

(No Model.)

J. Q. A. JOHNSTON.
CAR COUPLING.

No. 512,114.

Patented Jan. 2, 1894.

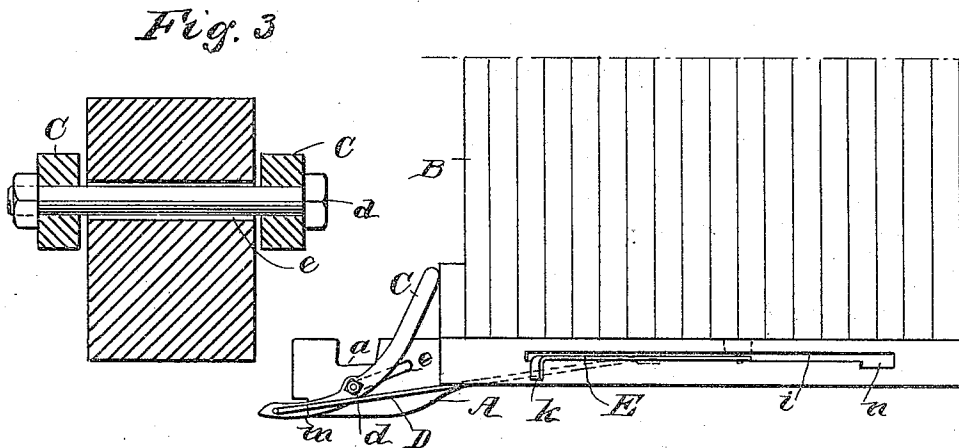
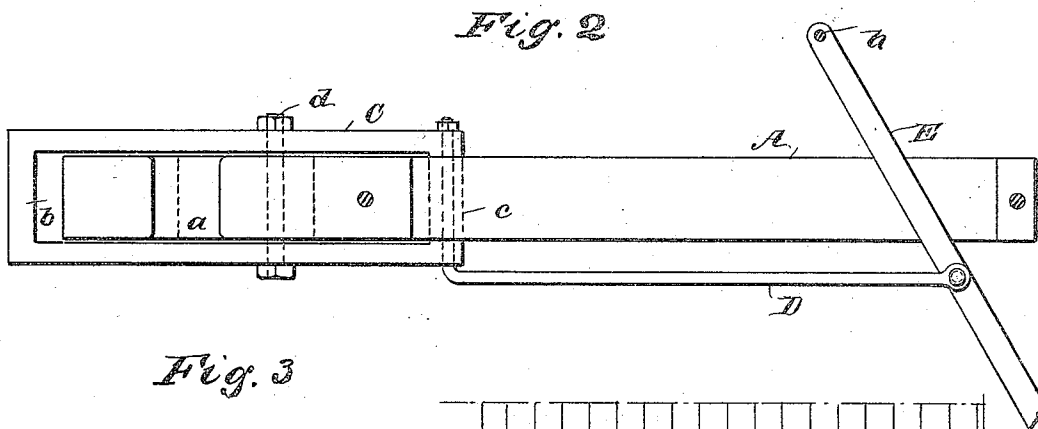
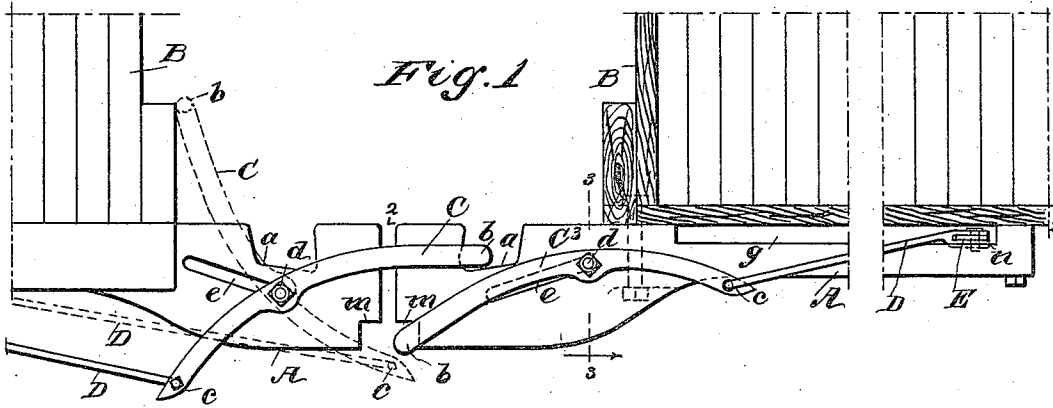


Fig. 4

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JOHN Q. A. JOHNSTON, OF NEWBURYPORT, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 512,114, dated January 2, 1894.

