(No Model.) 2 Sheets—Sheet 1.

W. A. MITCHELL.

CAR COUPLING.

No. 350,836. Patented Oct. 12, 1886.

Fig. 1.

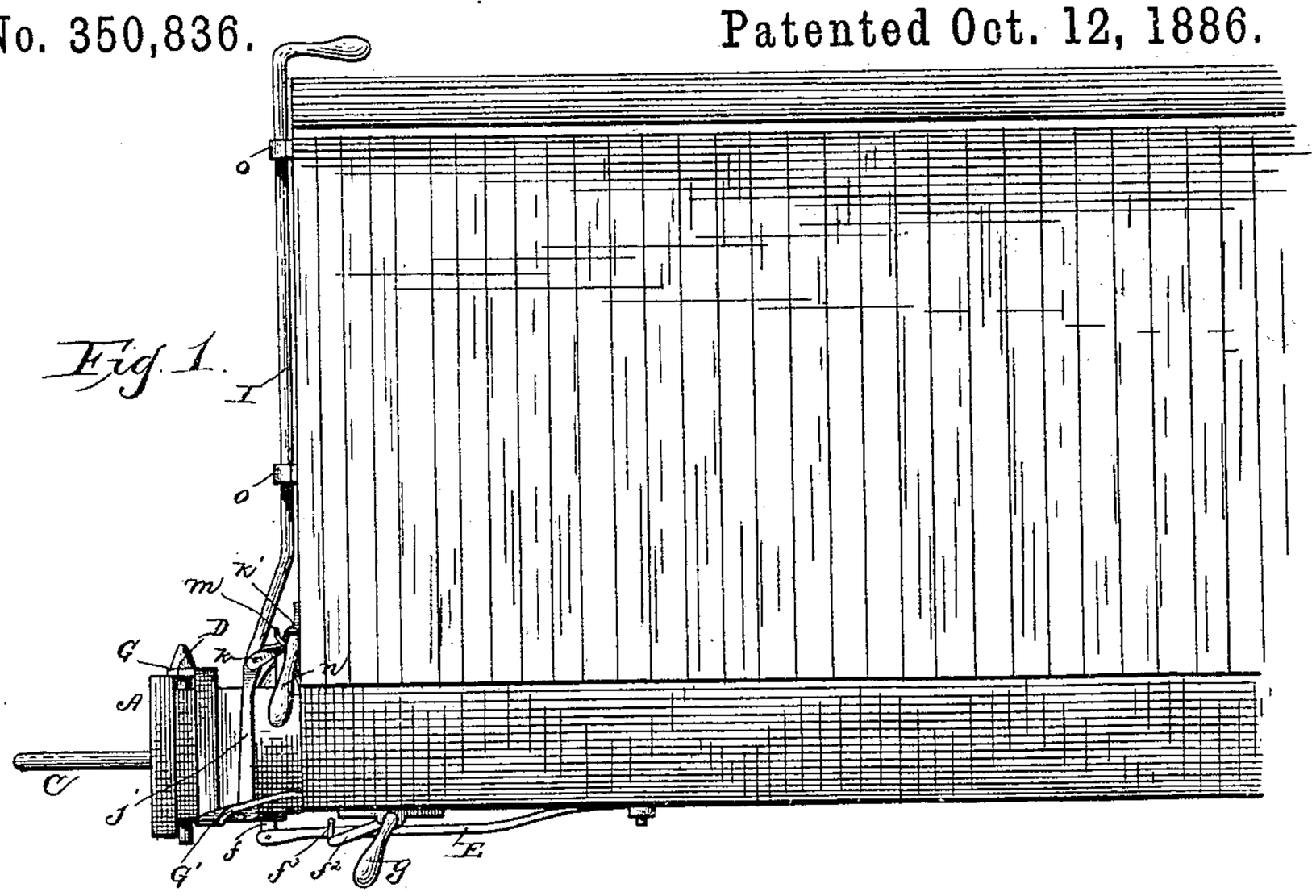
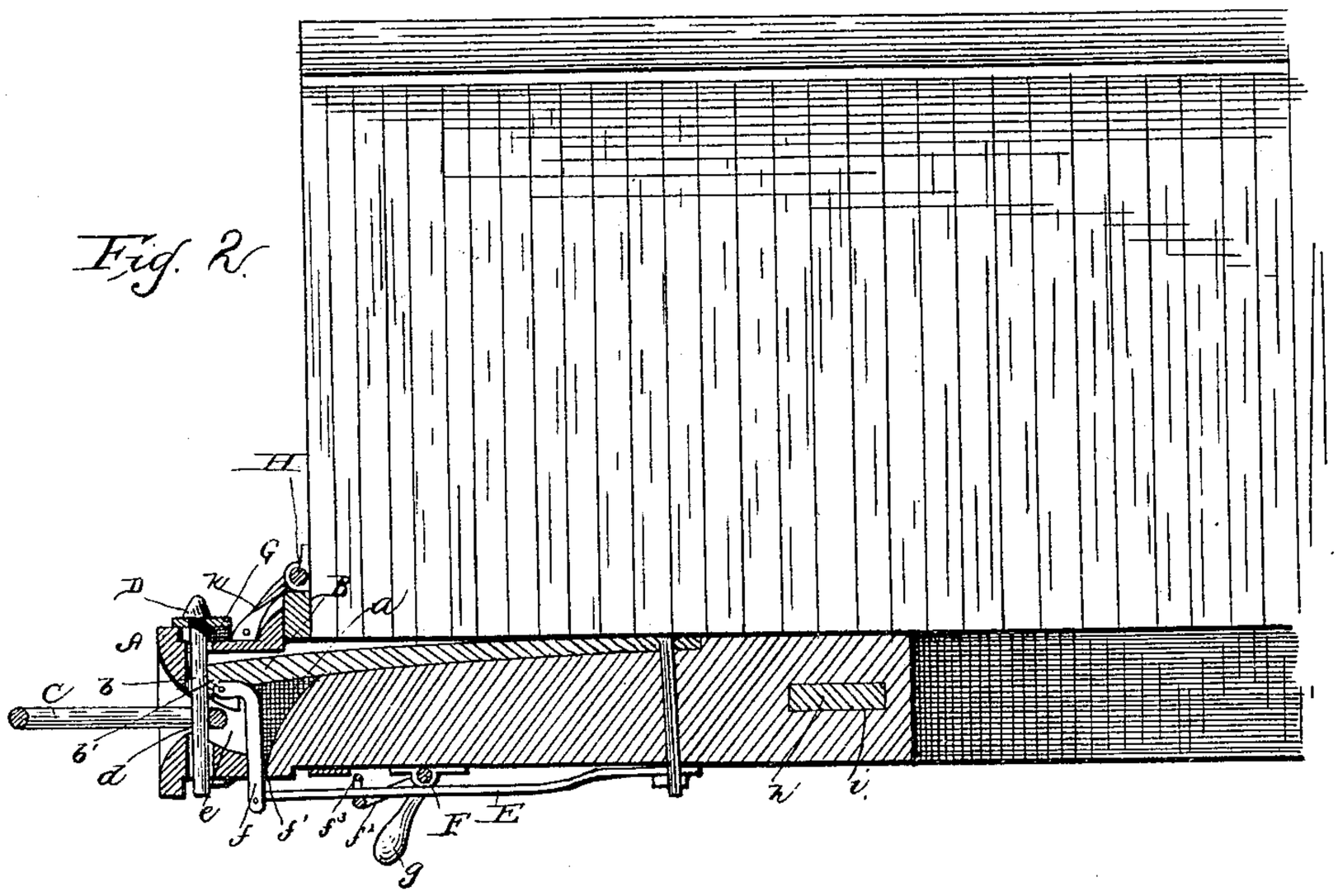


