

No. 613,696.

Patented Nov. 8, 1898.

W. B. LYON.
CAR COUPLING.

(Application filed Feb. 16, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

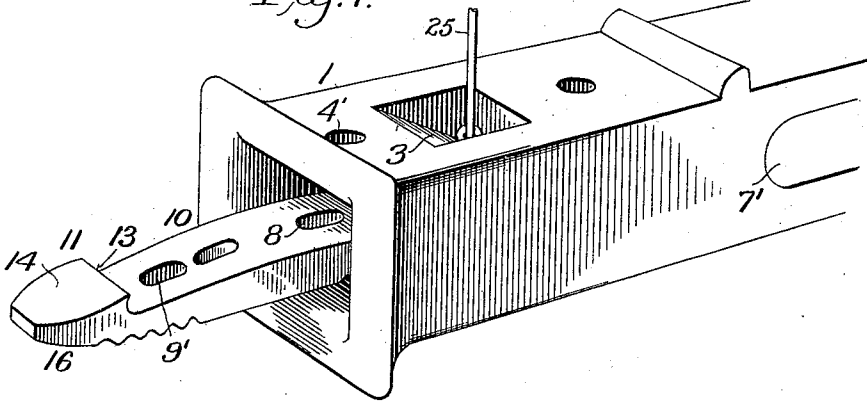


Fig. 2.

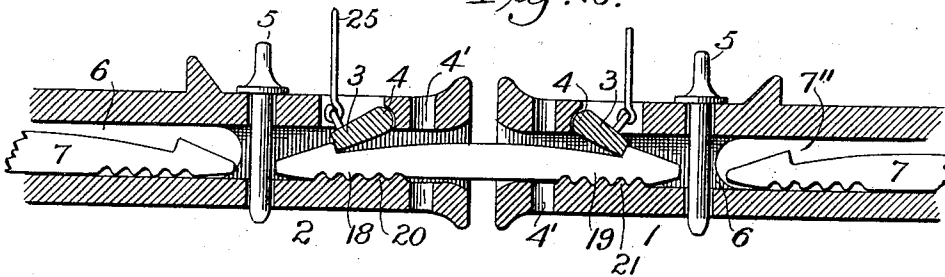
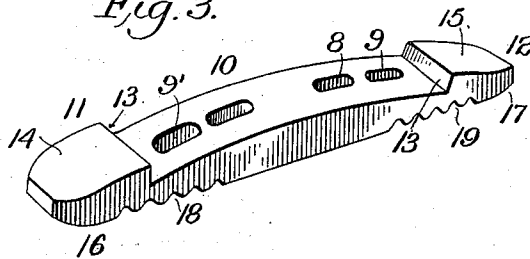


Fig. 3.



