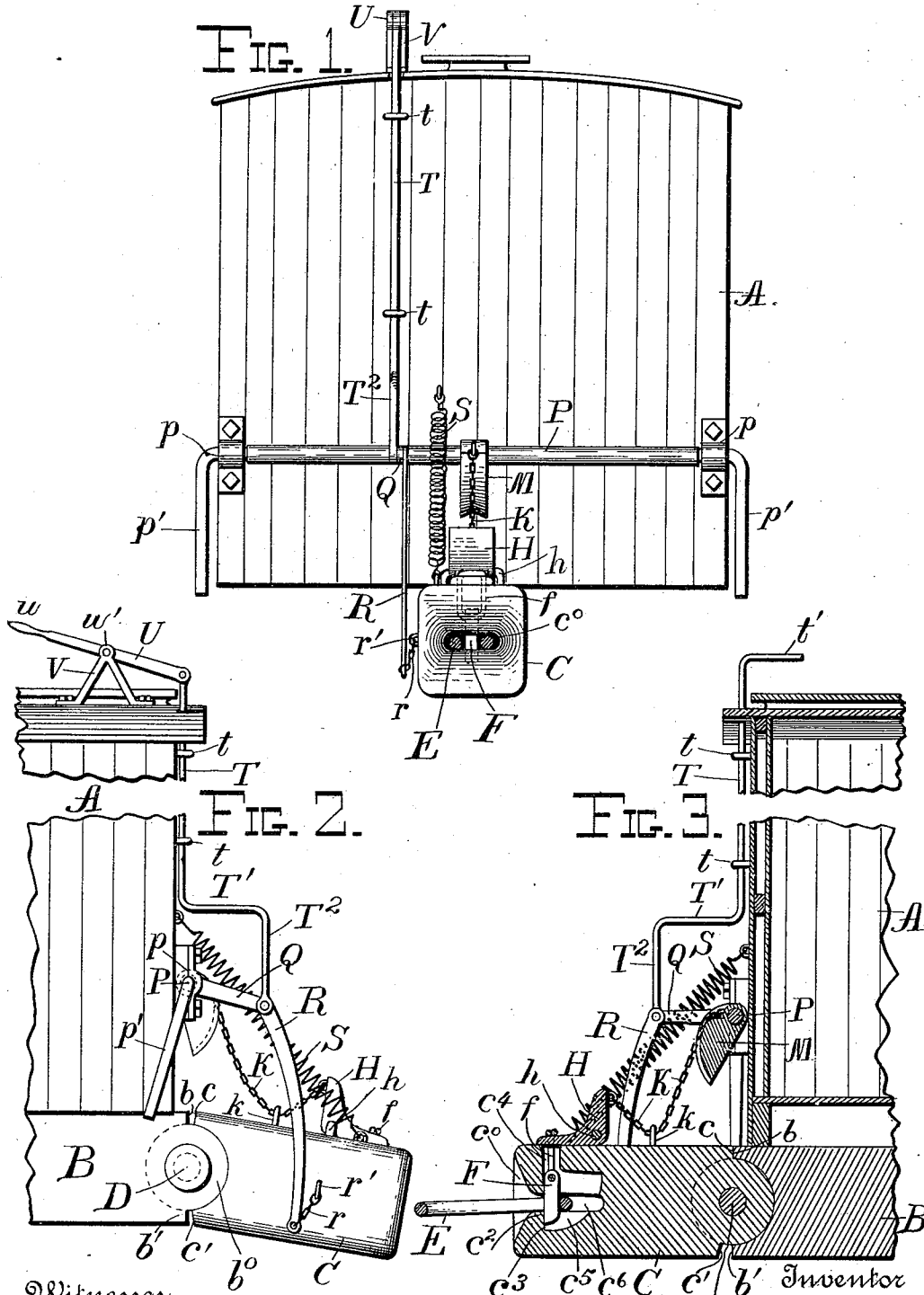


(No Model.)

C. EPPS.
CAR COUPLING.

No. 557,502.

Patented Mar. 31, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES EPPS, OF MCKINNEY, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 557,502, dated March 31, 1896.

Application filed August 3, 1894. Renewed September 9, 1895. Serial No. 562,015. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EPPS, a citizen of the United States, residing at McKinney, in the county of Collin and State of Texas, 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 improvements in car-couplings; and it consists in certain novel features hereinafter described and claimed.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 represents a front view of a car fitted with my improved coupler. Fig. 2 represents a side elevation of the front end of the car-body, showing the coupler, parts being broken away; and Fig. 3 represents a central longitudinal section of the car and coupler.

The carrier-iron and various other fixtures attached to the car for supporting and holding the draw-bar, not being a part of my invention, are omitted from the drawings.

A represents the body of the car, which carries beneath the same a draw-bar B, which is secured to the car in any convenient way. This draw-bar is provided with a circular recess in the forward end thereof, adapted to receive the pivoted end of the draw-head C, which end is held between the jaws b^0 by means of the pivot-pin D. Above these jaws the draw-bar B is provided with vertical walls or faces B and b' .

