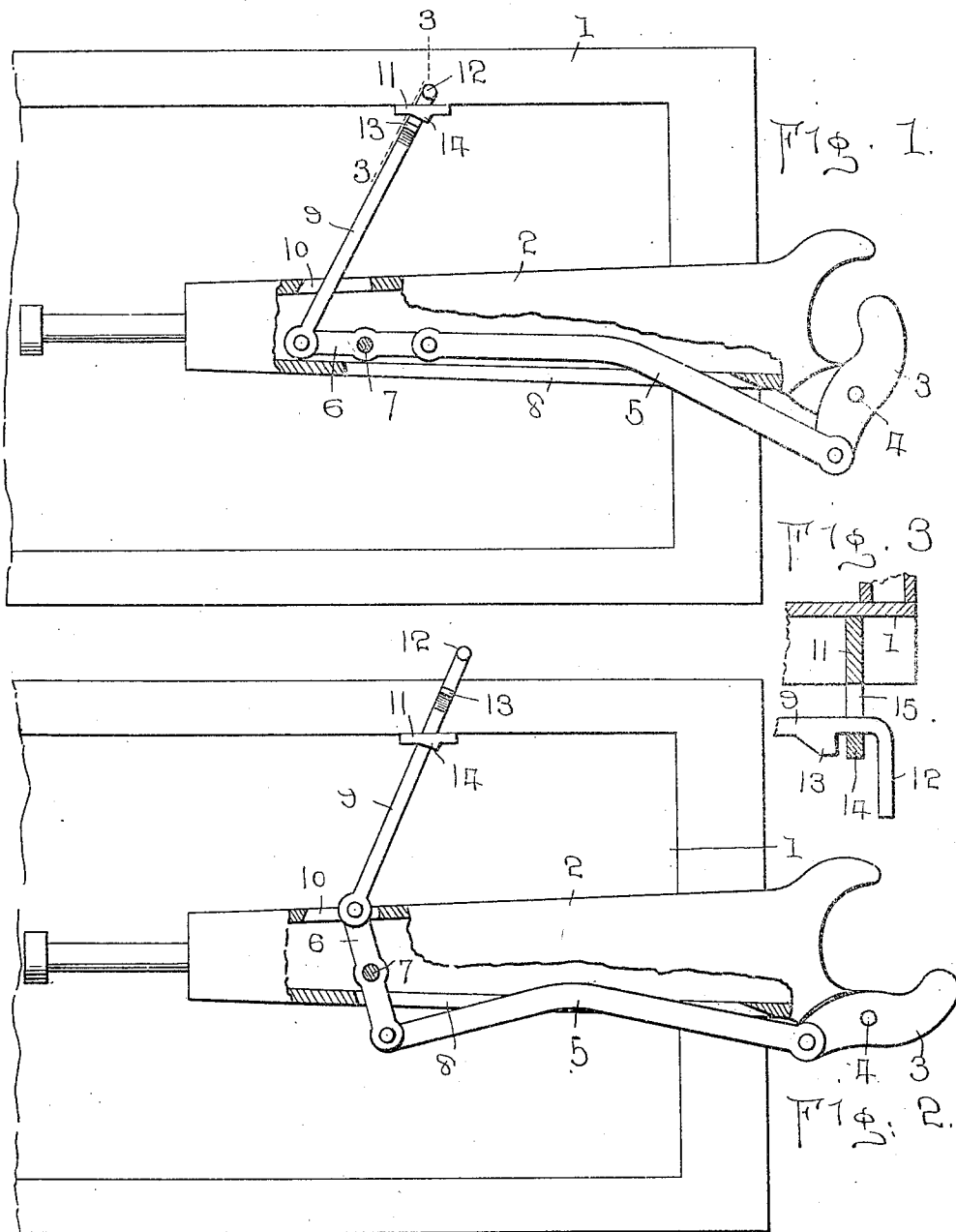


CAR COUPLING.

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1,023,818.

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WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN A. COWIE AND JOHN C. MARSHALL, OF SUMMERSET, IOWA.

CAR-COUPLING.

1,023,818.

Specification of Letters Patent.

Patented Apr. 23, 1912.

Application filed October 6, 1911. Serial No. 653,261.

To all whom it may concern:

Be it known that we, JOHN A. COWIE and JOHN C. MARSHALL, citizens of the United States, residing at Summerset, in the county of Warren and State of Iowa, have invented certain new and useful Improvements in Car-Couplers; and we do hereby 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.

This invention relates to car couplers and more particularly to car couplers which may be readily coupled or uncoupled from the side of the car without having to back the engine to obtain slack.

An object of the invention is to provide a car coupler which may be locked or unlocked by a trainman without the necessity of his reaching between two cars or the engineer backing the engine to obtain slack between the cars which it is desired to uncouple or couple together, thus eliminating the danger of the trainman being caught between the cars and probably seriously injured.

Other objects and advantages will be hereinafter set forth and pointed out in the specification and claims.