WITNESSES

James F. Duhamel.
W. M. Poynter

INVENTOR,

WILLIAM B. LYON,

By John H. Hetherington
Attorney

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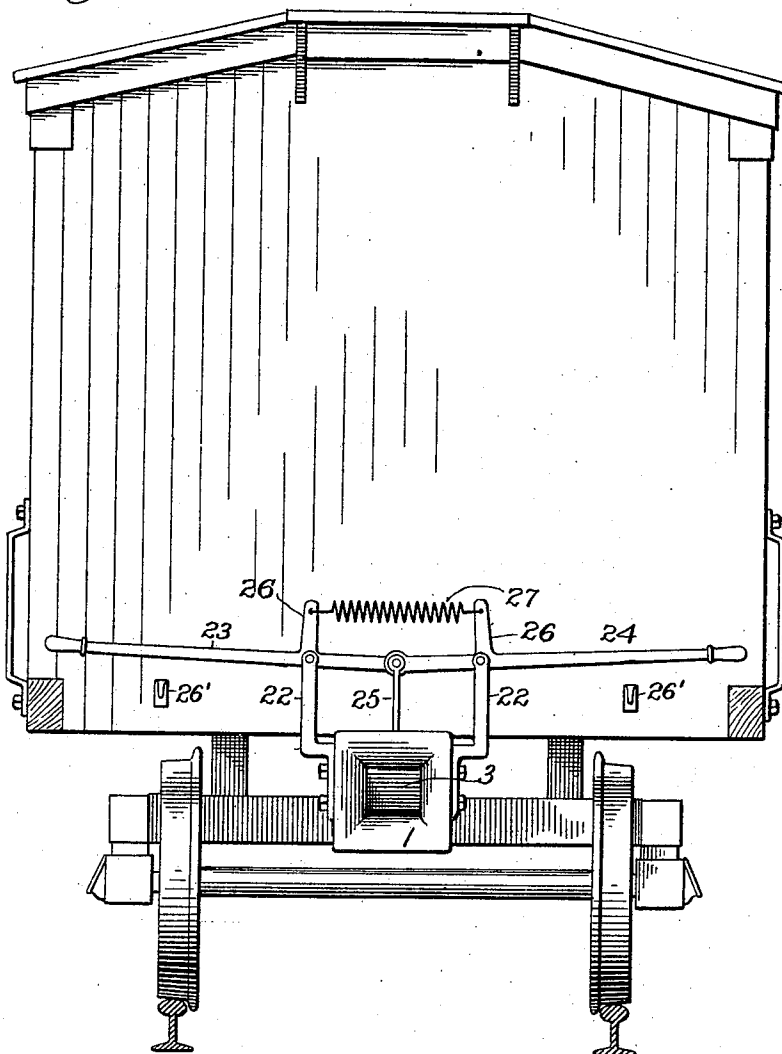
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2 Sheets—Sheet 2.

Fig. 4.



WITNESSES

James F. Duhamel
W. M. Dwyer

INVENTOR,

WILLIAM B. LYON,

By John Haddock
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM BOGART LYON, OF HARTSEL, COLORADO, ASSIGNOR OF ONE-HALF
TO HORACE ALDEN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 613,696, dated November 8, 1898.

Application filed February 16, 1897. Serial No. 623,680. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BOGART LYON, a citizen of the United States, residing at Hartsel, in the county of Park and State of Colorado, have invented certain new and useful Improvements in Draw-Bars and Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to car-couplings.

My object is to provide an automatic car-coupler of extremely simple and cheap construction which will be of great strength and of such peculiar form that the strain will be more effectually distributed.

A further object is to provide a novel form of car-coupling which will be adapted to couple with any ordinary form of coupling and one which can be readily uncoupled whenever desirable and will not disengage should a car become derailed.

Having the foregoing and other minor objects in view, the invention consists of a car-coupling comprising certain improved features and novel combination of parts appearing more fully hereinafter.

In the accompanying drawings, Figure 1 is a perspective view showing the link coupled to one draw-head and adapted for reception in the other; Fig. 2, a longitudinal section showing the complete coupling and also the idle links in position; Fig. 3, a perspective view of the link; and Fig. 4, an end view of a car equipped with my improved coupler, showing the operating mechanism for the locking-plate.

The draw-heads are designated by the numerals 1 and 2 and they are duplicates. Each is provided with an opening 2, leading down from its top into its interior.

The numeral 3 designates a locking-plate of proper size to fit within the opening and which has its forward ends pivoted to the draw-head at 4. The locking-plate is adapted to remain normally dropped by gravity and the action of a spring, described later. Each draw-head has an outer pin-opening 4' to receive a pin when coupling to the old form of draw-head. It also has an opening adapted

to receive a pin 5. It will be observed the draw-head is recessed or chambered back of said pin 5, as at 6, and this chamber holds an extra or idle link, (shown at 7,) this link being of the form used to couple the draw-heads, and the same will be described presently. There are two openings 7' and 7'' in the sides of the draw-heads, so that the idle link can be inspected when the cars are coupled. The link consists of a bar of metal having elongated slots 8 and 9 in one end and another slot 9' in its other end. It is cut away for a considerable part of its length, as at 10, thereby forming two heads 11 and 12 and the shoulders 13. The upper and lower faces 14 and 15 of each head are beveled, as shown, and the sides are likewise beveled at 16 and 17. Somewhat inward from the shoulders the bottom of the link is formed with sets of serrations or teeth 18 and 19. In the bottoms of the draw-heads there are also similar serrations or teeth 20 and 21, which are so disposed as to be adapted to be engaged with the aforementioned teeth. When the draw-heads are coupled, the free ends of the locking-plates drop in front of the heads and the serrations engage, so that the strain is partially removed from the link and brought on the draw-heads.

