(No Model.)

J. H. WILLIAMS.

CAR COUPLING.

No. 436,683. Patented Sept. 16, 1890.

Fig. 1.

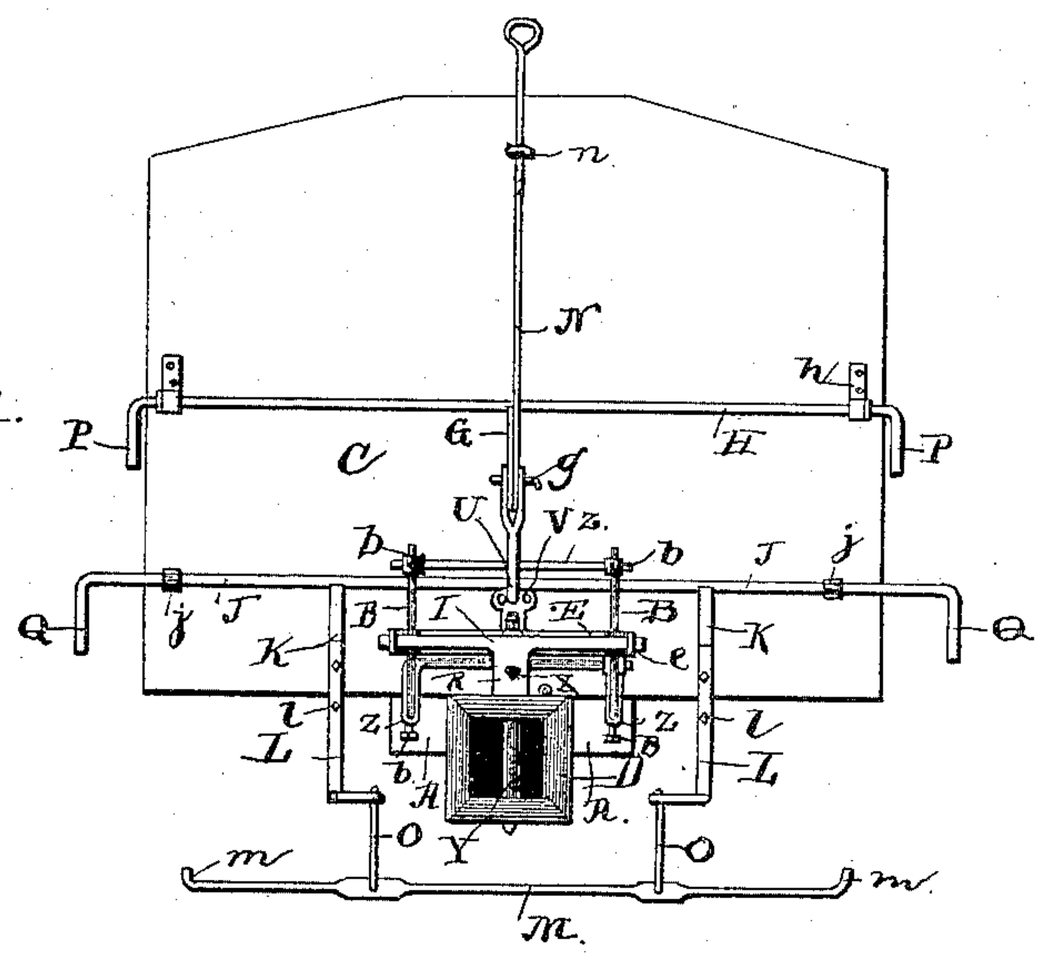


Fig. 2.

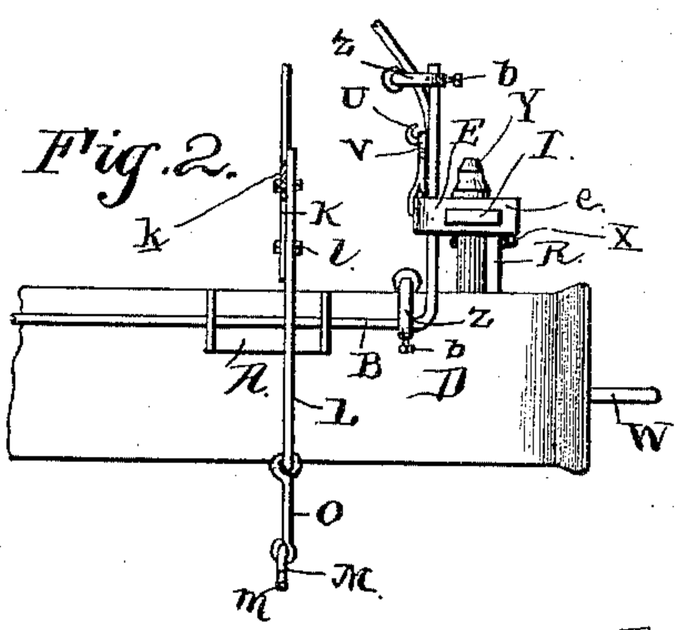
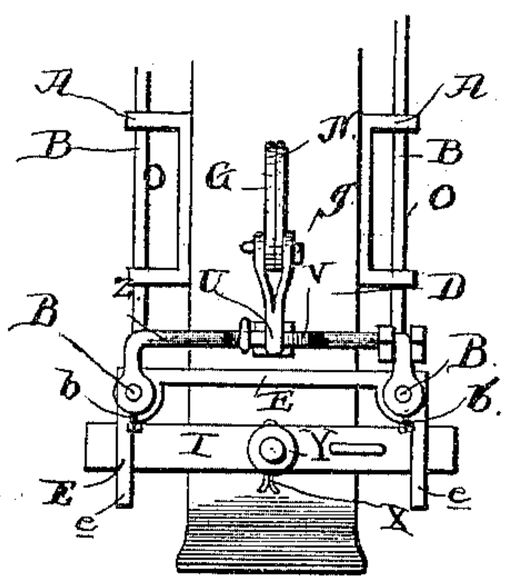


