

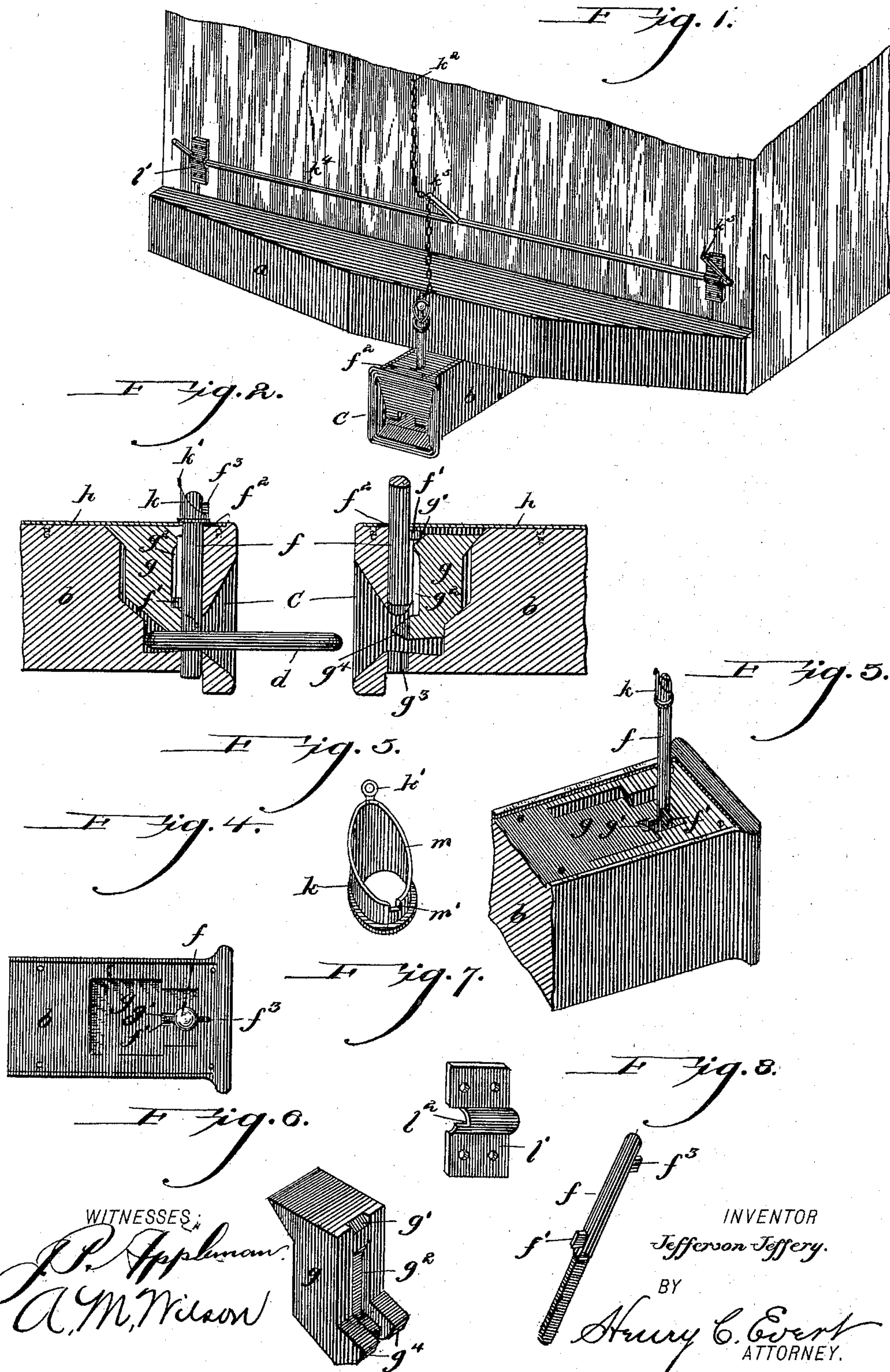
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Patented July 26, 1898.

J. JEFFERY.
CAR COUPLING.

(Application filed Dec. 11, 1897.)

(No Model.)



WITNESSES:
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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 608,128, dated July 26, 1898.

Application filed December 11, 1897. Serial No. 661,520. (No model.)

To all whom it may concern:

Be it known that I, JEFFERSON JEFFERY, a citizen of the United States of America, residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in car-couplers, and relates particularly to that class known as "automatic" couplers, having for its object to provide novel and effective means whereby two cars may be coupled together by their draw-heads coming in contact with each other.

15 The invention aims to construct a coupler of this class employing the link-and-pin style of coupling, and it aims to provide means whereby the link is retained in a horizontal position, so that it will enter into engagement with the coupling of the engaging car.

20 A further object of the invention is to provide novel and effective means for elevating the pin either from the side or from the top of the car, so that there may be no occasion for the party coupling the cars passing between the same.

25 A still further object is to provide means for holding the pin in the elevated position, so that the link carried by the draw-head of one car will enter without obstruction into the draw-head of the engaging car, after which operation the pin is automatically released and falls, so as to be engaged within the link.

30 The invention has for its further object to provide a coupler which may in many instances be made applicable to the draw-heads now in use.

35 The invention still further resides in the novel construction, combination, and arrangement of parts to be hereinafter more specifically described, and particularly pointed out in the claims.

