(No Model.)

C. HARRINGTON.

CAR COUPLING.

No. 459,547. Patented Sept. 15, 1891.

Fig. 1.

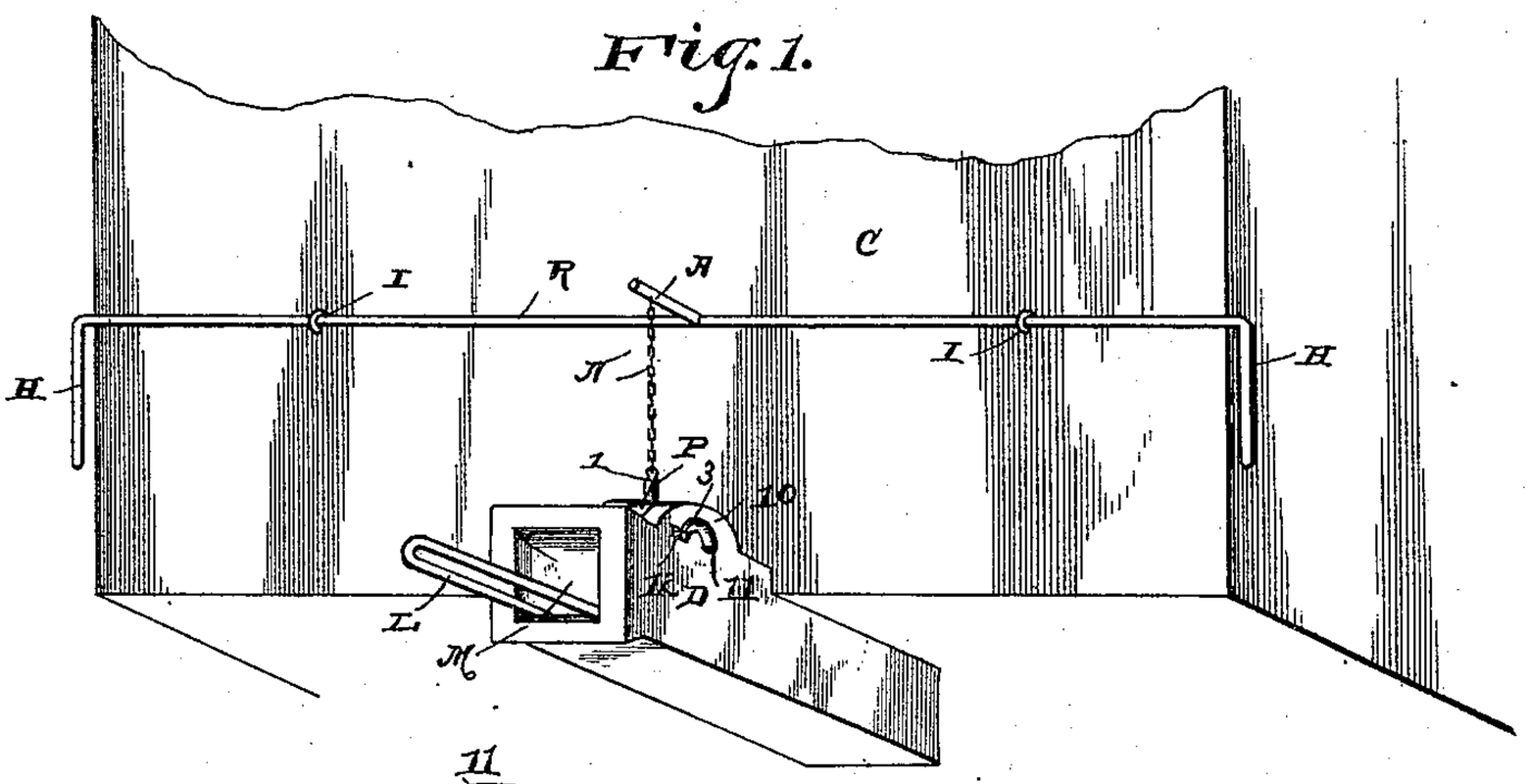


Fig. 2.

