

No. 848,763.

PATENTED APR. 2, 1907.

J. F. McCARTHY.
CAR COUPLING.

APPLICATION FILED JAN. 7, 1907.

Fig. 1.

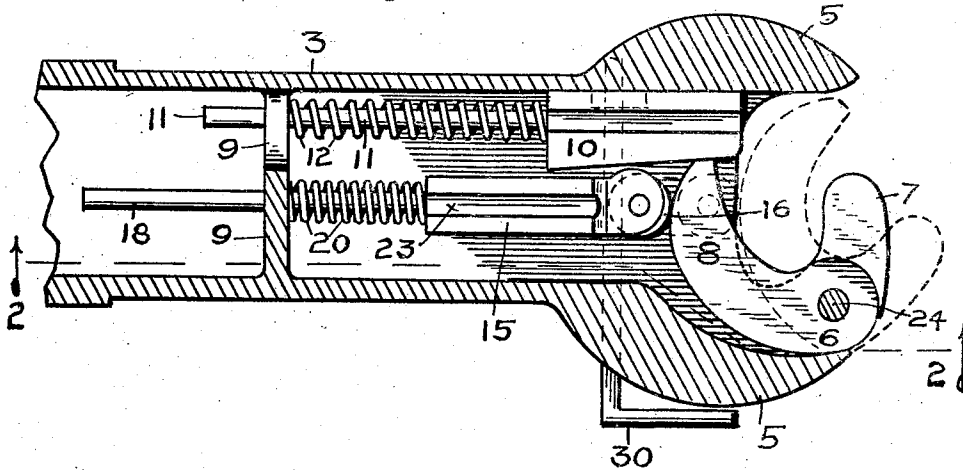
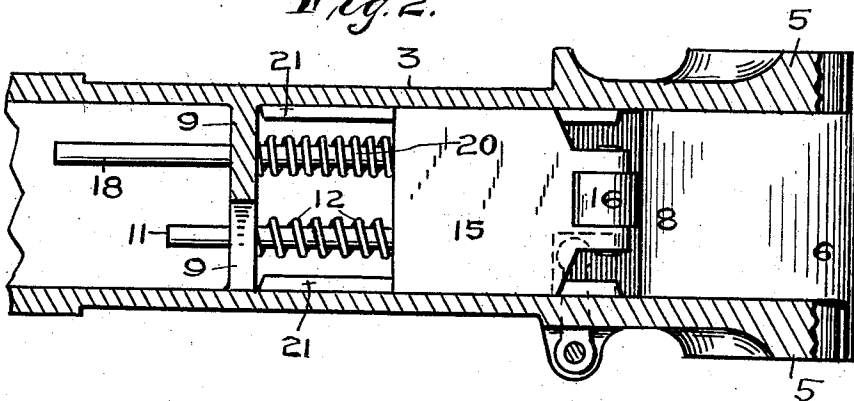


Fig. 2.



Witnesses;

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UNITED STATES PATENT OFFICE.

JOHN F. McCARTHY, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF TWO-THIRDS
TO PATRICK F. MORIARTY AND JOHN L. RAMSAY, OF INDIANAPOLIS,
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CAR-COUPLING.

No. 848,763.

Specification of Letters Patent.

Patented April 2, 1907.

Application filed January 7, 1907. Serial No. 351,251.

To all whom it may concern:

Be it known that I, JOHN F. McCARTHY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to improvements in rotary or knuckle or couplings for cars, and is an improvement upon the device for the same purpose for which I filed an application for Letters Patent of the United States on September 18, 1906, Serial No. 335,098.

The object of this invention is to provide more adequate means for taking up any lost motion or looseness of the knuckle, but more particularly to provide means for automatically moving the knuckle into open position immediately upon its release by the locking plate or wedge.

I accomplish the objects of this invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view in horizontal section longitudinally of the draw-bar of a coupling embodying my improvements, and Fig. 2 is a view in vertical section of my invention on the line 2 2 of Fig. 1 looking in the direction of the arrow.

