(No Model.)

J. REED.

CAR COUPLING.

No. 525,796. Patented Sept. 11, 1894.

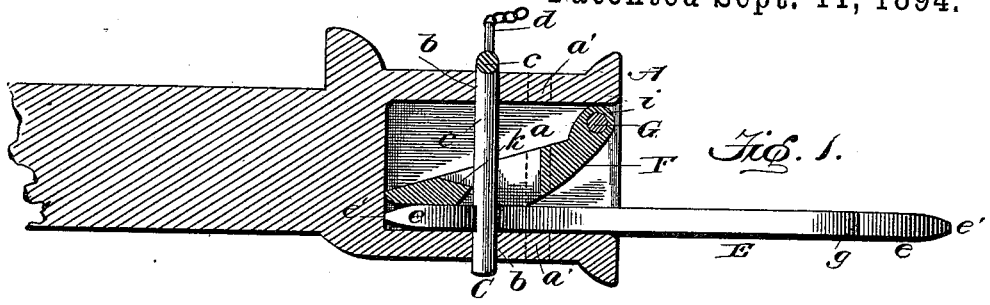


Fig. 1.

Fig. 2.

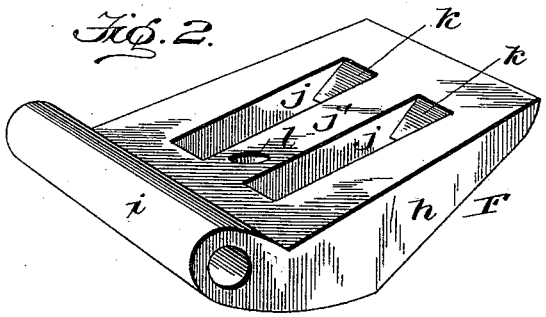


Fig. 3.

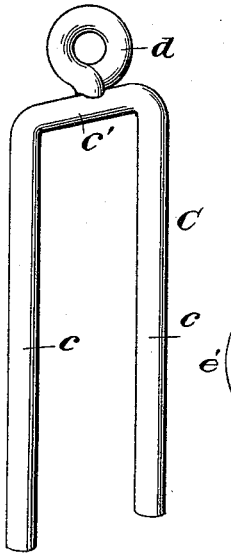
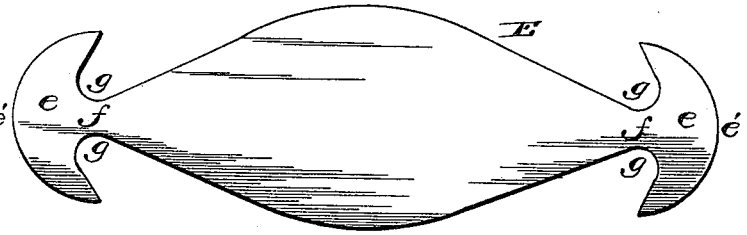


Fig. 4.



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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 525,796, dated September 11, 1894.

Application filed March 19, 1894. Serial No. 504,291. (No model.)

To all whom it may concern:

Be it known that I, JOHN REED, a citizen of the United States, residing at Ripley, in the county of Tippah and State of Mississippi, have invented certain new and useful Improvements in Car-Couplers; 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.

The nature of this invention is an automatic car coupler designed for use in connection with a peculiar style of link which has a limited horizontal and vertical play while engaged with a coupling pin to adapt drawheads at difficult elevations to be readily coupled together and provide for the play or movement necessary in passing around curves.

To these ends, my improvement consists in the combination with a drawhead having vertical spaced pin-holes therein, of a pin support hung at its forward end in the link chamber of said drawhead in a manner to normally drop, by gravity, in the path of a link, and said support provided with two longitudinal slots which have inclined shoulders or ledges at their rear ends, a duplex-pronged coupling pin fitted in the vertical pin-holes of the drawhead and adapted to rest upon said inclined shoulders of the support to be held in an elevated position thereby or to drop through the slots in the support to engage with a link, and a link formed of a solid bar which tapers from its middle toward both ends and each end terminates in a head which has laterally projecting shoulders that are rounded to afford seats for the duplex prongs of the coupling pin, all as will be hereinafter more fully described and claimed.