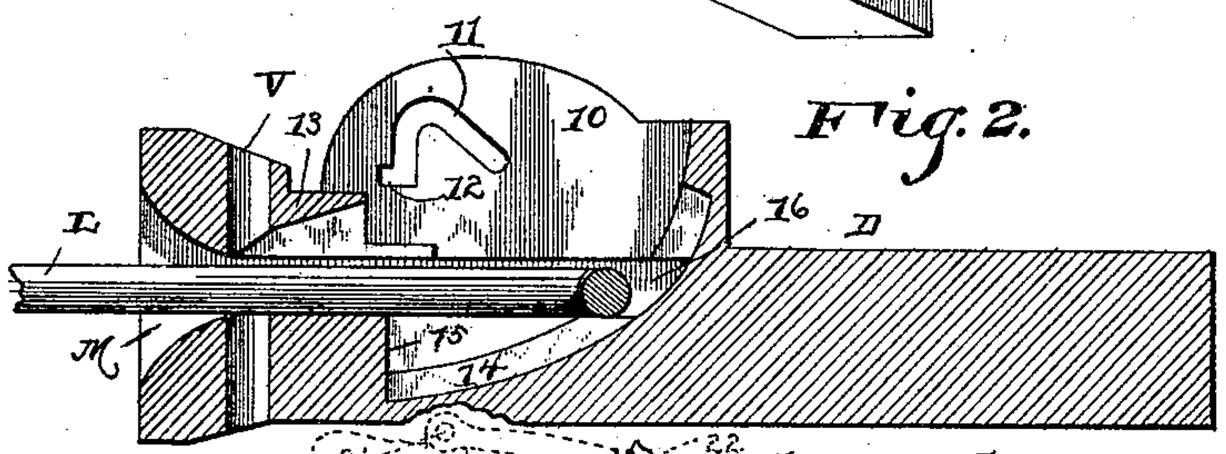


Fig. 3.

