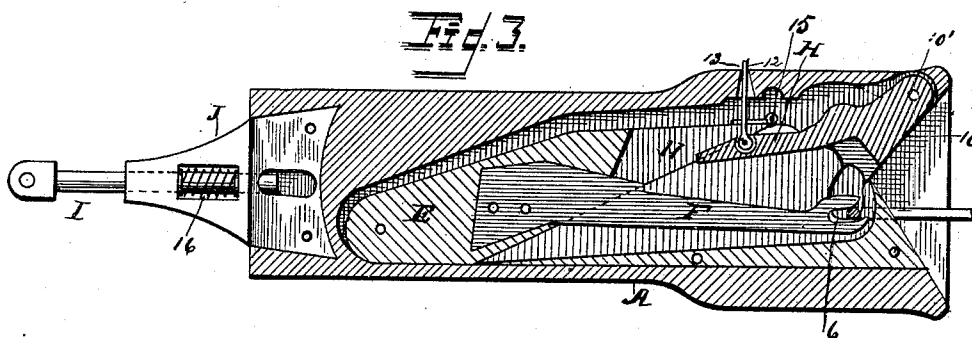
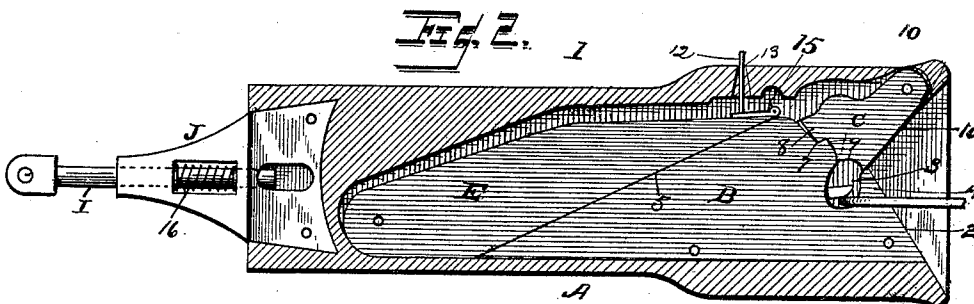
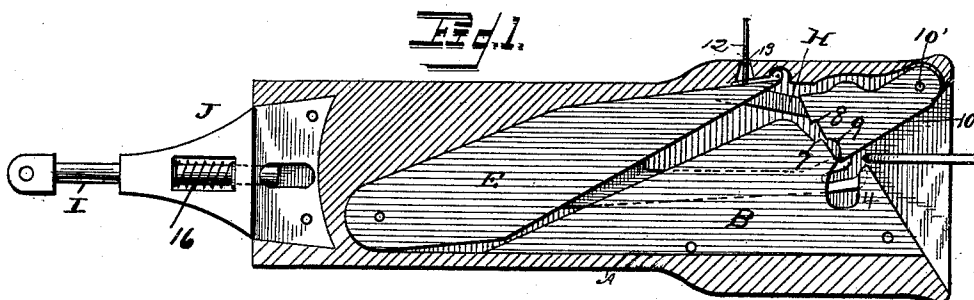


(No Model.)

J. CALLANTINE.
CAR COUPLING.

No. 460,329.

Patented Sept. 29, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH CALLANTINE, OF PERU, INDIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 460,329, dated September 29, 1891.

Application filed April 18, 1891. Serial No. 389,433. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH CALLANTINE, a citizen of the United States, residing at Peru, in the county of Miami and State of Indiana, have invented certain new and useful Improvements in Car-Couplers; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to car-couplers of that class in which a link is employed; and it has for its object to provide certain and effective mechanism for securely locking the link in place against the possibility of displacement, as from the vibration incident to the passage of a car over the track.

A further object is to provide mechanism for automatically locking the link in position.

A further object is to provide mechanism for holding the link in position to engage the locking mechanism on the adjacent car, whereby the danger usually accompanying such manipulation is effectually overcome.

A further object is to provide a car-coupler having locking mechanism of such construction as to allow the link to have free vertical and lateral play, whereby the said link will accommodate itself to any difference in the height of the two cars which it connects.

A further object is to provide a car-coupler the link-locking mechanism of which is entirely housed within the draw-head, whereby the said mechanism will be shielded from damage and also from exposure to moisture.

