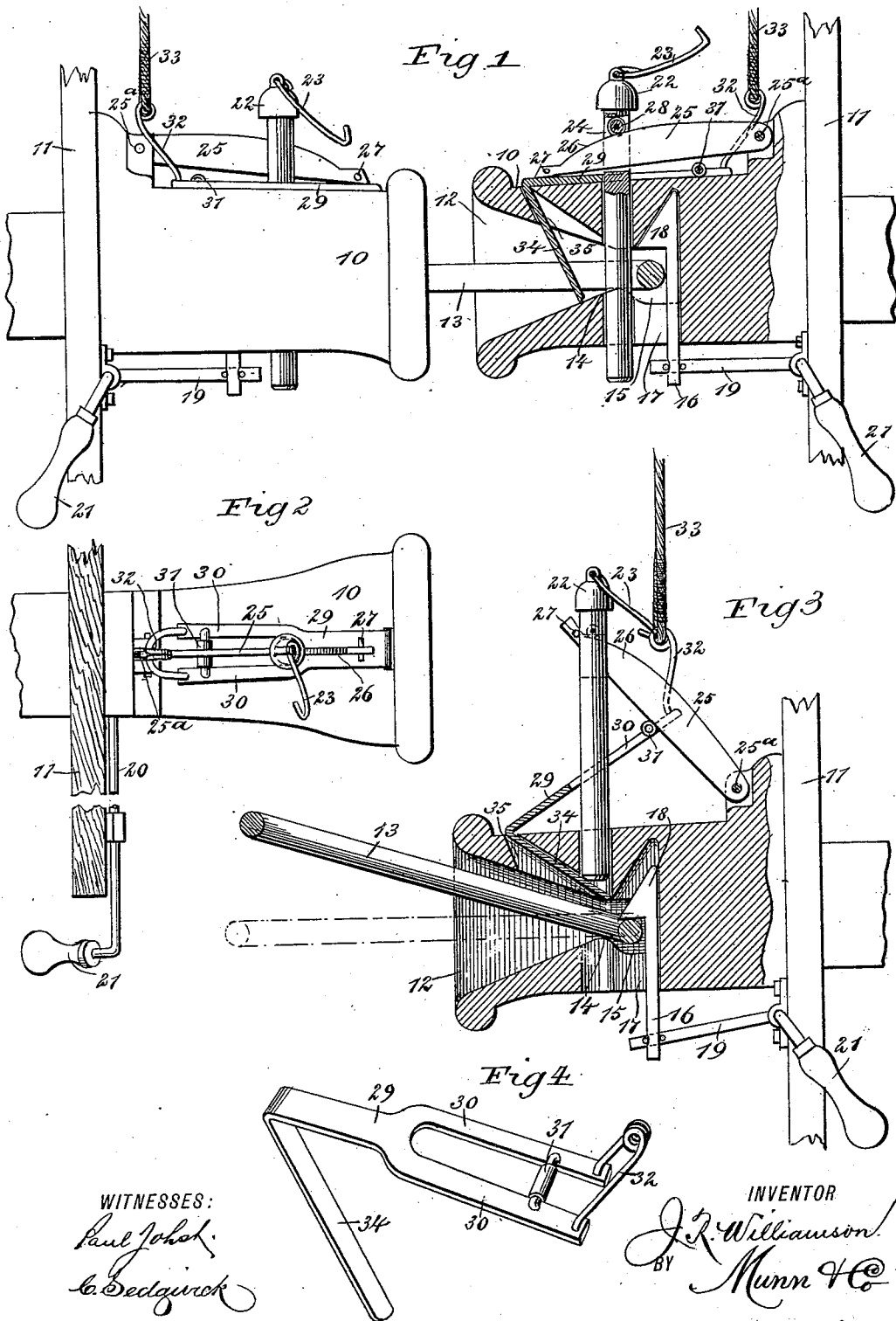


(No Model.)

J. R. WILLIAMSON.
CAR COUPLING.

No. 471,045.

Patented Mar. 15, 1892.



WITNESSES:
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JAMES R. WILLIAMSON, OF FANCY BLUFF, GEORGIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 471,045, dated March 15, 1892.

Application filed June 22, 1891. Serial No. 397,128. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. WILLIAMSON, of Fancy Bluff, in the county of Glynn and State of Georgia, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

My invention relates to improvements in car-couplings; and the object of my invention is to produce a coupling by means of which two cars may be automatically coupled together, which may be uncoupled from any convenient point upon a car, which may be made to couple with an old-fashioned car-coupling, which is provided with means for guiding a link so that it will readily enter an opposing coupling, and which may be operated without the necessity of the operator's placing himself between the cars.

To this end my invention consists of certain parts and details and combinations of the same, which will be hereinafter described and claimed.

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 broken view showing two couplings coupled together, one being shown in side elevation and the other in vertical section. Fig. 2 is a broken plan view of the coupling. Fig. 3 is a broken vertical section showing the coupling with the pin raised and with the link connected with the guiding mechanism, and Fig. 4 is a detail perspective view of one part of the pin-lifter.

The coupling is provided with a draw-head 10, which is secured to a supporting-frame 11, attached to a car in the usual manner, and the draw-head has a flaring mouth 12, adapted to receive a common form of link 13. The lower portion of the draw-head is inclined upward, and the highest point of the inner bottom surface of the coupling terminates in a ridge, as shown at 14, in Figs. 1 and 3, and a recess 15 is formed immediately behind this ridge, so that when a link is pushed into the back end of the draw-head the ridge 14 will form a fulcrum, which enables the link to be easily guided, as described below.