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

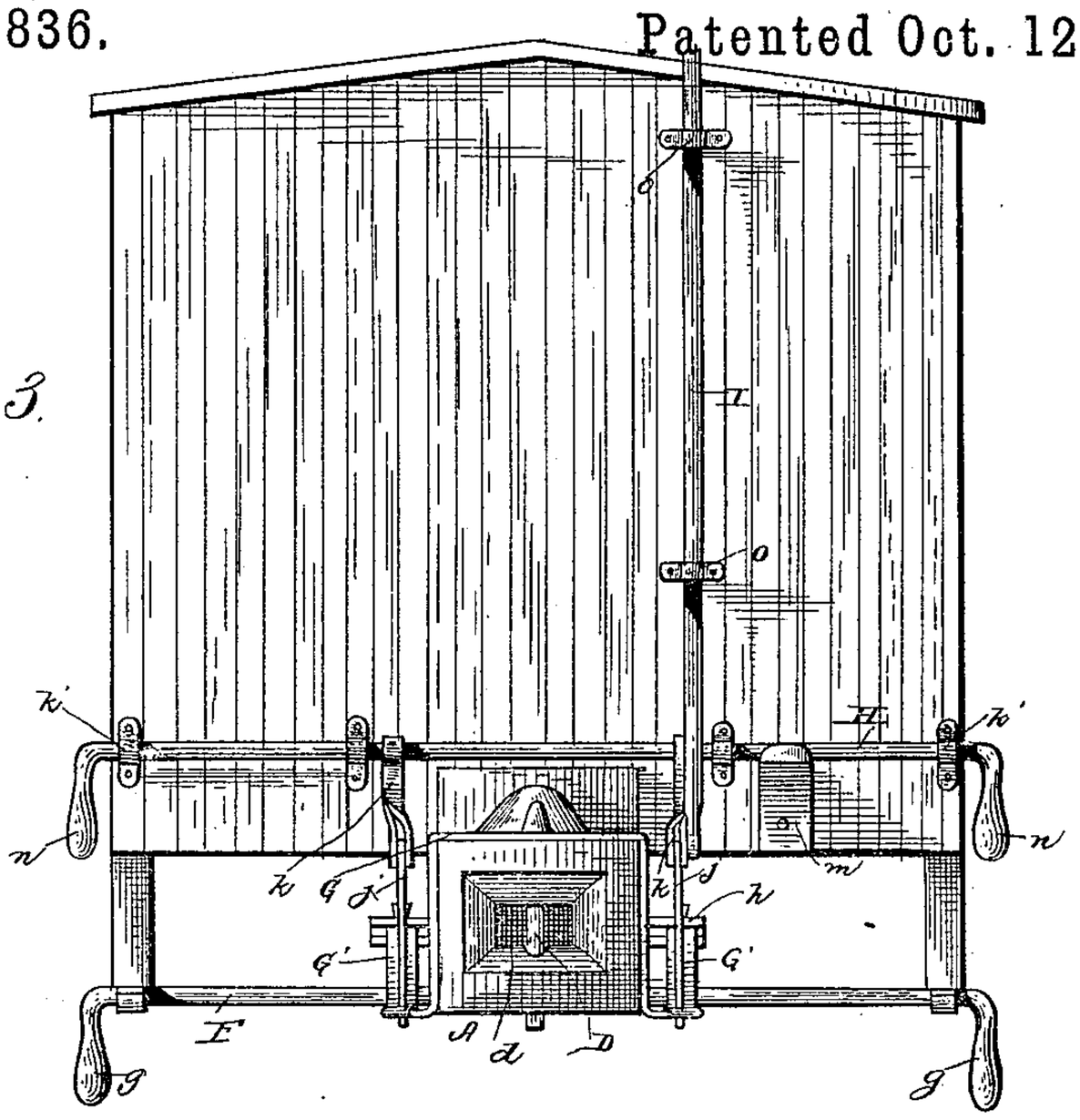
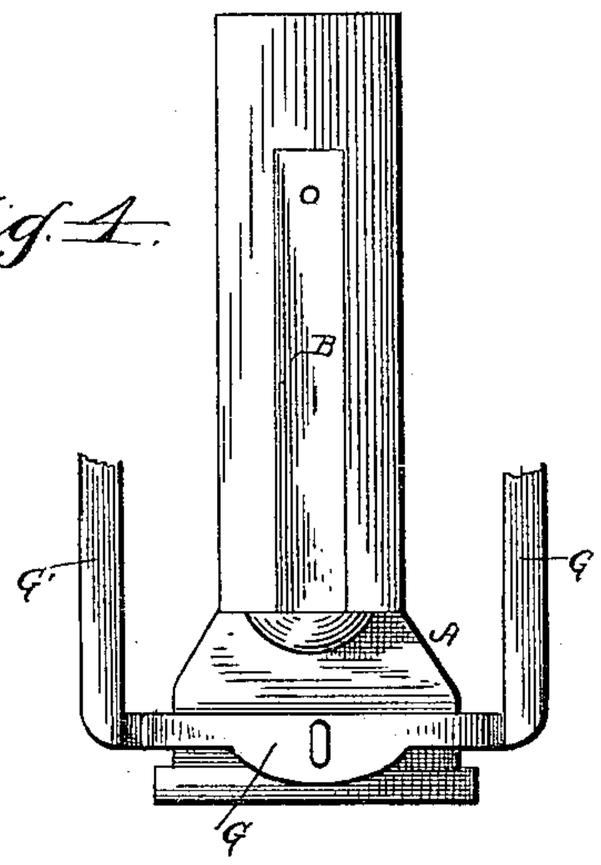


