

(No Model.)

A. H. CARROLL.
CAR COUPLING.

No. 579,953.

Patented Apr. 6, 1897.

Fig. 1.

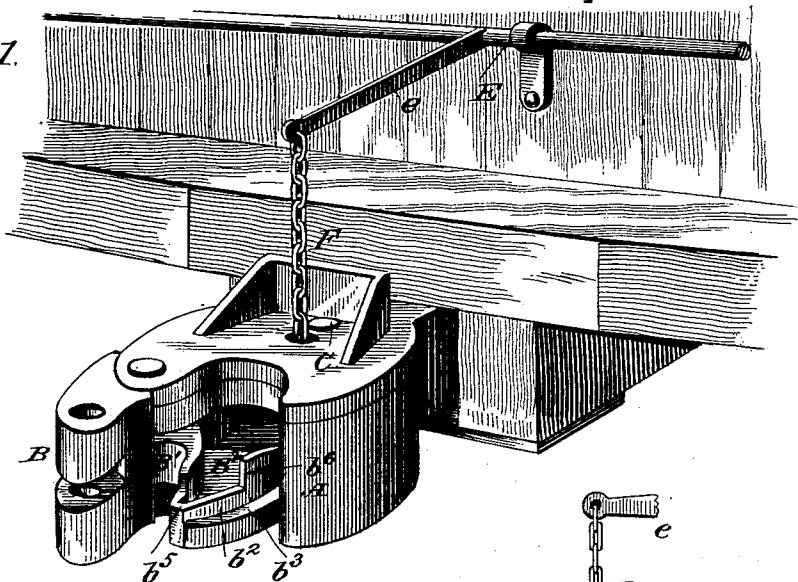


Fig. 2.

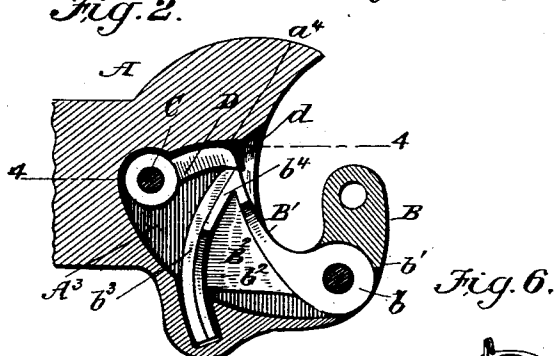


Fig. 4.

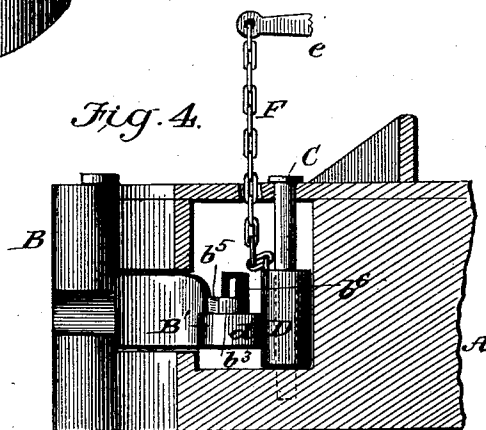


Fig. 3.

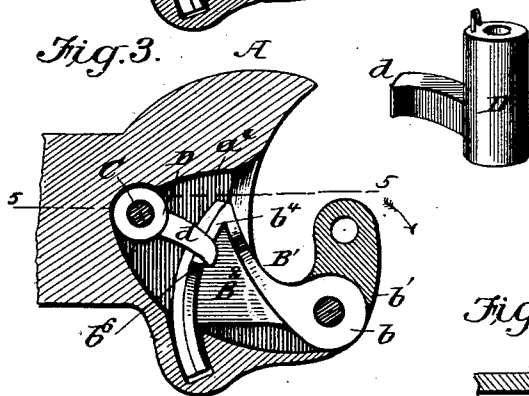


Fig. 5.

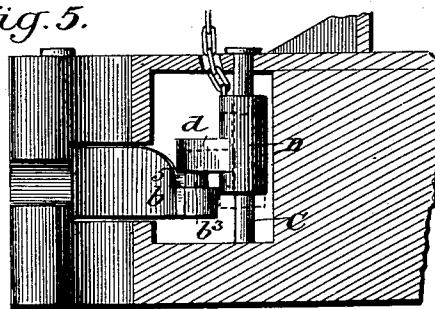
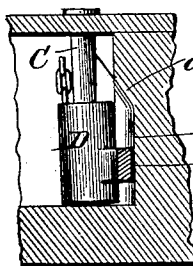


Fig. 7.



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AARON H. CARROLL, OF JACKSONVILLE, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 579,953, dated April 6, 1897.

Application filed August 12, 1896. Serial No. 602,566. (No model.)

To all whom it may concern:

Be it known that I, AARON H. CARROLL, residing at Jacksonville, in the county of Morgan and State of Illinois, have invented a new and Improved Car-Coupler, of which the following is a specification.

