting the head of the pin with the end of the car, and a longitudinally-sliding spring-actuated link-support mounted below the draw-head and extended beyond the latter, substantially as and for the purpose set forth.

3. In a car-coupling, the combination of the draw-head having a longitudinal sliding movement between suitable supporting-flanges, the guide-strips secured under said flanges and connected by a plate at their front ends, the guide-plate at the rear ends of said guide-strips having a slot, the link-supporter, the shank of which is extended through said slotted guide-plate and provided with a cross-head mounted upon the guide-strips, and a spring coiled upon the shank of the link-supporter between the cross-head and the slotted guide-plate, substantially as set forth.

4. In a car-coupling, the combination of the draw-head, the pin mounted in the same and having a notch at its lower end, the spring connecting the head of said pin with the end of the car, the longitudinally-sliding spring-actuated link-support having an upwardly-curved and longitudinally-sliding front end provided with a downturned lip and having notches in its upper side, and suitable devices for raising the coupling-pin, substantially as herein set forth.

5. The combination of the longitudinally-sliding draw-head, the vertically-movable pin having a notch at its lower end, a spring connecting the upper end of said pin with the end of the car, a vertically-sliding spring-actuated rod having forwardly-extending arms engaging a lever which is pivoted in the lower bearing of said rod, a chain connecting the outer end of said lever with the coupling-pin, and a hand-lever adapted to engage the vertically-sliding rod, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

COMODORE PERRY JACOBS.

Witnesses:
R. H. PEARD,
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