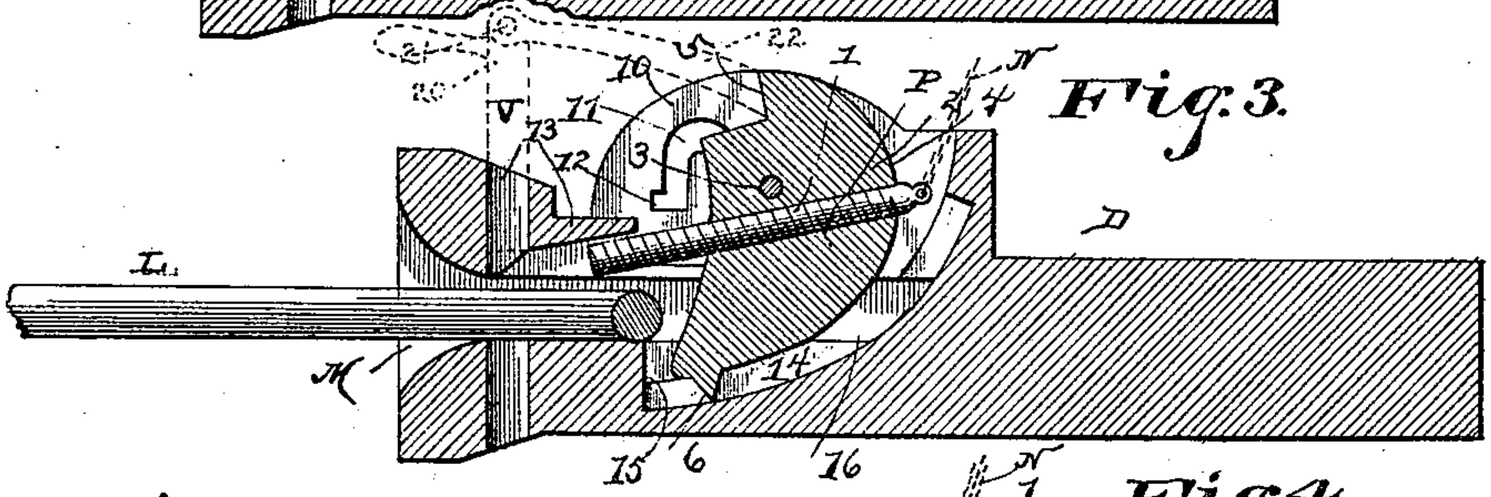


Fig. 5.

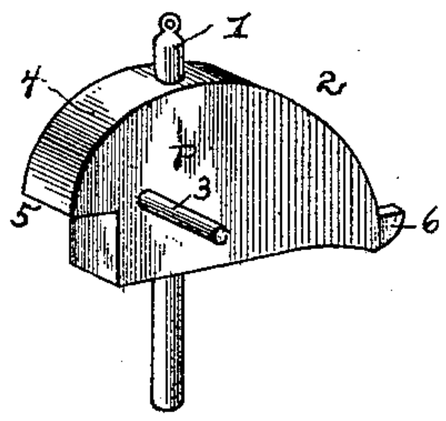
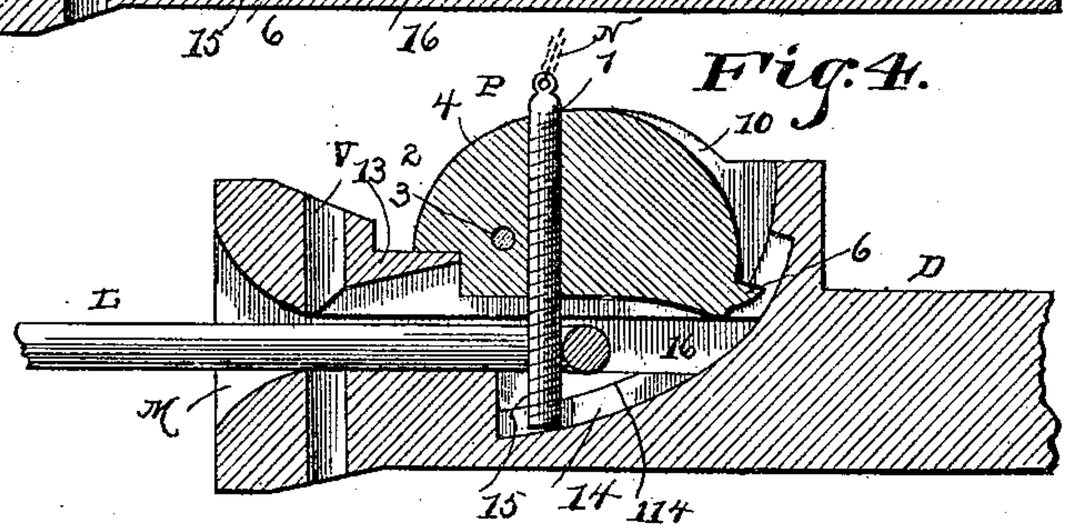


Fig. 4.



Witnesses

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CHARLES HARRINGTON, OF BARTLETT, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 459,547, dated September 15, 1891.

Application filed June 9, 1891. Serial No. 395,712. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HARRINGTON, a citizen of the United States, residing at Bartlett, in the county of Williamson and State of Texas, have invented a new and useful Car-Coupler, of which the following is a specification.

This invention relates to car-couplings, and more particularly to that class thereof known as "swing-pin;" and the object of the same is to effect improvements in devices of this character.