40 In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like letters of reference indicate similar parts throughout the several views, in which—

45 Figure 1 is a perspective view of a portion of the car equipped with my improved coupler. Fig. 2 is a longitudinal sectional view

of the coupler and a portion of the two engaging draw-heads. Fig. 3 is a perspective view of a portion of the draw-head and coupler. Fig. 4 is a top plan view of the same. Fig. 5 is a perspective view of the centering-collar carried by the pin. Fig. 6 is a perspective view of one of the sliding blocks arranged within the draw-head to hold the pin in the elevated position, so that the link may enter into the draw-head without engaging the pin. Fig. 7 is a perspective view of the keeper for locking the operating-rod on the pin. Fig. 8 is a perspective view of the preferred form of pin.

Referring now to the drawings by reference-letters, *a* represents the car-body, which has attached thereto in the usual or any other preferred manner the draw-head *b*, which is provided at its front or engaging face with outwardly-projecting openings *c* to receive the ordinary coupling-link *d* and permit the same passing into the recess *e* within the draw-heads, where it is engaged by the coupling-pins *f*. Arranged in the recess *e* of the draw-heads is a gravity-block *g*, the front top edge of which is provided with an inclined portion *g'*, and the front face thereof being provided with a groove *g''*, that receives the coupling-pin *f*, said groove *g''* corresponding in position to the aperture *g'''* provided for the pin in the base of the draw-head. The projecting ends *g''''* at the base of this gravity-block are inclined, so that the block will be elevated when the link *d* comes in engagement therewith.

Assuming that the coupling-link *d* is out of engagement with one of the draw-heads, it will of course be observed that this sliding block will drop downward within the recess and thereby form a support for the lug *f'* that is provided on the face of the coupling-pin *f*, the said lug resting upon the inclined portion *g'* of the block, serving to hold the pin in the elevated position and out of the way of the coupling-link as it enters the draw-head. As the coupling-link enters the draw-head, however, it comes in engagement with the inclines *g''''* on the gravity-block, thus elevating the block upward and out of engagement with the lug *f'* and permitting the pin to fall into engagement with the link. The pin is retained within the draw-head and

prevented from being wholly withdrawn by means of the plate *h*, secured in any suitable manner to the top of the draw-head, said plate being provided with an aperture to receive the coupling-pin, the lug *f'* of which is passed below the plate by means of a small slot *f²*, communicating with the aperture of the pin, the said pin being inserted through the plate before the same is secured to the draw-head, so that the aperture *f²* will be closed after the plate is in position and the pin thereby prevented from being withdrawn. The pin *f* (shown in detail in Fig. 8) may be termed a "compromise" pin and is reduced on its lower end, which will permit its use with a link designed for less than a two-inch pin, while the lug formed on same will prevent its turning in the slot or groove formed in the block. For the purpose of operating the pin and thereby coupling the cars while standing at the side of the same I have arranged on the upper portion of the said pin a sleeve or collar *k*, which is suspended by an eyelet *k'* from the chain *k²*, which is attached to the arm *k³*, centrally arranged on the transverse rod *k⁴*, operating in and supported by the keepers *l l'*, attached to the end of the car. The ends of this rod *k⁴* are turned at right angles, so as to form cranks *k*, whereby the rod may be operated. The chain *k²* may be extended from the arm *k³* upward to the top of the car, so as to permit the operating of the pin from this point.

The upper end *m* of the sleeve *k* is inclined, so that the pin will be likewise centered by this inclined end of the sleeve coming in engagement with the lug *f³* provided on the coupling-pin and the pin thereby turned until the said lug comes into the receiving-slot *m'* provided at the lowest point of the inclined end of the sleeve. The keeper *l'* is provided with a cut-away portion *l²*, into which the corresponding crank *k⁵* may be drawn and the rod thereby locked when the arm *k³* is in the elevated position, which has withdrawn the pin from the draw-head, so as to permit the entering or withdrawing of the coupling-link.

The operation of the device will be readily apparent by reference to Fig. 2 of the drawings, wherein the coupling-link is shown supported in the left-hand coupler in a position so as to enter into the opening *c* of the right-hand coupler. The coupling-pin in this right-hand coupler is shown supported by its lug *f'* upon the gravity-block, and as the coupling-link *d* comes into engagement with the incline *g⁴* of the block the same is ele-

vated, and the support for the pin being thus removed the same drops into engagement with the link and couples the two cars together. By the arrangement of the incline on the sleeve it will be observed that should the pin become turned when it is in the elevated position, so as to cause the lug *f'* to engage the sides of the coupler, the operating of the rod *k⁴* will bring the inclined end of the sleeve into engagement with the lug *f³* of the pin and cause the same to turn until the lug *f'* is in position to permit the pin to drop into engagement with the link.

Where the ordinary draw-heads are of sufficient weight, this form of coupling may be readily applied thereto by providing them with a recess and placing the sliding block therein, using the ordinary link and requiring but a slight change in the pin now employed.

While the construction as herein shown and described appears to be the preferable form of my invention, yet I do not wish to limit myself to this construction, as various changes may be made without departing from the general spirit of my invention.

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

1. In a car-coupler, the combination of the draw-head with a gravity-block arranged therein, of a coupling link and pin, said pin carrying a sleeve having an inclined end, lugs formed on said pin a chain connected to said sleeve, a cross-rod operating in keepers secured to the end of the car and having an arm to which the aforesaid chain is attached, one of said keepers being provided with a cut-away portion for locking the rod when the pin is in the elevated position, substantially as shown and described.

2. In a car-coupler, the combination with a draw-head and coupling pin and link, of a sleeve attached to said pin having an inclined end adapted to come in engagement with the lug provided on the coupling-pin, a chain connected to said sleeve, a cross-rod operating in keepers secured to the end of the car, said cross-rod carrying an arm to which the aforesaid chain is attached, substantially as shown and described.

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

JEFFERSON JEFFERY.

Witnesses:

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