A hook 16, is held to move vertically in a recess 17, and in the recess 15 in the rear portion of the draw-head the upper end of the

hook terminates in an inclined head 18, which fits a corresponding recess in the upper portion of the draw-head. The lower end of the hook connects with the crank 19, which projects forward from a rod 20, the rod being mounted in suitable supports on the end of the car, and the rod terminates at the ends in crank-handles 21, which may be conveniently reached from the sides of the car. It will thus be seen that by pulling upon the handle 21, when the link is in position in the draw-head, the crank 19 and hook 16 will be forced inward, so that the hook will engage the rear upper portion of the link 13, and as the link will bear upon the ridge 14 the downward pressure of the hook will raise the outer end of the link, and by regulating the amount of pressure the link may be nicely guided so as to enter an opposing coupling.

The coupling is provided with a pin 22, which extends vertically through the draw-head in the usual manner and is adapted to engage the link, the pin having a hook 23 at the top, by means of which it may be held in a raised position, as described below. The pin is slotted vertically near its upper portion, as shown at 24, and extending through this slot is the upper member 25 of the link-lifter, said member being pivoted at its rear end to the draw-head, as shown at 25^a and having its forward portion inclined, as shown at 26, so that when the member 25 is raised it will easily lift the pin. A pin 27 extends transversely through the free end of the member 25, and the pin serves to prevent it from being withdrawn from the pin. A roller 28 is pivoted in the upper portion of the slot 24 in the pin, and this roller receives the pressure from the member 25 and serves to prevent excessive friction. The lower member of the link-lifter comprises a bar 29 and its attachments. The bar 29 is forked at its rear end, the members 30 of the fork being connected by a roller 31, which is arranged beneath the member 25 of the lifter, and the rear end of the fork carries a lifting-link 32, to which a cord 33 is attached, and this cord may connect by any suitable lever mechanism with the top or sides of a car, or it may be carried to any convenient part of a car. The front end of the bar 29 is doubled downward and inward at an acute angle, and the

lower portion 34 extends through a recess 35 in the front portion of the draw-head and passes downward through the recess in the draw-head in front of the pin 22.

5 The operation of the coupler is as follows: When two cars come together, the link 13 enters the draw-head in the usual manner and strikes the lower portion 34 of the bar 29. The front end of the bar is thus raised up-
10 ward, carrying with it the member 25, the front end of which rests upon the bar, and the member 25 raises the pin 22, so as to permit the link 13 to pass well into the draw-head. When the link passes beyond the pin,
15 the weight of the latter causes it to drop back to its normal position, and the link is thus retained in the draw-head. To uncouple the cars, the cord 33 is raised, thus raising the rear end of the bar 29 and bringing the roller
20 31 against the member 25. This raises the member 25 and pin 22, and also tips back the lower portion 34 of the bar 29, so that it will be out of the way of the link, and the link may then be withdrawn from the draw-head.
25 To guide the link, the brakeman grasps the handle 21 of the rod 20 and manipulates it in the manner already described.

When a lot of cars are to be drilled in a yard and it is not desired to couple them to-
30 gether, the link-lifter is raised and the hook 23 on the pin 22 is made to engage the lifting-link 32, as shown in Fig. 3, and it will thus be seen that the coupling cannot operate. It will be noticed that a common link is used
35 and a pin which is substantially like the common pin, so that the coupling may be easily coupled with an old-fashioned car-coupling, and the link lifting and guiding attachments may be easily applied to a common coupling.
40 Having thus fully described my invention, I claim as new and desire to secure by Let-
ters Patent—

1. In a car coupling, the combination, with a draw-head having a recess in its top and a

pin sliding in the draw-head, of a lever piv- 45
oted to the draw-head and having a sliding connection with the pin, and a forked bar on top of the draw-head and having one end pro-
jecting down through the recess of the draw-
head, substantially as described. 50

2. In a car-coupling, the combination, with a draw-head having a recess in its top and a pin sliding in the draw-head, of a lever piv-
oted to the draw-head and having a sliding 55
connection with the pin, and a forked bar on the draw-head having at one end a down-
wardly-projecting portion entering the recess of the draw-head and at its other end pro-
vided with a lifting-link, substantially as 60
herein shown and described.

3. The combination, with a draw-head hav-
ing a recess in its top and a slotted pin mount-
ed in the draw-head, of a lever pivoted in the
draw-head and extending through the pin, a 65
forked bar mounted on the draw-head and
having one end extending downward through
the recess in the draw-head, a roller mounted
in the bar beneath the lever, and means for
lifting the forked bar, substantially as shown
and described. 70

4. The combination, with a draw-head hav-
ing a ridge in the bottom and the link which
enters the draw-head, of a vertically-movable
hook mounted in the draw-head behind the 75
ridge, and a lever mechanism for operating the
hook, substantially as shown and described.

5. The combination, with a draw-head hav-
ing a ridge in the bottom and a link which
enters the draw-head, of a vertically-movable
hook mounted in the draw-head behind the 80
ridge, a handled rod extending transversely
beneath the draw-head, and a crank connect-
ing the rod with the hook, substantially as
shown and described.

JAMES R. WILLIAMSON.

Witnesses:

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