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM A. MITCHELL, OF LAWRENCE, ASSIGNOR OF ONE-HALF TO J. A. SIMPSON, OF TERRELL, AND W. H. BROOKS, J. T. AIRHART, AND T. J. CRITSER, OF LAWRENCE, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 350,836, dated October 12, 1886.

Application filed June 8, 1886. Serial No. 204,491. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. MITCHELL, a citizen of the United States of America, residing at Lawrence, in the county of Kaufman and State of Texas, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to improvements in car-couplings, having for its object convenience in effecting the adjustment of the link with relation to the height of the draw-head of the approaching car and facility in coupling and uncoupling the cars; and to these ends the invention consists of the combination of parts, including their construction, substantially as hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view of a draw-head and a portion of a house-car with my improved car-coupling applied thereto. Fig. 2 is a vertical longitudinal section taken through the draw-head of Fig. 1. Fig. 3 is a front view of Fig. 1; and Fig. 4 is a plan view of the draw-head, showing in particular the lifting or elevating coupling-pin yoke.

In the embodiment of my invention I chamber, as at *a*, the draw-head A, which is of ordinary construction, said chamber *a* opening from the upper side of the draw-head, and dispose in the said chamber *a* the link-adjuster B, which is pivoted or hinged at its rear end to the draw-head and provided at its forward end with a pendent approximately-beak-like portion, *b*, entering the coupling-link chamber *d* of the draw-head A, and adapted to act upon the inner end of the link, as presently explained. The forward end of the link-adjuster B is beveled or tapered upward, giving it a downward and inward inclination, to readily direct and guide the link to the bottom of its chamber as the link enters the latter. In the same (forward) end of the link-adjuster B is a central vertical groove or recess, *b'*, for the reception of the coupling-pin D, passed, as usual, vertically through the draw-head. In the bottom of the link-chamber *d*, at its rear end, is a cavity, *e*, into which the inner end of the coupling-link C is forced or depressed by the link-adjuster B, also as will more fully appear hereinafter. To the link-adjuster B is connected the one end of a bar or link, *f*, the latter passing through an aperture or slot, *f'*, extending from the bottom of the draw-head and up into the same to the chamber *a*. The lower or outer end of said link or bar *f* is pivoted or connected to a bar, E, the inner or rear end of which latter is bolted to the under side of the draw-head A, the bolt of which is also passed through the link-adjuster B, which latter, by means of the said bar E, is held in a depressed position—that is, with its beak or pendant projecting into the link-chamber *d*. It will thus be seen that if the link be thrust into the link-chamber of the draw-head it will strike against the forward beveled end of the beak of the link-adjuster B and be directed and guided by said bevel or inclination of the beak of the link-adjuster to the bottom of said link-chamber and under the said beak of the link-adjuster into the cavity.

F is a rod for elevating or lowering the link-adjuster B, thereby raising or lowering the outer end of the link and adjusting its position so that it may readily enter the link-chamber of the opposite draw-head, according as the height of the draw-head of the approaching car may demand. This link-adjuster-operating rod F is provided with a cam, bail, or crank, f^2, having a stirrup or loop, f^3, through which the bar E is passed, and, as the one or the other of the handles *g g* of the rod F (one at each end thereof and at the sides of the car) is turned to the right or left by an attendant or train-man, it will act upon the bar E and force it downward or upward with the link or bar *f*, which will lower or elevate the link-adjuster B, for the purpose aforesaid.

