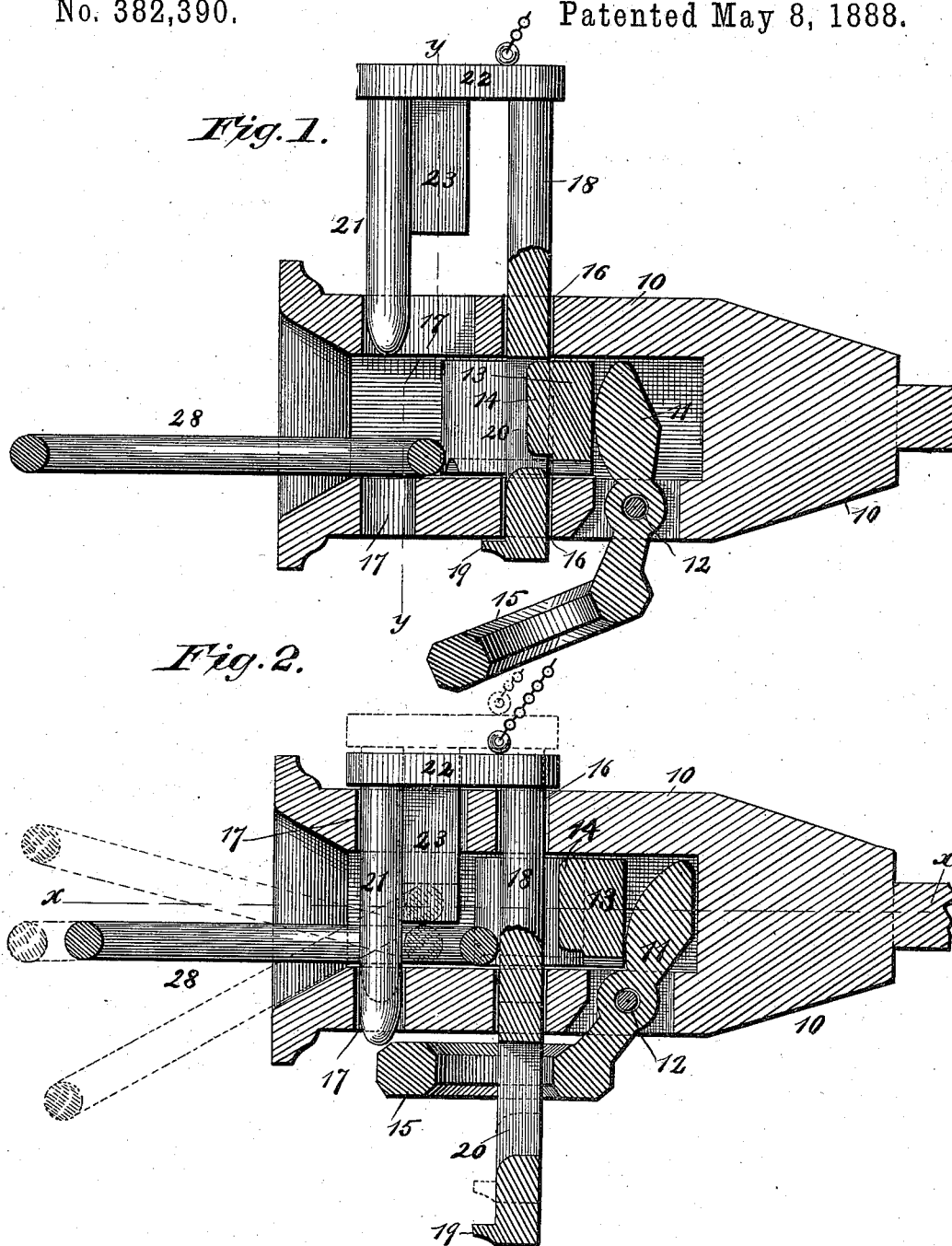


L. B. SAMPSON.

CAR COUPLING.

No. 382,390.

Patented May 8, 1888.



WITNESSES:

Phil. Dieterich.
W. Sedgwick.

INVENTOR:

L. B. Sampson
BY *Munn & Co.*
ATTORNEYS.

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Fig. 3.