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN HENRY WILLIAMS, OF NEW LEWISVILLE, ARKANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 436,683, dated September 16, 1890.

Application filed July 2, 1890. Serial No. 357,531. (No model.)

To all whom it may concern:

Be it known that I, JOHN HENRY WILLIAMS, a citizen of the United States, residing at New Lewisville, in the county of Lafayette and State of Arkansas, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention relates to car-couplings, more particularly to those classes known as "pin-and-link lifters;" and the object thereof is to provide improvements upon devices of this character heretofore existing.

To this end the invention consists of the details of construction hereinafter more fully described, and illustrated in the drawings, in which—

Figure 1 is an end view of a car embodying my improvements with the parts in their normal position. Fig. 2 is a side view of the draw-head and attachments. Fig. 3 is a plan view of the same.

Referring to the said drawings, the letter C designates the car-body, and D is an ordinary draw-head mounted beneath the same in the usual or in any preferred manner. To each side of the support for this draw-head is connected a bracket A, having eyes in its front and rear ends, and through each of the eyes slides a rod B, which is bent upwardly forward of the front eye, as shown. The two rods B are connected at their upper ends, and also, if desired, at their elbows by horizontal tie-rods Z, which have eyes at their ends embracing said rods B, and through these eyes pass set-screws *b*, whose points bear against the rods B. A skeleton frame is thus formed which slides forward and back in the brackets A, and can accommodate itself to the longitudinal movements of the draw-head as permitted by its buffer-springs and as occasioned by the starting and stopping of the car.

The letter E designates a cross-bar having forwardly-bent ends *e*, and the vertical rods B pass loosely through holes in the bends of this cross-bar, whereby the latter may rise and fall thereon.

I is a laterally-moving bar of rectangular cross-section, whose ends slide loosely through properly-shaped holes in the forwardly bent ends *e* of the cross-bar E, and R is a lug depending from the center of this bar.

Y is the coupling-pin, which passes vertically through a hole in the draw-head in the usual manner, and X is a split pin, which passes forwardly through the coupling-pin and through the lug R, as shown. A horizontal frame is thus formed, which may slide vertically upon the skeleton frame and which may move laterally with respect to the car, and the coupling-pin may therefore have a vertical and lateral movement whereby it can accommodate itself to the movements of the draw-head, or whereby the coupling-pin may be lifted to disengage the link W.

Rising from the center of the cross-bar E is a wing V, having a number of holes in its upper end, and engaged with one of these holes is a hook U, having a split upper end.

H is a rod journaled in bearings *h* on the end of the car and having cranked extremities P, and G is a rigid crank at the center of this rod, whose outer end is pivoted on a pin *g* in the upper end of the hook U.

N is a vertical rod extending through a staple *n* near the top of the car and having a handle at its upper end, and the lower end of this rod is pivoted on the pin *g* within the upper split end of the hook U. By this means, when one of the cranks P is turned or when the rod N is operated, the coupling-pin Y will be raised and lowered in a manner which will be readily understood, and the coupling may therefore be operated from either side or from the top of the car.

J is a rod mounted in bearings *j* on the end of the car and having cranked ends Q, and K are rigid cranks depending from said rod at either side of the draw-head and having slots *k* in their bodies. L are extension-bars connected by bolts *l* with said slots *k*, and O are links connecting the lower ends or feet of said extension-bars with a link-lifter bar M, which extends transversely across the car below the body of the same, and has turned-up ends *m*, forming handles, whereby it may be moved longitudinally of its length. By this means when the cranks Q are turned the lifter-bar M will be elevated and the link W will be raised, as will be obvious, and when the lifter-bar M is moved longitudinally by its handles *m* the link may be moved from side to side to guide it into the mouth of the

draw-head of an approaching car. In this manner the link can be lifted and controlled from either side of the car.