The uncoupling mechanism on the car will now be described.

The numerals 22 designate brackets, which are secured to the draw-head on opposite sides thereof. There are two levers 23 and 24, which are pivotally connected to the uprights and extend laterally to the sides of the car. These levers have their inner ends connected to the locking-plate by a rod or bar 25. Said levers have upward arms or projections 26, and the numeral 27 designates a coiled spring which connects these projections, so that the inner ends of the levers are kept down and the locking-plate also pressed down. Catches 26' are employed for locking with the levers to keep the locking-plate raised whenever desirable. It will be seen, therefore, that the device can be uncoupled from either side of the car, and hence all danger to the trainmen is obviated.

Ordinarily the link is carried by one draw-head, and the locking-plate of the latter is in engagement with one of the shoulders of said

link. When the guards come together, the projecting end of the link is received in the draw-head of the other car, and after riding on said head the locking-plate of the latter
 5 draw-head drops in front of the remaining shoulder of the link. The ends of the link are beveled in order that they may be properly guided into the openings in the draw-heads. Whenever it is desirable to uncouple,
 10 this can be done by depressing either lever, whereupon the locking-plate will be raised and the link disengaged from the car whose releasing mechanism has been operated, and said link will be carried by the draw-head of
 15 the other car. If a link should become broken, the idle link in the draw-head can be pulled out and substituted. I provide the slots in the link, so that if it is desirable to couple my improved coupler to the ordinary
 20 form of draw-head the pin of the latter can be passed down through the slot in the link. The additional slot in the link is to permit of adjustment of the links to bring the draw-head to the necessary proximity. By reversing
 25 the link the holes change position for coupling to a common coupler.

It will be observed that the pins carried by my improved couplers prevent longitudinal movement inwardly in either draw-head. It
 30 will be seen that a partially-derailed car can be readily coupled and drawn back on the track if my improved coupler is used. This is generally not possible with the common form of coupler.

35 There are many slight changes which could be resorted to in carrying out the invention without detracting from any of the advantages thereof, and hence it is to be noted that I do not limit myself to the precise construction
 40 herein shown and described, but consider that I am entitled to all such changes as properly come within the spirit and scope of the invention.

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

1. In a car-coupler, the combination with a draw-head having a plurality of teeth on its interior bottom wall, of a link having a plurality of teeth on its bottom face which link
 50 is received in the draw-head and has its teeth engaged with those aforesaid, and supplemental means for holding the link in the draw-head.

2. In a car-coupler, the combination of a
 55 draw-head having teeth on the bottom of its interior, a link adapted to be received in said draw-head provided with a head and with teeth on its bottom face adapted to engage the teeth on the draw-head, and a pivoted,
 60 gravity-operated locking plate or pawl whose free end is adapted to engage with said head, substantially as described.

3. The combination of a draw-head having two holes for coupling-pin and a deep cavity
 65 for entirely inclosing a coupling-bar, a locking-pawl articulating with the draw-head between the pin-holes, a coupling-bar having holes and shoulders as described, and a movable pin to fit either hole in the draw-head
 70 and to serve as an abutment for the coupling-bar when the locking-pawl is used and a coupling-pin when the open link is used, whereby the draw-head is adapted to contain a coupling-bar and to be interchangeably coupled
 75 with its counterpart or with a foreign link-and-pin draw-head and coupler, substantially as described.

4. In a car-coupler, the combination with a draw-head, of pivoted levers extending in
 80 opposite directions toward the sides of the car and provided with arms, a spring connecting said arms, a locking-plate for the draw-head, and a connection between the inner ends of the levers and the locking-plate.
 85

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WM. BOGART LYON.

Witnesses:

M. R. HANLIN,
 S. C. QUIGGLE.