To this end the invention consists of the specific details of construction hereinafter more fully described and claimed, and as illustrated on the sheet of drawings, wherein—

Figure 1 is a perspective view of the end of a car with my improved car-coupling attached, showing a link locked therein. Fig. 2 is an enlarged central longitudinal section of the draw-head with the pin omitted. Fig. 3 is a similar section showing the pin ready to receive the link. Fig. 4 is a similar view with the link locked in place. Fig. 5 is an enlarged perspective detail of the catch and pin.

Referring to the said drawings, the letter C designates the body of a car, in eyes I in the end of which is journaled a horizontal rod R, having handles H at its ends and having a forwardly-projecting arm A at its center.

D is the draw-head, having the usual mouth M and vertical pin-opening V adapted to receive the ordinary coupling-pin for engaging the link L; but P is the pin which I use in connection with the present invention.

All the parts above mentioned are of the usual construction, with the exception set forth in the following specific description.

The pin P comprises the pin proper 1, whose upper end is connected by a chain N with the front end of the arm A on the horizontal rod R. The body of this pin passes through a catch 2, as seen in Fig. 5, from which it may be removed in case either part becomes broken or worn, and this catch has a transverse pin 3 and a rounded upper edge 4, terminating in a shoulder 5 at its front end and a tongue 6 at its rear end, all as best seen in said figure.

The above-described catch and pin work within the body of the draw-head which is open at its top and, at each side of this opening rises a curved bracket 10, having an inverted-V-shaped slot 11, with a small offset 12 at its front end, within which slot the transverse pin 3 works.

13 is a shoulder formed at the front end of the opening in the top of the draw-head, and the shoulder 5 rests upon the upper side of the pin 1 against the lower side of this shoulder, according to the position of parts.

14 is a curved guide in which the tongue 6 moves in the operation of the device, and 15 is the shoulder at the front end of this guide, against which the pin rests when the link is locked in place. The opening 16 extends from the mouth M backwardly to and across the guide 14, all as best seen in Fig. 2.

In operation, the parts standing in the position shown in Fig. 3, with the transverse pin 3 in the rear end of the slots 11 and the pin 1 resting beneath the shoulder 13, if now the link L is forced into the mouth M it strikes the body of the catch 2 and turns it to the rear, thereby moving the tongue 6 up the curved guide 14. I should have said that the rounded edge 4 of the catch 2 is eccentric to the transverse pin 3, and hence when the catch moves to the rear in the manner described this rounded edge, bearing against the walls of the guide 14, causes the catch to rise bodily within the draw-head, whereby the transverse pin 3 is moved upwardly in the rear side of the slots 11. The pin 1 is meanwhile moving downwardly from the shoulder 13 toward the shoulder 15, and just at the moment when its lower end passes over the corner of the latter shoulder the transverse pin 3 passes over the angle of the slots 11 and the entire catch and pin drops to the position shown in Fig. 4, the pin 1 being then, of course, through the link. The tongue 6 by striking the upper end of the curved guide 14 prevents a dislocation of parts in uncoupling, which movement is effected in the following manner: The parts being in the position shown in Fig. 4, if one of the handles H is turned in the proper direction to draw upwardly on the chain N with a sudden pull the entire catch and pin will be raised bodily within the draw-head until the transverse pin passes over the angle of the slots 11 and the pin passes over the corner of the shoulder 15, and the pull on the chain N at this time drawing the catch to the rear the latter falls by its own gravity to the position shown

in Fig. 3, when the link L is free to draw out. The offsets 12, to which reference was above made, are preferably, although not necessarily, provided at the front ends of the slots 11, and when the link is locked in place the transverse pin 3 draws into these offsets by the tension on the link, as seen in dotted lines in Fig. 2. It will be obvious that in either position of parts an ordinary coupling-pin could be passed through the vertical pin-opening V, and this is especially serviceable when the parts are damaged by breakage or wear.

The above-described device possesses many advantages which practical usage will develop and which need not be elaborated here, and I do not limit myself to the exact details of construction, as considerable change may be made therein without departing from the spirit of my invention.