G is a yoke fitted upon a draw-head, A, and having a central aperture in its upper horizontal cross piece or plate in alignment with the coupling-pin passage of the draw-head, which aperture receives the coupling-pin, the head of the latter holding it in position in the yoke. To the lower ends of the side arms of the yoke G are connected the for-

ward ends of longitudinal narrow plates or bars G′, which latter extend some distance rearward alongside of the containing-case of the draw-head, and are connected at their rear ends to a cross-bar, *h*, passed through and relatively fixed to the draw-head, and through slots *i* in the containing-case of the draw-head, whereby the draw-head may have a limited movement with the said yoke-connected bars or plates G′ within said case, as is usual in cars, which form no part of my invention, and therefore no further reference thereto is required herein. In the event of the employment of my invention in connection with a draw-bar having a cross-bar at or near the rear end thereof, the longitudinal plates or bars G′ are attached thereto.

The yoke G has a pivotal or hinged connection with two links, *j j*, in turn articulated or pivoted to the free ends of two arms, *k k*, fixed to a rod or lever, H, journaled or pivoted to turn in strap-eyes *k′*, fastened to the car-body. This rod or lever H is provided with a stop or projection, which, when the yoke G has been operated so as to actuate the coupling-pin and elevating-yoke, will press against the spring plate or holder *m*, fastened to the end of the car, the said stop being turned with the said rod from below to the front and upward against and pressing outward upon said spring plate or holder. The latter, with said stop, thus serves as a catch or retaining device for the rod or lever as against the turning of the rod when the hand is removed from whichever of its two handles *n n* that may have been grasped for its operation, and as the coupling-pin is held in an elevated position, thereby effecting the automatic holding of the coupling-pin in its elevated position previous to the coupling of the cars.

For operating the coupling-pin-elevating yoke G from the top of the house-car, a rod, I, is connected to one of the fixed arms *k* of the rod or lever H, and extends a short distance above the top or roof of the car, the same having been passed through guides and retaining-eyes or keepers *o*, fastened to the end of the car.

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

1. In a car-coupling, the combination, with the draw-head, of the link-adjuster having a pendent beak and the link-chamber having a cavity immediately below said beak, substantially as and for the purpose stated.

2. The combination, with the draw-head, of the link-adjuster having a pendent beak provided with a groove or recess, the link or bar secured in said recess or groove, and the bar connected to the draw-head and to said link or bar, substantially as shown and described.

3. In a car-coupling, the combination, with the draw-head, of the link-adjuster, with its pendent beak portion projecting into the link-chamber, and the bar connected to the draw-head, acting downwardly and connected by a link or bar to said link-adjuster, substantially as shown and described.

4. In a car-coupling, the combination, with the draw-head, of the link-adjuster having its beak projecting into the link-chamber, the bar connected to the draw-head and acting downwardly upon and connected by a link or bar to the said link-adjuster, and the rod having a cam, bail, or crank adapted to act upon said bar, substantially as shown and described.

5. The combination, with the draw-head, of the coupling-elevating yoke having side arms, the longitudinal plates or bars, the cross-bar passed through said draw-head, and to which said plates or bars are connected, and the rod or lever connected to links of said yoke, substantially as shown and described.

6. In a car-coupling, the combination, with the draw-head, of the coupling-pin-elevating yoke having a centrally-apertured upper cross-bar, and its side arms connected to longitudinal bars connected to a cross-bar at the rear end of the draw-head, the links pivoted to said longitudinal bars, and the rod or lever having fixed arms pivoted at their outer ends to the upper ends of said links, which rod or lever is provided with a stop bearing upon a spring fastened to the end of the car, substantially as shown and described.

7. The combination, with the draw-head and the pin-elevating yoke having links connected to the longitudinal bars thereof, of the rod or lever having a stop or projection, the spring plate or holder, and the fixed arms connected to said lever and links, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. MITCHELL.

Witnesses:
J. A. SIMPSON,
C. A. GOODWIN.