J. B. STAMOUR.

Car-Coupling.

No. 164,698. Patented June 22, 1875.

Fig. 1.

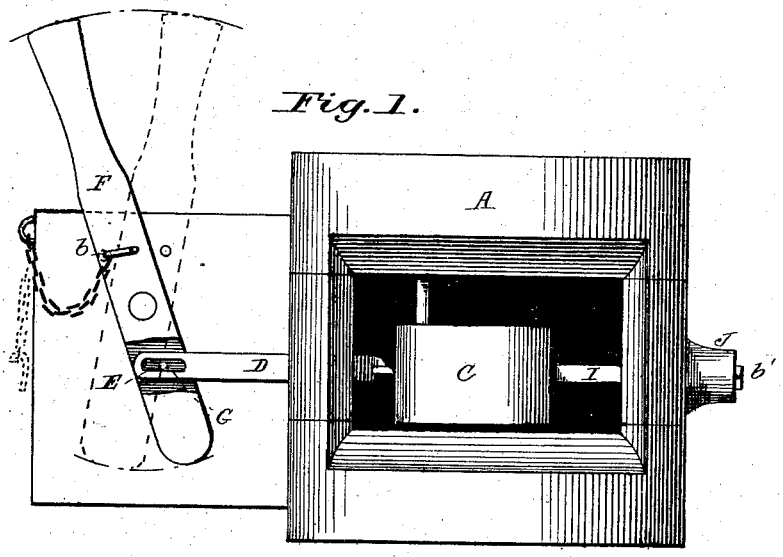


Fig. 2.

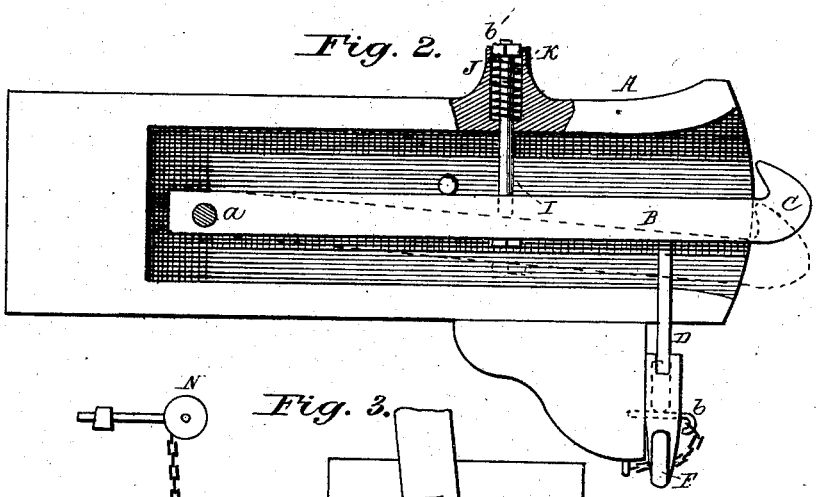
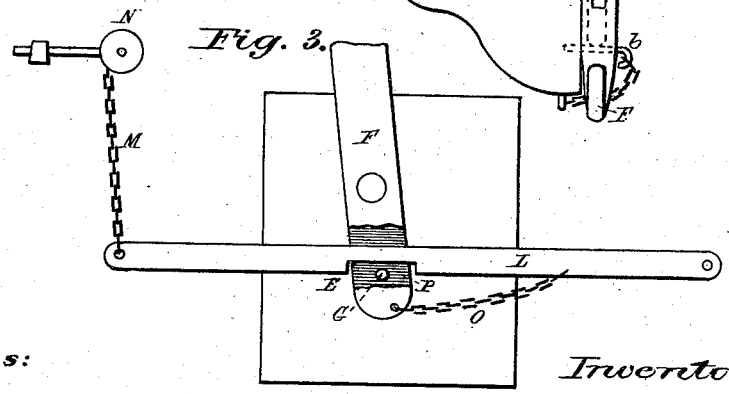


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN B. STAMOUR, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO GRUVER AUTOMATIC CAR-COUPLING COMPANY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **164,698**, dated June 22, 1875; application filed May 20, 1875.

To all whom it may concern:

Be it known that I, JOHN B. STAMOUR, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Coupling, of which the following is a specification:

The present invention has reference to that class of car-coupling devices in which hooked self-coupling bars are employed; and it has for its object to provide means whereby the coupling-bars are permitted to move laterally when coupled, so as to avoid a rigid connection, and to permit said coupling-bars to move in unison with the motions of the cars, but not to such an extent as will cause the uncoupling or disconnection of the same.