With the above construction of parts the skeleton frame-work may move forward and back, and the horizontal frame-work may move up and down, and from side to side, and as the pin is carried by these frame-works and passes through the draw-head it is never released from the frame-works while the draw-head moves as is necessary. The pin can at all times be raised as above described, but the pin-lifting mechanism does not disengage the pin from the draw-head. The link-lifter can also be lifted as above described. This improved mechanism for raising the pin and link can be attached to the ordinary coupling now in use by simply drilling a hole through the pin, whereby a split pin X can be inserted therethrough to connect the coupling-pin with the lug R, and the balance of the parts are only attached to the parts of the car or to the ordinary car-coupling.

What I claim is—

1. In a car-coupling, the combination, with the draw-head D, the coupling-pin Y, the lateral bar I, having the lug R, and the split pin X, detachably connecting said lug and coupling-pin, of the cross-bar E, having forwardly-bent ends *e*, provided with holes, through which said lateral bar moves loosely, and means for raising and lowering said cross-bar, substantially as described.

2. In a car-coupling, the combination, with the draw-head D, the coupling-pin Y, the rectangular lateral bar I, having the depending lug R, and the pin X, detachably connecting said lug and coupling-pin, of the cross-bar E, having forwardly-bent ends *e*, provided with holes, through which said lateral bar moves loosely, a longitudinally-moving skeleton frame, substantially as described, upon which said cross-bar is guided vertically, and means for raising and lowering the cross-bar on said frame, as set forth.

3. In a car-coupling, the combination, with the brackets A, secured to the sides of the draw-head support and having eyes at their front and rear ends, the L-shaped rods B, whose lower members slide longitudinally in said brackets and whose upper members are connected by horizontal tie-rods Z at their upper ends and at their bends, of a horizontal frame, substantially as described, guided upon the upper members of said rods, a coupling-pin Y, connected thereto and passing through the draw-head D, and means for raising and lowering said frame, as set forth.

4. In a car-coupling, the combination, with the brackets A, secured to the sides of the draw-head support and having eyes at their front and rear ends, the L-shaped rods B, one of whose members slides longitudinally in said eyes and the other of whose members stands vertically in front thereof, horizontal tie-rods Z at the upper ends and at the bends of said rods, said tie-rods having eyes embracing said rods, and set-screws *b* in said eyes, of a horizontal frame, substantially as described, guided upon said rods B, between the tie-rods, a coupling-pin Y, connected thereto and passing through the draw-head D, and means for raising and lowering said pin, as set forth.

5. In a car-coupling, the combination, with the draw-head and the coupling-pin moving vertically therethrough, of a skeleton frame guided longitudinally in eyes on the draw-head support, a horizontal frame-work guided vertically on the skeleton frame, a laterally-moving bar therein to which said coupling-pin is connected, and means for raising and lowering said frame, each and all substantially as described.

6. In a car-coupling, the combination, with the draw-head D, the coupling-pin Y, the brackets A, secured to the sides of the draw-head support, the L-shaped rods B, sliding longitudinally of the car in said brackets, and the tie-rods Z, connecting said rods at their upper ends and at their bends, of the cross-bar E, having forwardly-bent ends *e*, provided with rectangular holes, said cross-bar being mounted at its bends upon said rods B between said tie-rods, a bar I, moving laterally through said rectangular holes and connected with said coupling-pin, a wing V, rising from the center of said cross-bar E and having a number of holes, and pin-lifting devices, substantially as described, leading from said holes, as and for the purpose set forth.

7. In a car-coupling, the combination, with the draw-head, the coupling-pin, the wing connected with said pin, and the hook engaging said wing and having a split upper end, of a rod journaled across the car-body and having cranks at its end, a rigid crank at its center, whose outer end is connected by a pivot-pin *g* with the split end of said hook, and a vertically-moving rod N, leading to the top of the car and pivoted at its lower end on said pin, substantially as described.

8. In a car-coupling, the combination, with the draw-head, the coupling-pin, and means for operating it, of the transverse shaft J, journaled in bearings on the end of the car and having handles Q at its ends, the rigid cranks K on said shaft having slots *k* in their bodies, the extension-bars L, the bolts *l*, passing through said bars and engaging said slots, the link-lifter bar M, extending transversely beneath the car and having turned-up ends *m*, and the links O, connecting the lifter-bar with said extension-bars, substantially as and for the purpose hereinbefore described.

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

JOHN HENRY WILLIAMS.

Witnesses:

ALBERT LESTER,

MONT HURST.