My invention relates to improvements on the Janney type of car-couplers; and it seeks to provide a coupler of this kind in which the locking devices for the knuckle-coupling member are of a very simple construction, which will automatically serve to lock the said knuckle member to its coupling position, which can be easily set to an unlocked position, and which will during the uncoupled position of the knuckle always remain in a proper position to positively operate to automatically lock such knuckle member when it is moved in by an opposing draw or coupling head.

Furthermore, my invention also seeks to provide a coupler of the character stated, which, while possessing the general appearance of the Janney type of coupler, has the drawhead, the knuckle member, and the coupling-locking means so arranged and combined that the coupler will be of a very strong and compact nature.

With other minor objects in view, which will hereinafter be made apparent, the invention consists in a car-coupler embodying the peculiar combination and novel arrangement of parts, such as will be first described in detail, and then specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved car-coupler. Fig. 2 is a horizontal section of the same, showing the knuckle member in its coupled and locked position. Fig. 3 is a similar view showing the parts in position for uncoupling. Fig. 4 is a vertical section taken on the line 4 4 of Fig. 2. Fig. 5 is a similar view taken on the line 5 5 of Fig. 3. Fig. 6 is a detail view of the lock-pin, hereinafter referred to; and Fig. 7 is a detail section taken on the line 7 7 of Fig. 2.

Referring to the accompanying drawings, A indicates the draw-head, which in general contour is of the Janney type, and B the knuckle or coupling member, which has the usual central or eye portion *b*, pivoted be-

tween the bifurcated front end A' of the head and a stop-shoulder *b'* to limit the outward swing thereof.

The coupling member B has a strike portion B', having a horizontal extension B², provided with a vertical member *b*², disposed at a point inside the rear edge of such extension B², whereby a rest portion or flange *b*³ is formed, such vertical member *b*² being provided with a cut-out portion *b*⁴ for a purpose presently explained.

By reference to Figs. 2 and 3 it will be seen the draw-head has a mortise A³, in which at a point to one side of the center is disposed the pivot-pin C, on which is pivotally hung the swing lock member D, such pin C in practice being held slightly in an inclined position toward the knuckle member, whereby to cause the member D to swing over in the direction of the knuckle B by gravity when lifted to an uncoupling position.

The lock member D, the construction of which is best shown in Fig. 6, has a curved horizontal lock-finger *d*, which when the parts are in their uncoupled position seats in the curved side or pocket portion *a*⁴ of the draw-head and forms a wedge to hold the knuckle member B from swinging outward, it being held in front of the outer end of the extension B', as shown most clearly in Fig. 4.

When it is desired to set the parts to an uncoupling position, the member D is lifted on its pin C by suitable lift devices, such as, for instance, a rock-bar E, journaled on the front end of the car and extended to the ends, having a crank-arm *e*, to which is connected a lift-chain F, which extends down into the draw-head member, as shown.

When the member D is lifted, it swings over toward the knuckle member B by gravity, such movement being, however, facilitated by the outwardly-curved portion *a*⁶ of the draw-head mortise, which the member *d* engages as it rises up, it being manifest that as soon as the said member *d* rises above the point *b*⁵ of the coupling member B it will swing over onto the cut-out portion *b*⁴ thereof and rest against the shoulder *b*⁶, as shown in Figs. 3 and 5. When in this position, the member B is free to swing outward in the direction indicated by the arrow in Fig. 3, and as it does the shoulder *b*⁶ will swing the finger *d* back

until it disengages the portion b^4 and drops down on the ledge b^3 , (see dotted lines, Fig. 5,) where it remains during the time the member B remains at its outer uncoupled position, it being understood that during coupling, when as the member B swings rearward the member d will rest on the ledge b^3 until the extreme end passes from under it, when such member will drop down in front of the said end and wedge it to a locked position, such operation being entirely automatic.

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

15 1. In a car-coupler, the combination with the draw-head, and the knuckle member having a vertical extension at the rear end having a cut-away portion and a shoulder, of the swinging coupling member having a lock-finger d adapted when lifted to be swung onto the vertical extension of the knuckle member and in engagement with the shoulder b^6 and to be swung out of engagement with such vertical extension by the shoulder when the
20 knuckle member is swung to its outer position as specified.

2. The combination with the draw-head, having a mortise provided with a pocket por-

tion having an outwardly-curved shoulder, and the knuckle member having two horizontal rest portions at the rear in different planes, the upper one having a shoulder of the swing-pin C having a finger d adapted to engage the curved shoulders of the mortise-pocket and swing onto the upper rest portion of the knuckle member when the pin is lifted by hand to an uncoupling position and to engage the lower rest portion of the knuckle member when such member is pulled outward substantially as shown and for the purposes described.

3. The combination with the draw-head, and the knuckle member having horizontal extensions B^2 provided with a vertical member b^2 and a rest-ledge b^3 said member b^2 having a shoulder, of the pin C, the locking member D having a horizontal finger d and the hand-operated lift devices connected to the car-body and the member D all being arranged substantially as shown and for the purposes described.

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Witnesses:

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