The invention consists in the combination, with a hooked coupling-bar pivoted at its rear end within a draw-head, of a connecting rod or link, which extends through the side wall of the draw-head, and is provided with a slot at its outer end, through which passes a pin on the lower end of a vertical coupling-lever.

The slotted link, which serves as a connection between the coupling-bar and uncoupling-lever, will permit the coupling-bar of each car to move independently of the lever to such an extent as will enable the coupling-bars to have the requisite lateral play to conform with the motions of the car. The lever is prevented from moving with the coupling-bars by means of a suitable locking device, generally a pin or pawl and ratchet. The uncoupling operation is effected by first unlocking the lever, when it can be moved to disconnect the hooks of the coupling-bars.

In the accompanying drawing, Figure 1 is a front elevation of my improved coupling. Fig. 2 is a longitudinal horizontal sectional view. Fig. 3 is a modification of my invention.

In the drawing, letter A denotes a draw-head of the usual construction; and B is a coupling-bar, turning at its rear end upon a vertical pivot-pin, *a*. The forward end of the bar B is provided with or wrought into a laterally-projecting-hook, C, which is designed to engage with a correspondingly-shaped hook of the coupling-bar of an opposite car. The coupling operation is performed automatically, the heads or hooks of the bars gliding readily past each other when the cars collide, so as to cause the shoulders of the hooks to engage with each other, when they are held closed or in contact by spring-pressure. A rod or link, D, is connected with the forward portion of the coupling-bar, and passes out through an opening made in the side wall of the draw-head. The outer end of said rod or link is provided with a slot, E, and is connected with the lower end of a vertical lever, F, by means of a pin, G, passing through said slot and carried by the lever. The lever is pivoted to the platform or body of the car at a short distance above its lower end, and its upper end extends into a position where it is within convenient reach of the operator or brakeman. The slotted connection between the coupling hook and lever will enable the former to move independently of the latter, which motion is requisite and desirable to permit the coupling-bars to move or play sufficiently in a lateral direction without danger of uncoupling. The extent of the motion of the coupling-bar is defined by the length of the slot in the connecting-link. The lever is locked after the completion of the coupling operation by means of a suitable locking device, which may either be a detachable pin, *b*, passing through the lever and entering the platform, or a ratchet or segmental rack and pawl or dog, or any other preferred locking device. The lever being locked, it follows that the coupling-bars cannot move sufficiently to be disconnected and yet have the requisite or needed lateral play. The lever, when unlocked, can be moved sidewise to such a degree as will effect the uncoupling operation by the separation of the hooked bars. This result or action of the lever is due to the fact that the pin at its lower end strikes the end of the slot in the connecting-link. A rod or stem, I, connected with the coupling-bar at or near its center, extends through the wall of the draw-head, and terminates in a chamber or hollow boss, J, formed on the draw-head or attached thereto. The outer end of the stem, or that portion within the chamber, is encircled by a spiral or coiled spring, K, which tends to exert the proper outward pressure or pull upon the

coupling-bar for holding it engaged with the coupling-bar of an opposite draw-head. A nut or stop, *b'*, is applied to the end of the stem for retaining the spring thereon.

As a modification of the slotted link above described it is proposed to use instead an arm, L, which is jointed to the coupling-bar and loosely suspended at its other end by a chain, M, from a weighted pulley, N. The uncoupling-lever is, in this instance, connected with the coupling-bar by means of chain O, but its pin G is retained. The arm L, instead of being slotted, is provided with a long notch, P, in its lower edge, into which notch is received the pin of the lever when the arm L is lowered. When the parts are in this position the coupling-bar is free to move the same as if the slotted link were employed, and the uncoupling operation is also effected by moving the lever in the proper direction. The arm L is designed to be raised when the coupling operation is to take place, so as to free it from the lever, and consequently the coupling-bars, as they spring laterally, will not move the lever. The object of this operation is to prevent the uncoupling-lever from being thrown to the side in the performance of the coupling operation—a result liable to be attended with injury to life or limb.

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

The combination, with a hooked coupling-bar and an uncoupling-lever constructed to be locked in position when the couplings are coupled, of a slotted or notched link or arm connected with the coupling-bar and the said lever, and constructed to limit the lateral play of the coupling-bar in either direction, as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand.

J. B. STAMOUR.

Witnesses:
A. H. NORRIS,
JOS. L. COOMBS.