To enable others to more readily understand my invention I have illustrated it in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a longitudinal sectional view showing the parts assembled in position for operation. Fig. 2 is a detached perspective view of the link support. Fig. 3 is a perspective view of the coupling pin. Fig. 4 is a perspective view of the coupling link.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates the drawhead which in all respects is similar to the ordinary type of drawheads now in use, as it is provided with the link chamber *a* and a vertical pin-hole *a'* for an ordinary coupling pin which can be used in case of emergency. In addition to the single vertical pin hole, *a'*, I provide the drawhead with the vertical parallel pin-holes *b*, *b*, situated in rear of the pin hole *a'*, and extending through the top and bottom walls of the link chamber, whereby the drawhead is adapted for use in conjunction with my improved pin C, and the link E. This pin, C, consists of the parallel prongs *c*, *c*, and the head *c'* all of which are preferably formed from a single rod or piece of metal which is appropriately bent to the form shown by Fig. 3, and the prongs *c*, *c*, of this pin are fitted in the parallel holes *b*, *b* of the drawhead. To the head *c'* of the double pronged pin C is fastened an eye or loop *d*, and to said eye or loop can be connected a chain or lever (not shown) by which the pin C can be lifted either from the side or top of the car, whereby the cars can be uncoupled without requiring the attendant to pass between the cars and obviate danger to life or limb of the attendant.

The link E is forged or otherwise produced from a single piece of metal in the shape shown by Fig. 4 of the drawings, and this link is tapered from the middle toward both ends thereof. The ends of the link terminate in the heads *e* which are beveled on their top and bottom surfaces to enable the heads to readily enter the drawheads and to slide beneath the gravity pin support. Each head is rounded at its front edge, as at *e'*, and the head is of such width as to extend beyond both sides of the narrow neck or shank *f* which joins the head to the body or bar of the link E, and the rear edge of each head *e* is curved as shown to form the recesses *g*, *g*, that constitute the seats for the prongs of the pin. The headed ends of the links are designed to easily pass into the drawheads, and the prongs of the pin C fit on opposite sides of the narrow necks or shanks *f*, and in the rounded seats *g*, *g*, whereby the head of the link is adapted to each pull against the duplex prongs of the coupling pin.

The coupler is made automatic by the employment of the gravity pin support F shown

by Figs. 1 and 2 of the drawings. This support F is cast in a single piece of metal in the form shown, with a slotted body *h*, and the inclined head *i* which head stands at an angle to the body, and the lower sides of the head and body are curved or inclined as shown. The body *h* of the support is provided with the vertical longitudinal slots *j*, *j*, which are separated by the bridge wall *j'*, and at the rear ends of the slots are provided the inclined ledges *k*, *k*, which extend downwardly from the top face of the body *h* toward the slots *j*, *j*. This pin support F is hung within the link chamber by means of the pivot shaft or bolt G which passes through the head *i* of the support and the side walls of the link chamber, so that the weight of the rear free part of the support F causes the latter to assume the inclined position shown directly in the path of the link on an approaching car. The lower free ends of the prongs *c*, *c*, rest upon the inclined ledges *k*, *k*, of the support F, which ledges occupy such position as to sustain the pin in an elevated position, and when the link on an approaching car enters the link chamber, the head *e* of the link strikes the front face of the pivoted support, lifts the latter and the pin resting thereon until the ledges *k* on the support assume a substantially perpendicular position so as to cause the pin to drop through the slots *j*, *j*, and enter the seats in front of the head on the coupling link, the latter in the mean time having passed beneath the support F to the rear part of the link chamber, thus automatically effecting the coupling of the cars. The support F is provided, in the bridge wall *j'*, with a transverse opening, *l*, adapted to align with the opening *a'* in the drawhead to enable an ordinary single coupling pin and an ordinary open link to be used for coupling the cars in case the link E or the pin C should break or become lost.

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

In a car coupler, the combination with a drawhead provided with the vertical parallel pin-holes, of the gravity support F having its head pivoted in the drawhead, at G, and provided with the longitudinal slots *j*, and with the inclined ledges *k* at the rear ends of said slots, the double-pronged pin fitted in said parallel holes and adapted to rest upon the inclined ledges *k*, and the link provided with the head which is formed with the seats *g*, *g*, to receive the prongs of the pin, substantially as described.

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

JOHN REED.

Witnesses:
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