Application filed April 25, 1893. Serial No. 471,765. (No model.)

To all whom it may concern:

Be it known that I, JOHN Q. A. JOHNSTON, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and useful Improved Car-Coupling, of which the following is a full, clear, and exact description.

This invention relates to an improved car coupling of the automatic type, and has for its objects to provide a simple and reliable car coupling, which will afford means to connect two cars having the improvement, by the percussion of one coupling drawhead upon the other, and permit the quick and safe detachment of two cars having the novel couplings, by manipulation of parts at the side of one car.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of two of the improved car couplings, on end portions of cars, in coupled condition; one of the cars appearing in vertical section. Fig. 2 is a plan view of one coupling removed from the car body, on the line 2—2 in Fig. 1. Fig. 3 is a transverse sectional view, on the line 3—3 in Fig. 1; and Fig. 4 is a side elevation of a car having the improved coupling, the latter being in position to couple with an approaching drawhead.

The drawhead A, is elongated and secured upon the lower side of the car body B, near the transverse center, as usual, a sufficient portion of the drawhead being projected forwardly of the body to permit the free connection therewith of working parts on a similar car coupling, as will be hereinafter explained. A transverse groove *a* is produced in the forward portion of the drawhead A, the front wall of which groove is slightly undercut to adapt it to hold an engaged coupling link and prevent the latter from slipping upwardly and out of the groove.

The coupling link C, is composed of two parallel side bars, that are curved a proper degree edgewise, and joined together at front and rear ends by the straight cross bars *b*, *c*.

The link C fits loosely upon the forward portion of the drawhead body A, and is loosely secured thereon by a transverse bolt *d*, the out-curved edges of the side bars being uppermost when the device is in coupled adjustment, or locked to retain an unused link in a compact folded condition. The bolt *d*, engages a longitudinal and downwardly inclined slot *e*, that is formed in the drawhead A, at a proper distance from its front end.

On the rear cross bar *c*, or near it, there is a pusher rod D, pivotally secured, which rod extends rearwardly, and is pivoted to a lever E, that is located in a longitudinal channel *g*, produced in the drawhead body A, on the upper side of the portion that is extended below the car body, said lever having one end *h*, pivoted to the car frame so as to permit the free vibration of the lever in the channel. The other end of the lever E, is projected through a slot in the side timber of the car frame, as at *i*, in Fig. 4, and has a handle piece *k*, bent on said terminal to prevent this end from entering the slot too far, and also to afford means for the free manipulation of the lever.

When the coupling link C, is to be adjusted for an automatic connection with the groove *a*, of a mating coupling, the lever E is thrown forwardly, which will reverse the link, and adapt it to lie with its concave edges uppermost, while the forward cross bar lies against the car end, or a projection therefrom, the normally rear end of the link being projected in advance of the drawhead. When in the condition just described, if the car having its coupling so adjusted, is caused to approach and impinge the drawhead A, thereon upon a mating drawhead, the link will by its gravity and momentum imparted to it, be rocked forwardly, and engage the groove *a*, of the impinged drawhead. There is a notch *m*, formed in the lower front corner of the drawhead A, which will receive the front cross bar *b* of the link C, when the latter is thrown into the position shown at the right side of Fig. 1, by a proper manipulation of the lever E, which will slide it rearwardly, the end of which lever can then be depressed into a recess *n*, at the end of the slot *i*, and thus retain the link in a position that will prevent it from obstructing other parts.

To uncouple two cars connected by the improvement in duplicate, it is only necessary to slide the lever E forwardly, which will elevate the link and release the same from the groove a, when the link may be adjusted to re-couple, as shown by dotted lines in Fig. 1, or to secure it out of the way, as represented at the right of said figure and as has been explained.

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

1. The combination, with a drawhead longitudinally channeled on top at the rear, and cross grooved on top at the front, of a link having edge-curved side bars and straight cross bars at its ends, pivoted by a cross bolt in a transverse inclined slot in the drawhead, and a device to rock and slide the link, substantially as described.

2. The combination, with a car body, of a drawhead secured beneath said body, longitudinally channeled on top at its rear end and cross grooved on top near its front end, a link having parallel edge-curved side bars and straight cross bars at its ends, a pivot bolt fast in opposite perforations in the side bars intermediate of the ends of the link, and loose in a downwardly and forwardly inclined transverse slot in the drawhead, a lever pivoted at one end to the car body and working in the drawhead channel and in a longitudinal slot in the car frame, and a pusher rod pivoted at one end to the lever and at its other end to the rear of the coupling link, substantially as described.

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Witnesses:

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