In the accompanying drawings which are made a part of this application, Figure 1 is a view looking at the bottom of one end of a car with our improved coupler secured thereto, the coupler being in locked position and parts thereof broken away to clearly show the operative parts, Fig. 2 is a similar view, the coupler being shown in unlocked position, and Fig. 3 is a fragmentary sectional view on the line 3-3 of Fig. 1.

Referring more particularly to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 represents the bottom of a car upon which is secured the draw head 2 of ordinary construction. Pivoted to one corner of the engaging end of the draw head 2, however, is the knuckle 3 which is secured thereto by the bolt or rivet 4. Likewise connected to the knuckle 3 is one end of the coupler bar operating rod 5 which is bent about midway its length and has its opposite end pivoted to the turn bar 6 which is pivoted at its center by means of the pivot pin 7 within the draw head 2. The draw head 2 is provided with an elongated

opening 8 within one side and extending practically the entire length thereof to accommodate the knuckle operating rod 5, as will be later clearly understood. The pivot pin 7 extends in a vertical direction, however, through the draw head 2 to allow the turn bar 6 to swing in a horizontal direction, the end connected with the operating rod 5 working through the elongated opening 8. Connected to the other end of the turn bar 6 is one end of the controlling lever 9 which works through the lever opening 10 in the opposite side of the draw head 2. The opposite end of the controlling lever 9 is extended through a bracket 11 depending from the bottom 1 of the car near one side edge thereof and then bent downwardly to form the handle 12 of said lever 9. Upon the lower edge of the lever 9 is the depending lug 13 which is adapted to be engaged against the lower portion 14 of the bracket 11 below the opening therethrough to limit the outward movement of the controlling lever 9 and thus retain the coupler in locked position, as shown in Fig. 1.

When it is desired to uncouple the train, or to open the coupler by swinging the knuckle upon its pivot 4, to the position shown in Fig. 2, the handle 12 of the lever 9 is grasped and the lever raised to bring the depending lug 13 opposite the opening 15 provided therefor, through the bracket 11, and the lever drawn outwardly. This will swing the turn bar 6 upon its pivot pin 7 and draw the knuckle operating rod 5 toward the center of the car and thus swing the knuckle 3 upon its pivot 4 to open position. It will be evident that as the controlling lever 9 is reciprocated toward the side of the car or from the side to the center, this operation may be performed without the necessity of the trainman stepping between two cars and without backing the engine to obtain slack between the cars as have heretofore been necessary. In fact, when this coupler and its operating mechanism are employed, the cars may be uncoupled while the train is in motion by operating the lever as above described. It will be impossible, however, for this coupler to become accidentally uncoupled or, in other words, for the knuckle 3 to swing to open position upon its pivot pin 4, for the reason that the part of the knuckle operating rod, between the end thereof which is piv-

oted to the turn bar 6 and the center or turned portion of the operating rod, is substantially in alinement with the turn bar 6, longitudinally of the car upon which the coupler is carried. Any outward strain upon the free end of the knuckle 3 would be ineffective in turning the turn bar 6 upon its pivot 7. The movement of the bar 6 would be limited in one direction by the handle 12 of the controlling lever 9 and in the opposite direction by the depending lugs 13 upon the under side of said lever near the handle end thereof. Thus, the complete coupler is locked in closed or coupled position. Thus it will be seen that we have provided a car coupler which will be positive in operation and which may be readily placed in open or closed position by means of a controlling lever at the side of the car upon which the coupler is secured.

Owing to the comparatively small number of parts and the simple formation and operation thereof the complete coupler may be manufactured and employed upon cars of various types at a small cost. Further, should any of the parts become worn or broken they may be readily replaced.

What we claim is:

1. A car coupler comprising a draw head provided with an elongated slot on one side and a lever opening upon the opposite side, a knuckle pivoted to the draw head, a knuckle operating rod connected with the knuckle and adapted to work through the elongated slot in the draw head, a turn bar pivoted within the draw head and connected to the knuckle operating rod, a controlling lever connected to the turn bar and adapted to work through the lever opening in the draw head, and means for locking the parts

against movement when the coupler is in closed position.

2. In a coupler for a car, a draw head adapted to be secured to the under side of a car, a turn bar carried within the draw head, a knuckle carried upon one end of the draw head, a connecting rod between the turn bar and the knuckle, a controlling lever connected with the turn bar for turning the bar and thus operating the knuckle through the connecting means, and means for locking the controlling means against accidental movement.

3. A coupler for cars comprising a draw head adapted to be secured to the under side of a car, a knuckle pivoted upon one corner of a projecting end of the draw head, a turn bar pivoted to the draw head, connections between the draw head and the knuckle, a controlling lever connected to the turn bar, a bracket secured to the under side of the car and depending therefrom, said bracket having an opening through which the lever is adapted to reciprocate, an operating and movement limiting handle carried by the controlling lever outwardly of the bracket, and a stop lug depending from the under side of the lever inwardly of the bracket and adapted for engagement thereagainst to prevent accidental turning of the turn bar.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN A. COWIE.
JOHN C. MARSHALL.

Witnesses:

O. C. BROWN,
W. Y. STANLEY.