In Fig. 3 is shown in dotted lines a standard 20, which may be removably seated in the upper end of the pin-opening V or may rise from the draw-head at any suitable point forward of the brackets 10, and in the upper end of this standard, on a pivot 21, is mounted a pawl 22, whose weighted inner end is adapted to engage the shoulder 5 on the catch 2. This device is useful when it is desired to switch the cars without having them automatically couple, as is frequently the case, and it will be evident that when the parts are in the position shown the link L, when driven into the draw-head, cannot turn the catch to move the pin 1 through the link, because the pawl 22 prevents.

What is claimed as new is—

1. In a car-coupling, the combination, with a draw-head having an open top, a bracket at each side of the opening therein having an inverted-V-shaped slot, and a shoulder 15 beneath the opening 16 within the draw-head, of a catch located between said brackets, a transverse pin through said catch engaging the slots therein, a coupling-pin through the catch at right angles to the transverse pin and adapted to engage said shoulder, and means for operating the catch, as set forth.

2. In a car-coupling, the combination, with a draw-head having an open top, brackets at the sides of said opening, each having an inverted-V-shaped slot with a forwardly-extending offset at its front end, and a shoulder 13 above and 15 below the longitudinal opening 16 in the draw-head, of a catch located between said brackets, a transverse pin through the catch engaging said slots, a coupling-pin through the catch at right angles to the transverse pin and engaging the upper shoulder when raised and the lower shoulder when lowered, and means for operating the catch, as set forth.

3. In a car-coupling, the combination, with a draw-head having an open top and a longitudinal opening, a shoulder 13 at the front end of said open top, and a shoulder 15 in the bottom of said opening, of a catch located in the open top and having a shoulder 5, a pin depending from said catch and engaging beneath the upper shoulder 13 when the pin is raised, the pin engaging the lower shoulder 15 when it is lowered and the shoulder 5 on the catch at this time engaging the upper shoulder 13, and means for moving the catch, as set forth.

4. In a car-coupling, the combination, with a draw-head having an open top, a bracket at each side thereof having an inverted-V-shaped slot, and a curved guide 14 at the rear end of the longitudinal opening in the draw-head, of a catch located between said brackets, a transverse pin therein engaging said slots, a pin depending from the catch, a tongue 6 at the rear end of the catch engaging said guide, and means for operating the catch, as set forth.

5. In a car-coupling, the combination, with a draw-head having an open top, a bracket at each side thereof having an inverted-V-shaped slot, and a curved guide at the rear end of the longitudinal opening in the draw-head, of a catch located between said brackets, a transverse pin therein engaging said slots, a pin depending from the catch, the curved upper and rear face of the catch being eccentric to said transverse pin and bearing against said guide, and means for raising the catch, as set forth.

6. In a car-coupling, the combination, with a draw-head having an open top, a bracket at each side thereof having an inverted-V-shaped slot, a curved guide at the rear end of the longitudinal opening in the draw-head, a shoulder 15 in the bottom of said opening, and a shoulder 13 at the front end of the open top, of a catch located between said brackets, a transverse pin therein engaging said slots, a pin depending from the catch and respectively engaging the upper and lower shoulders when it is raised or lowered, the curved upper and rear face of the catch being eccentric to the transverse pin and bearing against said guide, a crank-shaft journaled across the end of the car and having a projecting arm, and a chain connecting said arm with the catch, as set forth.

7. In a car-coupling, the combination, with a draw-head having an open top and a vertical pin-opening intersecting its longitudinal opening a catch in said open top having a shoulder 5, a pin depending from said catch, and means for operating the latter, of a standard removably seated in the upper end of said pin-opening, and a pivoted pawl in said standard engaing the shoulder on the catch when the latter is in position to hold the pin raised, as hereinbefore set forth.

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

CHARLES HARRINGTON.

Witnesses:
J. S. POYNOR,
W. W. WALTON.