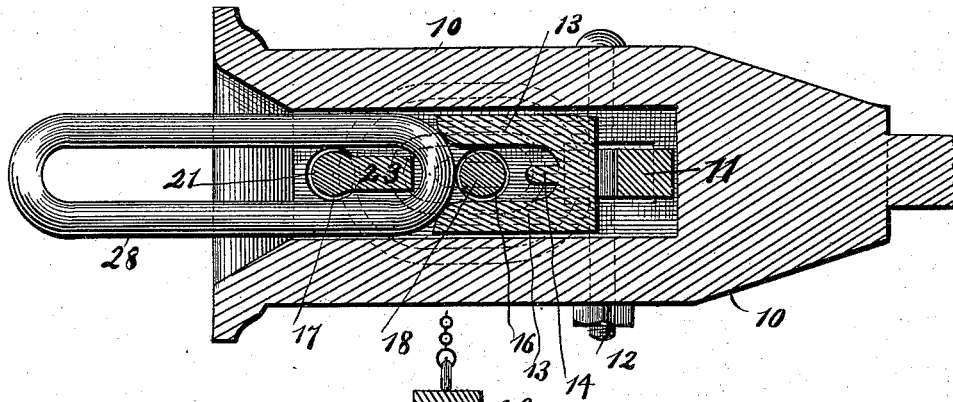


Fig. 4.

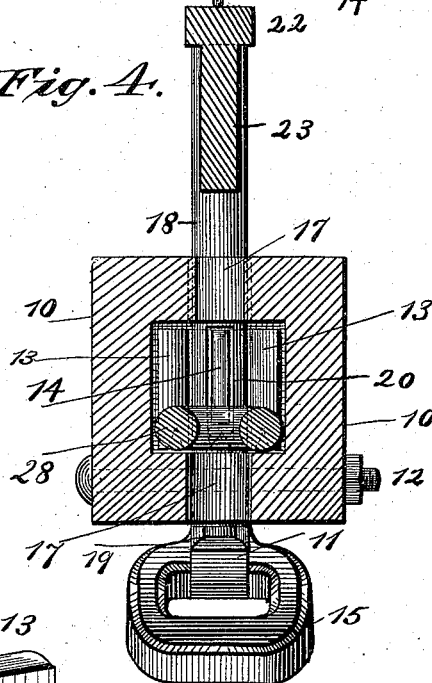


Fig. 5.

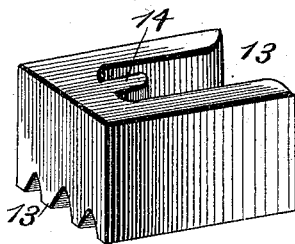
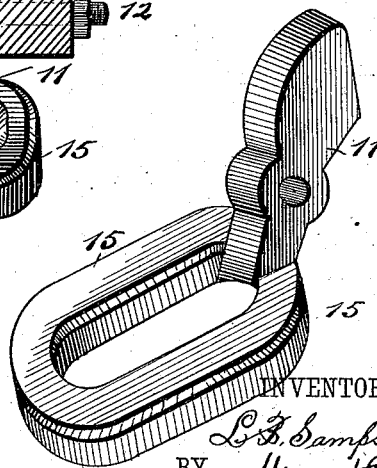


Fig. 6.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LUTHER B. SAMPSON, OF ROCHESTER, NEW HAMPSHIRE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 382,390, dated May 8, 1888.

Application filed December 8, 1887. Serial No. 257,305. (No model.)

To all whom it may concern:

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

My invention relates to a car-coupling, and has for its object to improve the construction of the coupling secured to myself by Letters Patent No. 371,368, and dated October 11, 1887, the further object being by said improvement to provide a coupler of few parts, strong and simple in construction, direct, quick, and automatic in action, and wherein all the parts may be expeditiously and conveniently removed from the draw-head and as readily replaced.

The invention consists in the 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 of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal vertical section through the coupler when in position to receive the link of an opposing draw-head. Fig. 2 is a longitudinal vertical section through the coupler when coupled with an opposing draw-head. Fig. 3 is a horizontal longitudinal section on line *xx* of Fig. 2, illustrating the coupling as effected. Fig. 4 is a transverse vertical section on line *yy* of Fig. 1, with the pin in a coupling position and the link placed to receive the pin. Fig. 5 is a perspective view of the sliding grip in the draw-head actuated by the locking-lever, and Fig. 6 is a perspective view of the weighted locking-lever.

