(No Model.)

A. P. BREWSTER.

CAR COUPLING.

No. 385,789. Patented July 10, 1888.

Fig. 1.

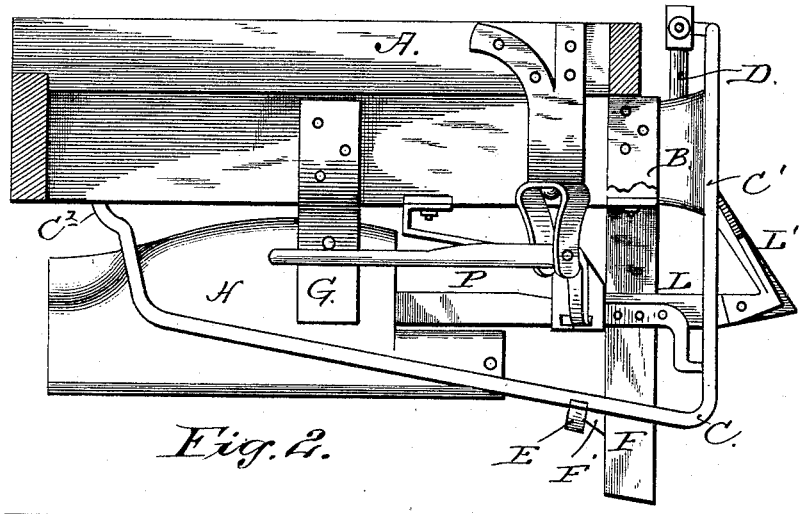


Fig. 2.

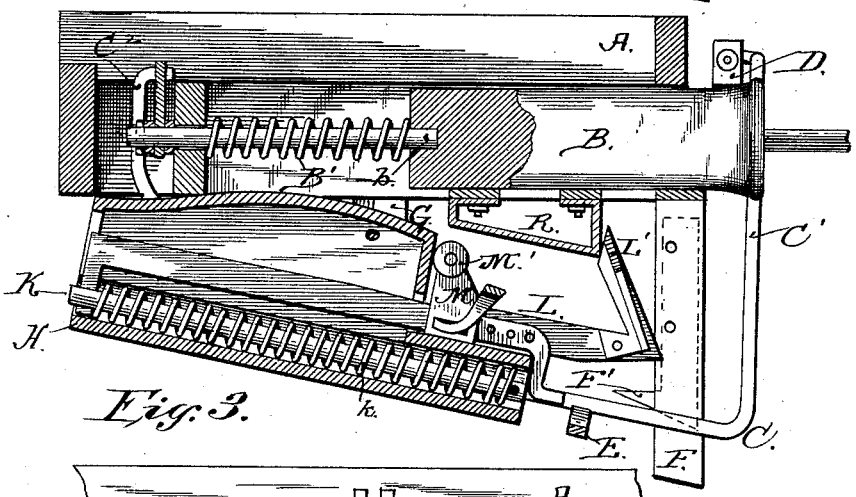
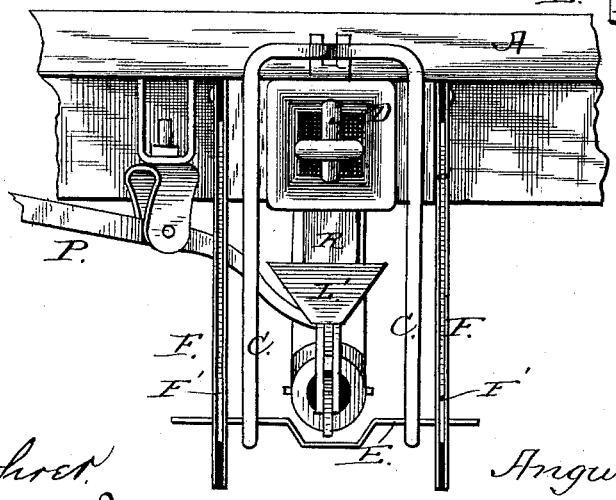


Fig. 3.



