# M. B. MARCUM.

## Car-Couplings.

No. 148,227. Patented March 3, 1874.

*Fig. 1.*

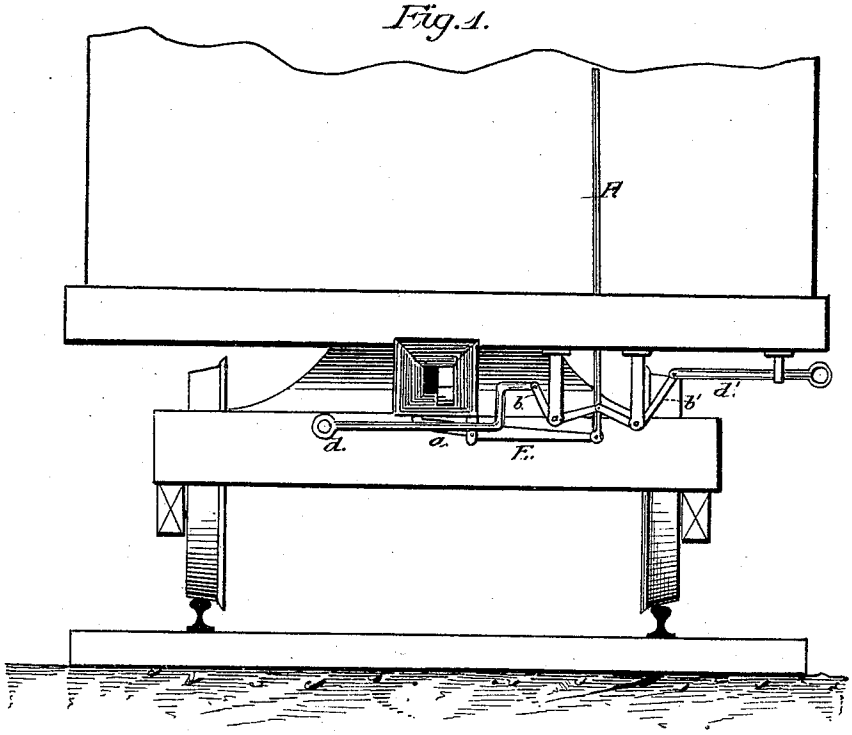



*Fig. 2.*

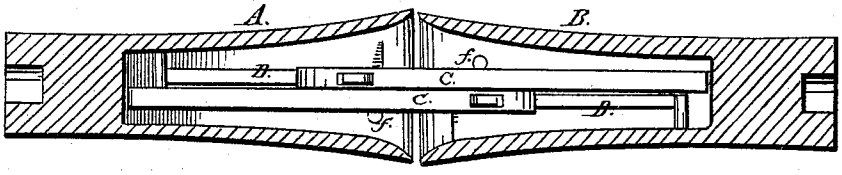
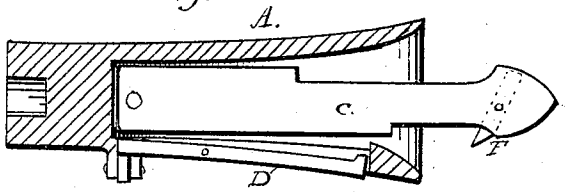



*Fig. 3.*




Attest.

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **148,227**, dated March 3, 1874; application filed February 6, 1874.

*To all whom it may concern:*

Be it known that I, MARNELL B. MARCUM, of Cameron, in the county of Clinton and State of Missouri, have invented certain new and useful Improvements in Car-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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention has for its object to furnish an improved car-coupling, simple in construction, safe and reliable in operation, which will couple itself as the cars are run together, and will couple cars of different heights with facility, affording perfect safety to the operator in uncoupling, and may be coupled with the ordinary link and pin, if required; and it consists in the construction and combination of parts, as hereinafter more fully described.

In the accompanying drawings, similar letters of reference indicate corresponding parts in the different figures.

Figure 1 shows a portion of the end of a freight-car with the coupling in place, also the devices for releasing the coupling. Fig. 2 is a horizontal section of a pair of couplings, showing the position of the parts when in use. Fig. 3 represents a vertical section, giving the shape and position of the draw-bar, together with the tripping-lever by which it is disengaged whenever desired.

A and B represent the adjacent bumpers or draw-heads of two cars, the rear parts of which are constructed and secured to the cars in the ordinary manner. The forward ends are made with a wide and flaring mouth, so that they shall be sure to catch the draw-bar C of an approaching car. This bar is pivoted at its rear end within the draw-heads, and is enlarged at the same end in its vertical dimensions to such an extent as to nearly fill the cavity in that direction, leaving only sufficient play to allow it to adjust itself to cars of varying heights. Its outer end is spear-shaped, and is provided with a tongue or pawl, F, which is pivoted within a mortise passing diagonally through the bar near its end. When the bumpers or draw-heads come together, this pawl upon each draw-bar drops into a recess in the opposite draw-head, thus locking them together. In order to allow the draw-bars to pass each other, they are each made of such thickness as to fill less than one-half the width of the cavity within the draw-head. Upon the under side of the draw-heads is formed a longitudinal mortise or slot, for the reception of the pivoted lever D, one end of which lever is arranged to raise the pawl of the draw-bar out of the notch in the bottom of the draw-head when operated by means of the lever E, which is pivoted between two projecting lugs at *a*, and one end of which is so formed as to enter the slot and raise the lever D, when its opposite end is depressed by the rod H. This rod passes up through the platform, and against the end of the car to its roof, in order to furnish a means of uncoupling from that position. Two bell-cranks, *b* and *b'*, are also connected at *c* to the rod F, and the opposite extremities of each crank by a pivotal joint to the rods *d* and *d'*, each provided at its outer end with a handle, which affords a ready means of disconnecting the draw-bars, and thus uncoupling the cars from either side of the track. Holes *f* and *f'* are formed in the draw-heads, through which pins are inserted when the ordinary link is used.

It will be seen that the construction and arrangement of devices above described will prove very advantageous in making up long trains of freight, as well as in the handling of cars in the vicinity of depots, as its self-coupling action, and the arrangement of mechanism by which the cars may be detached from each other upon either side or the top, enable a less number of men to accomplish the same work in a given time.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is the following:

The draw-head A, provided with the spear-shaped draw-bar C, having catch-pawl F, in combination with the tripping-lever D, lever E, rod H, bell-cranks *b b'*, and handled rods *d* and *d'*, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand.

MARNELL B. MARCUM.

Witnesses:
M. K. CHANDLER.
M. P. HARWOOD.