The invention will first be described in connection with the accompanying drawings, and then more particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation, the draw-head being in section, showing the position occupied by the different parts as the link is about to be locked in place. Fig. 2 is a similar view showing the link locked in position. Fig. 3 is a longitudinal vertical sectional view through the draw-head and the locking mechanism, showing more particularly the construction of the latter.

Referring to the drawings, A designates the

draw-head, which may be made in one piece or in sections. Within the said head is formed a cavity or recess 1, in which is mounted the locking mechanism consisting of a rigid jaw B, a pivoted jaw C, and a pivoted weighted lever E, carrying an arm F, which latter is designed to lift the link to a position to admit of its being released and also to hold the said link in position to engage the draw-head of the adjacent car, as clearly shown in Fig. 3. The rigid jaw B is formed with an outer inclined face 2 and with a recess 3, which recess forms a projection 4, over which fits the link G when in place. The rear portion of the said jaw is inclined, as at 5, and forms a surface upon which rests the lever E, as clearly shown in Fig. 2. Jaw B is slotted longitudinally of its length, in which slot works an arm F, the outer end of the latter being bifurcated, as at 6, in which bifurcation rests the link. The upper portion of the inclined face 2 is provided with a shoulder 7, designed to be engaged by a similar shoulder 8 on the jaw C, so as to limit the downward movement of the latter. Jaw C is provided with a curved recess 9 in its lower face, which, when the parts are in the position shown in Fig. 2, forms a continuation of the recess 3 in the rigid jaw and admits of the link having ample vertical play to adjust itself to any required angle. Jaw C is also provided with an inclined face 10, which, in connection with the face 2 of jaw B, forms an angular recess, which aids the link in its passage to the recess 3.

H designates an arm, which is carried by the inner end of the jaw C and works in a recess formed in lever E. To the arm H is secured a lifting-rod 12, which extends through an opening 13 in the draw-head and may be carried to the top of the car to be operated therefrom or to the side of the car in a position to be operated by a person standing on the ground in a well-known manner. The object of this rod is to lift the jaw C when it is desired to release the link, and in order to raise the arm E coincidently with the said jaw, so as to bring the link to a position where it can slip out of the recess 3, a friction-roller 15 is provided, which is carried by the free end of the lever E and engages with the arm H in its upward movement, so that the jaw C and the lever E are both actuated by the same

mechanism. It is obvious, however, that a solid bearing may be substituted for the friction-roller; but for many reasons the latter is preferred.

5 I designates the draw-bar, which may be of any approved construction, but in this instance is shown mounted within a casting J, secured to the rear end of the draw-head and carrying a spring 16 for the purpose of less-
10 ening the shock when two cars are coupled.

From the foregoing description it will be seen that the arm F holds the link in a horizontal position, so that in coupling two cars no care has to be taken to bring the link in
15 position to engage the opposite coupler. If, however, the coupler on the car to be coupled is higher or lower than that carried by the moving car, the inclined faces 2 10 will guide the link to the recess 3 without the assistance
20 of an operator. When the cars are to be uncoupled, the rod 12 is raised, which movement lifts the locking-jaw C, the lever E, and with it the arm F, thus bringing the parts to the position shown in Fig. 1. It is to be under-
25 stood that the lever E and arm F are free to move without interfering at all with the locking-jaw C, so that should the link ride within the recess it will be prevented from working loose by contacting with jaw C, the latter be-
30 ing firmly held in place against tensile strain

by means of the lugs 8 9; but the principal strain is always applied to the projection 4.

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

1. In a car-coupler, the combination, with a draw-head formed with an interior recess, of a rigid locking-jaw, a pivoted locking-jaw, a weighted lever, and an arm carried by the lever.

2. In a car-coupler, a draw-head having an interior recess, in combination with a rigid locking-jaw, a pivoted locking-jaw carrying an arm, a weighted lever carrying an arm, and mechanism connecting with the arm of the locking-jaw, whereby the latter jaw and the weighted lever may be actuated in unison.

3. In a car-coupler, the combination, with a draw-head, of a rigid locking-jaw having a recess, a pivoted locking-jaw engaging the said rigid jaw, a pivoted weighted lever carrying an arm, and mechanism for actuating the pivoted locking-jaw and weighted lever in unison.

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

JOSEPH CALLANTINE.

Witnesses:

S. J. MATTHEWS,
NOTT N. ANTRIM.