Witnesses.
H. S. Rohrer.
Parker & Sweet

Inventor.
Angus P. Brewster.
By Chas W. Dorsey.
Attorney.

UNITED STATES PATENT OFFICE.

ANGUS P. BREWSTER, OF NEWNAN, GEORGIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 385,789, dated July 10, 1888.

Application filed March 29, 1888. Serial No. 268,814. (No model.)

To all whom it may concern:

Be it known that I, ANGUS P. BREWSTER, a citizen of the United States, residing at Newnan, in the county of Coweta and State of Georgia, 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 appertains to make and use the same.

My invention relates to an improvement in automatic car-couplings; and it consists in the construction and arrangement of parts, as will be hereinafter fully described, and specifically designated in the claims.

The object of my invention is to provide a car-coupler which will possess the advantages of automatically coupling, and being arranged to uncouple from a point at the side of the cars, thus avoiding the dangers coincident with entering between the cars for such purpose. I attain this object by the mechanism illustrated in the accompanying drawings, wherein like letters of reference indicate similar parts in the several views, and in which—

Figure 1 is a side view showing the parts in position for coupling and the car-frame in section; Fig. 2, a similar view showing the link in a coupled position and the link guide and adjuster lowered, and Fig. 3 is a front elevation.

In the drawings, A represents the car-frame; B, the draw-bar, which is secured to the frame and held in place by a rod, *b*, permanently attached thereto and extending back through a brace or cross-frame, its end protruding beyond the same and capped by a suitable nut. A spiral spring, B′, surrounds the rod *b* between the ends of the draw-bar and beam, its ends abutting against the same, thus acting as a cushion for the draw-bar.

C C are two side bars running the entire length of the draw-bar, and having their ends connected by U-shaped rods C′ C², the first of which extends up on both sides and over the top of the draw-head directly over the pin-opening therein, and has a pin, D, pendent therefrom. The rear connection, C², is carried up and secured to the end of the rod *b* in a manner which allows the front ends of bars C to be actuated up and down, but prevents a longitudinal movement of the same.

E is a cross-bar secured to the bars C at a point near their forward ends, the ends of the same projecting beyond the sides of said bars, as shown in Fig. 3. This bar E is bent downward at its center.

F F are two downwardly-extending supports and guides situated on the outside in close proximity to the bars C, to prevent the same from moving laterally. They are provided with recesses or grooves, in which are mounted swinging latches F′, which are pivoted at their upper ends, and have catches or extensions *f* at their lower ends, which protrude beyond the rear edges of the supports at a point directly above the ends of the bar E.

Pivotally secured to suitable hangers, G, between bars C, is a casing, H, having a cylindrical opening running through its center of larger diameter at its rear than at the forward end, thereby forming a shoulder.

K represents a link-adjusting bar having its rear portion inserted in and extending through the openings in casing H, and which is surrounded and has secured to its end a spiral spring, *k*, incased in the enlarged portion of casing H. The forward end of this spring abuts against the shoulder formed by the smaller opening. The forward end of bar K is formed with an upwardly-inclined extension, L, which has a guide plate, L′, secured thereto, of a width equal to the width of the opening in the draw-head.

Secured rigidly to the upper side of the bar *k* is a vertical bearing-arm, M, having friction rolls or wheels M′ mounted in its upper end, for purposes hereinafter mentioned. A downwardly and forwardly extending arm, N, is secured to the under side of the bar *k* at a point somewhat in advance of the bearing M. An elongated opening, O, is made in the bar *k*, in which is placed the end of the short arm of an operating-lever, P, which is secured to the frame of the car by a universal-joint connection, its long arm extending out beyond the side of the car.

R is an inclined downwardly-extending catch-block secured to the bottom of the car directly over the bar *k*, near the bearing-arm M, the forward side of this catch-block being vertical, as shown.