In the drawings, 10 represents the draw-head, which may be of any of the well-known forms. In the rear of the draw-head a lever, 11, is pivoted upon a transverse bolt, 12, which lever bears at its upper or inner end against a bifurcated sliding grip, 13, said grip being provided between the approaching faces of the grip-arms, integral with the rear wall of the recess formed thereby, with a central transverse rib or tongue, 14.

At the outer or lower end of the lever 11 a weight, 15, is arranged, either integral therewith or attached thereto, the said weight be-

ing at right angles to the lever and projected in the direction of the link-opening of the draw-head. The weight 15 is illustrated in the accompanying drawings as of link form; but I do not confine myself to this particular shape, as other forms may be employed with equally good results, the object of the weight being to keep the upper end of the lever 11 at all times in contact with the rear face of the sliding grip 13. The weight 15 is, however, preferably made in link form, or provided with an aperture, to permit the passage of the guide-rod of the coupling-pin, hereinafter described.

In the top and bottom of the draw-head spaced aligning apertures 16 and 17 are produced, the apertures 16 being adapted to receive a vertical guide rod or bar, 18, which rod, passing through the weight, is provided at its lower end with a horizontal toe, 19, preferably detachable therefrom, and a longitudinal slot, 20, above the said toe.

The apertures 17 are designed to receive the coupling-pin 21, which pin and guide-rod are connected at the top by a cross-head, 22; or the coupling-pin and guide-rod could be connected in any other way desired. Just at the rear of the coupling-pin and beneath the cross-head I arrange a weight or block, 23, sufficiently heavy to carry the coupling-pin from an uncoupled to a coupled position.

The guide-rod 18, in its projection downward, passes through between the approaching faces of the grip-arms, and the tongue or lip of the grip is normally at the rear of the aperture 16.

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 19 of the guide-rod 18 will come in contact with the under face of the draw-head and limit its upward movement. Meanwhile the lever 11 is, by means of the weight 15, exerting pressure against the rear wall of the grip. Thus when the coupling-pin and guide-rod have been carried upward as far as possible the slot 20 in the guide-bar will be opposite the tongue 14 of the grip, whereupon the tongue will be forced into the slot by the lever 11, as shown in Fig. 1, retaining the coupling-pin above the link-opening, or in position for coup-

ling. If, when the parts have been so adjusted, the draw-head is entered by a link, as 28, this link will strike against the forward end of the grip, and said grip will be forced backward, which motion of the grip withdraws the tongue 14 from the slot 20, whereupon the coupling-pin and its connected guide-rod will simultaneously drop down, the motion being accelerated by the weight or block 23. As the parts drop to this position (shown in Fig. 2) the weight 23 will bear upon the link 28, and will act to hold said link in a horizontal position.

Such a coupler as I have described is entirely automatic in its action, is free from springs, and contains no light working parts liable to get out of order. By removing the toe 19 and also the bolt 12 the parts may be readily detached. 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, and guide rod could be employed without departing from the spirit of the invention.

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

1. In a car-coupling, the combination, with a coupling-pin and a guide-rod connected thereto, of a sliding grip for engaging the said rod and holding the coupling-pin elevated, and a weighted lever pivoted at the rear of the grip

in engagement therewith and actuating said grip, substantially as herein shown and described.

2. In a car coupling, the combination, with a coupling-pin and a guide-rod connected thereto, provided with a longitudinal slot near its lower extremity, of a sliding grip provided with an integral transverse tongue centrally upon its outer face, and a weighted lever pivoted at the rear of the grip in engagement therewith and actuating said grip, substantially as shown and described, whereby when the pin and guide-rod are elevated the lever will force the grip-tongue to enter the slot in the guide-rod and retain the coupling-pin in an elevated position, as set forth.

3. In a car-coupling, the combination, with a coupling-pin and a guide-rod connected thereto, provided with a longitudinal slot near its lower extremity, and a toe upon said lower extremity, of a bifurcated sliding grip provided with a transverse tongue between the approaching face of the grip-arms, and a weighted lever pivoted at the rear of said grip and having a constant bearing thereon, substantially as and for the purpose herein set forth.

LUTHER B. SAMPSON.

Witnesses:

HENRY F. WALKER,
ELMER J. SMART.