The draw-head C is provided with a vertical wall or face c and an inclined wall or face c' , the former bringing up against the wall b when the draw-head is in the horizontal position, as shown in Fig. 3, and the latter, c' , being adapted to allow the draw-head C to swing downward about its pivot below the horizontal position, as shown in Fig. 2. The front end of the draw-head is provided with a flaring mouth c^0 , behind which is an enlarged quadrantal chamber c^5 , enlarged laterally somewhat, as at c^6 , to allow the link E to enter freely therein. The upper end of this chamber opens through the top of the draw-head, as shown at c^4 , while the lower end ter-

minates in a vertical wall c^3 , forming the rear of the shoulder c^2 , against which the pivoted pin F bears when the strain is on the link. This link F is pivotally connected to the bar f , attached to the bell-crank lever H, which is pivoted at h to the top of the draw-head. This bell-crank lever is drawn backward by means of the chain K, which passes beneath the guide k on the top of the draw-head and is made fast to the cam M, rigidly attached to the lifting-rod P, which rod is pivoted to the front of the car, as at p , and is provided with hand-levers p' at either side of the car.

It will be evident that if the rod P be turned so as to cause the chain K to wind up on the cam M, then the bell-crank lever H will lift the coupling-pin F out of engagement with the link E, which will be the process of uncoupling one car from another.

S is a spring of sufficient force to hold the draw-head normally in a horizontal position; but since the height of the couplings on various cars frequently differs relative to the track-bed it is frequently desirable to make some adjustment of the relative positions of the mouths of two draw-heads, so that the link may enter fairly when the cars come together. For this purpose I have made the draw-head pivoted horizontally, as shown, and supported normally in the horizontal position by means of the spring S.

In order to deflect the draw-head downward, as shown in Fig. 2, I provide a bar R, secured by means of the chains r and staple r' to the draw-head C, the upper end of the said bar R being pivoted to the arm Q on the lifting-bar P and also to the lower portion T^2 of the rod T, which is bent forward, as at T' , and passes upward to the top of the car through the guides t . This bar may be lifted either by a handle t' , as shown in Fig. 3, or by a lever U, pivoted at u' in the frame V, secured to the top of the car and having a handle u for operating the same. It will be seen that if the handle u be raised upward, or if the handle t' be pushed downward, the bar R will drag the front end of the draw-head downward against the action of the spring S, as shown in Fig. 2. It will be obvious that at the same time the arm Q will be forced downward, thus relaxing the chain K and preventing the coupling from becoming drawn

upward as the front end of the draw-head descends. It will also be noted that the draw-head may be depressed by moving either one of the hand-levers p' , as shown in Fig. 2, whereby the arm Q is caused to force down the bar R and the draw-head connected thereto. Thus it will be seen that a forward motion of either of these hand-levers p' will serve to tighten the chain K and lift the coupling-pin, at the same time lifting the bar R and slackening the chain r , thus not affecting the horizontal position of the draw-head. On the other hand, it will be seen that a backward motion of either one of the arms p' will slacken the chain K and will press down on the bar R, tautening the chain r and forcing down the front end of the draw-head against the action of the spring S. It will also be noticed that if the handle u be pressed down, or the handle t' be lifted up, then the coupling-pin may be lifted from the top of the car. Thus, it will be seen that the herein-described apparatus enables train-hands to operate the coupling-pin from the top, or from either side of the car, and the same conditions also prevail with regard to depressing or releasing the pivoted draw-head.

The various advantages of the herein-described construction will readily suggest themselves to any one skilled in the art.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a car-coupling, the combination with a draw-bar attached to the car, of a hollow draw-head provided with a flaring mouth, pivoted horizontally to said draw-bar; a spiral

spring connected to the top of said draw-bar and to the front of the car, and normally holding said draw-head in the horizontal position, and means for pressing down the forward end of said pivoted draw-head against the action of said spring, substantially as described.

2. In a car-coupling, the combination with a draw-bar attached to the car, of a draw-head pivoted horizontally to said draw-bar, a spring normally holding said draw-head in the horizontal position, a bar R and chain r connecting said bar to said draw-head and means operated either from the side of or from the top of the car for bearing down on said bar and so depressing the forward end of said pivoted draw-head, substantially as described.

3. In a link-and-pin car-coupling, the combination with a draw-bar attached to the car; of a hollow draw-head pivoted horizontally to said draw-bar; and means for raising and lowering the forward end of said pivoted draw-head; a coupling-pin adapted to engage in said draw-head; a bell-crank lever mounted over said draw-head, and operating said coupling-pin, a chain passing through guides on the draw-head and connected to said bell-crank lever; a cam connected to and supporting said chain, and means for turning said cam in either direction and so either tautening up or slacking off said chain, substantially as described.

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

CHARLES EPPS.

Witnesses:

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