Having thus described the construction and arrangement of my coupling, the operation

may be described as follows: When the pin is to be raised in a position to admit the link in the draw-head, the short arm of lever P is forced down and forward, bringing the arm N on the bar *k* below the cross-bar E. The lever then lifts the same, and consequently the bars C, up until the ends of the bar E come in contact with the catches on the latches F′, forcing them back, which by gravity immediately assume their normal position as soon as the ends of the bar pass above them. The bars C are thus locked in an elevated position, thereby raising the pin out of the draw-head and in position to immediately descend and couple the link. As the draw-head of the adjacent car with the link therein comes in contact with and the link enters the draw-head, the concussion forces the draw-bar back, thereby carrying the bars C, disengaging the ends of bar E from the latches F′, and allowing the pin to fall into the draw-head and thus couple the link. When a car having a lower draw-head is to be coupled, the bar *k* is forced forward by lever P, the arm N passing over the bent portion of bar E, and as its inclined end reaches a point beyond the draw-head it is forced up until the wheels in bearing-arm M come in contact with the vertical side of catch-block R, which holds the bar *k* in its advanced position. The link, striking the inclined plate, is conducted into the draw-head, and as soon as the adjacent draw-head strikes the inclined end of the bar it forces it down, thereby releasing the bearing arm from the catch-block, and the spring *k* immediately draws the bar back to its normal position. When the link is coupled in the draw-head and it is desired to raise or lower its outer end to insert it in an adjacent draw-head, the plate L′ is brought up in a manner as above described, and the edge coming in contact with the link raises it to the point directly opposite the opening in the adjacent draw-head.

It is evident that many minor changes in the construction and arrangement of my improved coupler can be made and substituted for those shown and described without in the least departing from the nature and principle of my invention.

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 movable draw-bar, of two side bars having their rear ends attached to the rear of the draw-bar and their forward ends connected to and extending above the draw-head, a pin secured to said bars above the draw-head and the lever, substantially as and for the purpose described.

2. In a car-coupler, the combination, with a movable draw-bar, of two side bars parallel therewith having U-shaped connections, the rear connection being permanently secured to the draw-bar and the front connection extended up above and over the draw-head, a link secured to the front connection, latches arranged at the sides of the said bars, and the lever, substantially as described.

3. In a car-coupler, the combination, with a movable draw-bar having a cushion-spring thereon, of two side bars having U-shaped connections, a pin secured to the front connection, supports and guides secured to the frame of the car, and extending down adjacent to said bars, latches mounted in said supports, a cross-bar having its ends secured to and extending beyond said side bars, and the lever, substantially as and for the purpose specified.

4. In a car-coupler, the combination, with the draw-bar, of side bars extending beyond the ends of the same and secured thereto, a link-adjusting bar pivoted to the frame-work, having an inclined plate on its upper end and an arm on its lower end, latches for holding the side bars in an elevated position, and the pin and lever, substantially as and for the purpose specified.

5. In a car-coupler, the combination, with the draw-bar, of a pivoted link-adjusting bar arranged beneath the same, having an inclined plate on its upper outer end and a bearing-arm on its upper side, a downwardly-extending arm on its lower side, a catch-block secured to the frame, and the lever, substantially as described.

6. In a car-coupler, the combination, with the draw-bar, of a casing having an opening therein pivoted to the frame, a link-adjusting bar having a coiled spring on its outer end inserted in said casing, an inclined plate secured to the front of said adjusting-bar, arms extending from the upper and under side of said adjusting-bar, a catch-block secured to the frame, and the lever, substantially as and for the purpose specified.

7. The combination of the draw-bar B, the rod *b*, the spring B′, the side bars, C, having end connections, C′.C′, the pin D, the supports F, the catches F′, and the lever P, substantially as described.

8. The combination of the draw-bar B, the casing H, the link-adjusting bar *k*, having plate L′ thereon, the spring K, the bearing-arm *m*, the catch-block R, and the lever P, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ANGUS P. BREWSTER. [L. S.]

Witnesses:

R. W. FREEMAN,

ORLANDO MCCLENDON.