Like characters of reference indicate like parts throughout the several views of the drawings.

3 designates a draw-bar, which is arranged under the car-body (not shown) and to which it is attached in any usual and well-known manner. This draw-bar is hollow and has the buffer-head 5 at its front end.

6 designates the knuckle, which in form is substantially like those in common use in what are known as "rotary" or "knuckle" couplings and comprises the hook portion 7 to engage with a like member on another car and a curved arm 8 to lock the knuckle. The hollow draw-bar 3 has the inside lugs 9 near its rear portion, and in front of one of these is the locking-plate 10, having the stem 11, which extends back through the lug 9. Between the lug and the locking-plate around the stem or bolt 11 is the spirally-wound spring 12, the function of which is to normally press the locking-plate 10 toward the front of the draw-bar. This locking-plate 10 is wedge-shaped, as shown, and its function is to lock the knuckle 6 in its closed po-

sition (shown in full lines in Fig. 1) in the manner as fully described and claimed in my former application for patent above referred to. Mounted in front of the opposite lug 9 is the head 15, which carries the antifriction-wheel 16. The head 15 has a bolt or stem 18 extending back through its lug 9, and around this bolt is the spirally-wound spring 20, which presses the head 15 constantly toward the knuckle 6. The draw-bar has the longitudinal ribs 21 extending inwardly of its upper and lower sides. These ribs fit into channels 23 in the top and bottom edges of the head 15 and act as guides to direct the movement of the head.

By the action of the spring 20 the antifriction-roller 16 is made to bear constantly against the curved arm 8 of the knuckle 6, and as the pressure from the spring 20 is delivered against the arm 8 in a plane at some distance to one side of the knuckle-pin 24 the pressure against the arm has a constant tendency to move the knuckle into its open position, as shown by the dotted lines in Fig. 1. Thus it will be seen that when the locking-plate 10 is drawn into the draw-bar sufficiently to release the end 8 of the knuckle the pressure of the roller 16 by virtue of its spring 20 immediately swings the knuckle into its open position and holds it there until positively closed, which may be done automatically by the contact with the arm 8 of a corresponding hooked portion 7 of a coupling of a car to be coupled on. Any looseness of the knuckle 6 due to wear or an imperfect fit will be taken up by the action of the spring 20 through the head 15 and the roller 16.

30 is the crank-arm of a rock-shaft, the same as that described in my former application, for retracting the locking-plate 10.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. In a car-coupling, a hollow draw-bar a coupling-piece of elbow form pivoted to said bar means for locking the coupling-piece an antifriction-wheel in contact with the inner arm of the coupling-piece and a spring to press the antifriction-wheel constantly against the coupling-piece and swing the latter into open position when released by said locking means.

2. In a car-coupler a hollow draw-bar a coupling-piece of elbow form pivoted within

said draw-bar a sliding wedge to lock the coupling-piece in its closed position a head mounted within the draw-bar and having a sliding movement longitudinally of the draw-bar a spring pressing the head normally toward the coupling-piece and an antifriction-wheel carried by the head and bearing constantly against the inner arm of the coupling-piece.

3. In a car-coupler a hollow draw-bar, a coupling-piece of elbow form located within and pivoted to said draw-bar, a wedge-shaped locking-plate sliding lengthwise longitudinally of the draw-bar to lock the coupling-piece in closed position, a head mounted within the draw-bar longitudinal ribs in the

draw-bar forming guides for said head said draw-bar having an inside lug a stem or bolt carried by said head and passing through said lug a spirally-wound spring surrounding said bolt and located between its head and said lug and an antifriction-wheel carried by the head having constant contact with said coupling-piece.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 27th day of December, A. D. 1906.

JOHN F. McCARTHY. [L. s.]

Witnesses:

J. A. MINTURN,
PATRICK MORIARTY.