

J. C. McCONNELL.

Car-Couplings.

No. 157,290.

Patented Dec. 1, 1874.

Fig. 1

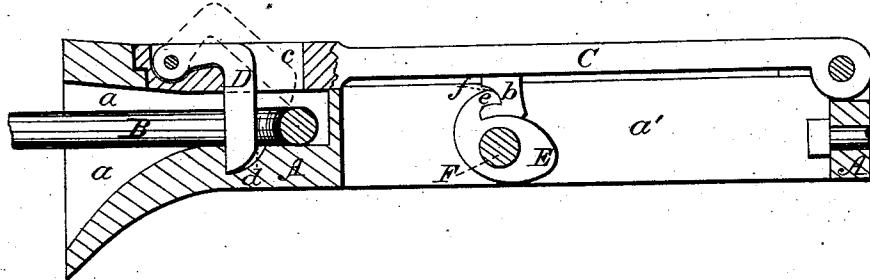
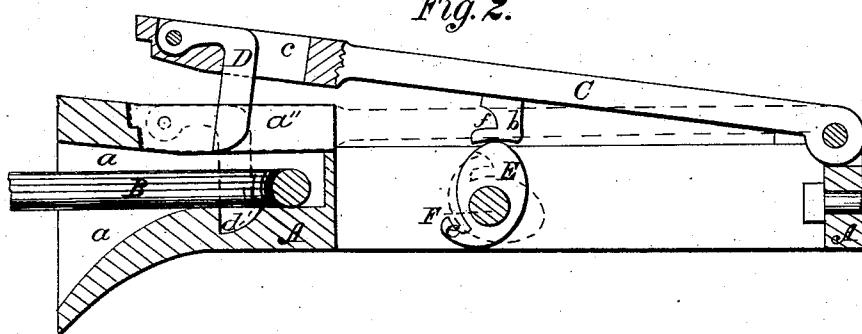


Fig. 2.



WITNESSES,

E. M. Schaeffer

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UNITED STATES PATENT OFFICE.

JAMES C. McCONNELL, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO C. D. ALEXANDER, OF PHILADELPHIA, PA.

IMPROVEMENT IN CAR-COUPINGS.

Specification forming part of Letters Patent No. 157,290, dated December 1, 1874; application filed April 7, 1874.

To all whom it may concern:

Be it known that I, JAMES C. McCONNELL, of Washington, in the county of Washington and in the District of Columbia, have invented certain new and useful Improvements in Car-Couplings; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical central section of my improved coupling upon a longitudinal line, the link being shown in engagement with the draw-head; and Fig. 2 is a like view of the same, with said link released from engagement, and in a position for withdrawal.

The object of my invention is to improve a device upon which Letters Patent No. 148,485 were granted to me on the 10th day of March, 1874. It consists in the combination and application of certain devices by which the engagement and release of the link with the draw-head is accomplished, and certain parts dispensed with. It consists, further, in the means employed for locking the parts that engage the link with the draw-head, all of which is hereinafter substantially set forth.

In the annexed drawing, A represents a draw-head having the usual bell-shaped opening *a* in and through its forward end, and provided with a vertical longitudinal slot, *a'*, which extends, from a point near said forward end, rearward nearly to the opposite end, as shown. C represents a bar pivoted at one end within the rear end and upper side of the slot *a'*, and extending forward within said slot, and having its opposite end contained within a suitable recess, *a''*. Upon the lower side, and midway between the extreme ends of said bar, is provided a projection, *b*, which has upon its forward side a notch, *f*. The bar C is also provided, near its front end, with a longitudinal slot, *c*, the rear portion of which extends downward through said bar. The slot contains a reversed L-shaped bar, D, pivoted at the forward end thereof within the corresponding end of said slot. When in position to hold the link, the vertical portion of said bar forms a right angle with bar C, and its lower end

rests within a suitable niche within the lower side and near the center of the opening *a*.

As thus arranged, it will be seen that the bar D, from its pivotal connection with the bar C, is permitted to move freely rearward when the link B is inserted in the draw-head, and, after the link is in place, the bar will automatically drop into place, and secure the link.

In order that the link B may be released from engagement with the draw-head A it is requisite that the lower end of the vertical portion of the bar D should be raised until upon a line with the upper side of the opening *a*, which operation is effected by means of the following-described mechanism: A shaft, F, is journaled horizontally and transversely within the draw-bar, a little forward of midway between the vertical portion of the bar D and the pivoted end of the bar C, and is provided within the slot *a* with a wiper, E, which bears against the projection *b* upon the lower side of the bar C. The wiper E is provided with a hooked projection, *e*, which, when in normal position, overlaps or enters the notch *f* on the forward side of the projection *b*, thereby firmly locking the bar C in place.

By partially rotating shaft F the projection *e* is freed from interference with the notch *f*, which permits, by farther rotation, the bar C, and, consequently, the bar D, to be raised, by the action of the wiper E upon the projection *b*, to the required height, and the link B to be withdrawn.

The lower end of the vertical portion of the bar D is inclined backward and upward, so that, before the front side of the said bar is entirely released from the niche *d*, the link will, in being drawn forward, begin to bear upon the incline, which provision guards against the bending of the bar D.

It is intended that the shaft F shall be provided with suitable attachments, so as to enable it to be operated either from the top, side, or platform of a car.

To couple two or more cars, it is only requisite that one of each pair of couplers should contain a link, and that the cars should move together, when said link, entering the mouth of the opposite draw-head, pushes backward

and upward the bar D a sufficient distance to permit the passage of the link beneath the lower end of said bar. The link, having passed backward a certain distance the bar D, automatically drops into position, thereby engaging the two draw-heads.

The device described is simple in construction, efficient in operation, durable, and not liable to get out of order, and the positions from which it may be manipulated render it entirely unnecessary for train men to expose themselves to the danger usually attending the ordinary coupling of cars.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The combination of draw-head A, having slots a' a'' and niche d , pivoted bar C, having

slot e , and pivoted bar D, having the beveled lower end, substantially as and for the purpose set forth.

2. The wiper E, having projection e , in combination with the bar C, having projection b with notch f , substantially as and for the purpose set forth.

3. The combination of a draw-head, shaft F, wiper E, bar C, and bar D, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of April, 1874.

JAMES C. McCONNELL.

Witnesses:

E. M. SCHAEFFER,

F. B. LOFTUS.