(No Model.)

W. J. WALKER.

CAR COUPLING.

No. 491,823. Patented Feb. 14, 1893.

Fig. 1.

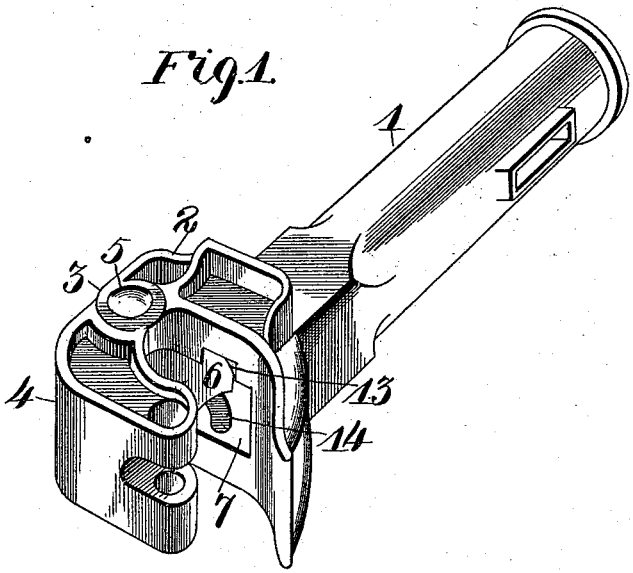


Fig. 2.

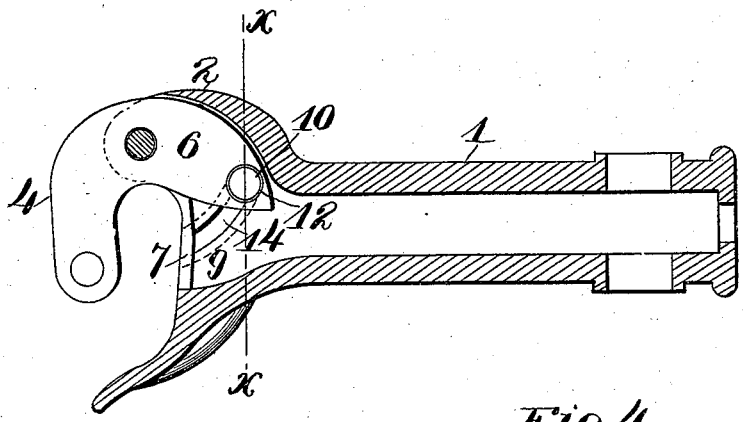


Fig. 3.

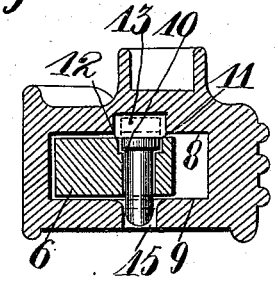
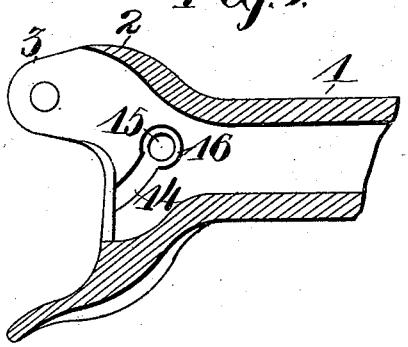


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM J. WALKER, OF ST. LOUIS, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 491,823, dated February 14, 1893.

Application filed July 8, 1892. Serial No. 439,342. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. WALKER, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Car-Couplers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in car couplers and consists in the novel arrangement and combination of parts more particularly described in the specification and set out in the claims.

In the drawings Figure 1 is a perspective view of my complete invention; Fig. 2 is a horizontal longitudinal section of the same; Fig. 3 is a transverse section taken on the line *x*— of Fig. 2; and Fig. 4 is a horizontal longitudinal section of the draw bar with hook removed therefrom.

The object of my invention is to construct a simple and durable coupler, and further to overcome the objections heretofore raised in this class of inventions.

The principal objects I have in view are first, to construct the locking device in such a manner that the same may be operated from the bottom of the coupler and consequently dispense with the opening generally formed in the top of the draw-head through which the chain or other contrivance passes and is attached to the locking device for elevating the same when it is desired to release the locked position of the hook. This opening generally if not at all times admits accumulations of various character as well as water and snow which renders the coupler inoperative on frosty days and thereby prevents the thorough working of the same; second, the locking device which I employ is bodily carried by the hook or knuckle but operated independently of the same and is designed to work entirely by gravity. It is well understood that the locking device is generally the weakest portion of the coupler and should consequently be protected from external injury to thoroughly perform the function for which it is designed.

Referring to the drawings, 1 represents a draw-bar of the ordinary type and 2 the draw-head forming a part of the same.

3 represents the ears between which the pivotal hook or knuckle 4 is interposed and which are located at one side of said draw-head.

5 represents a pin which passes through the said ears and through the said hook or knuckle 4 by means of which the same is movably secured to the draw-head. The said hook or knuckle 4 is provided with a tail 6 which when in a closed position is located within the space 7 formed for its reception in the draw-head. The space 7 of said draw-head necessarily forms the throat of the coupler and has an upper wall 8 and a lower wall 9 and corresponding side walls.

10 represents a movable pin which forms the locking device for the hook and is normally located in a suitable opening formed in the tail end of the hook and is free to be moved in an elevated position or dropped by the action of gravity when the hook 4 is in a closed position by virtue of the construction as more fully hereinafter described. The said pin 10 is provided with a head 11 which normally rests in a circular depression 12 formed in the top of the tail 6 of the hook and encircling the opening formed in the said tail below the same. The upper wall 8 forming a part of the space 7 is provided with a curved depression 13 which is better shown in dotted lines Fig. 2 the width of which is a little more than the width of the head 11 of the pin 10 allowing the said pin to be freely elevated after which the hook is free to be turned to the position it occupies when the same is in an open position.

Formed in the lower wall 9 and immediately below the depression 13 is a second depression 14 which is also curved and is of such a width as to admit the lower end of the pin 9 within which the same moves. The said depression 14 terminates in a vertical opening 15 the shape of which corresponds to that of the pin which opening allows said pin to drop to its full extent when the hook is in a closed position the walls of said opening allowing the said hook to be opened only when the pin is elevated by suitable means. The upper edge of the opening 15 is flaring as shown at 16 which tends to guide the pin 9 within the said opening when the hook 4 is about to close.

I do not wish to limit myself to any precise

device for elevating the pin 9 as such would be very simple in construction and come within the scope of any mechanic skilled in the art. I have not accordingly shown the same herein.

Having fully described my invention what I claim is,

1. A car coupler comprising a hook or knuckle, an opening formed in the tail end of the same, a pin 9 located in the said opening, and an opening 15 formed in the bottom of the said draw-head for receiving the lower end of the said pin, substantially as described.

2. A car coupler comprising a draw-head, a throat 7 formed therein, curved depressions 13 and 14 formed in the upper and lower walls of the same, an opening 15 formed in the lower of said walls and at the termination of the depression 14, and a pin 9 carried by the hook the lower end of which is adapted to be received by the said opening 15 substantially as described.

3. A car coupler comprising a draw-head 2, a throat 7 formed therein, curved depressions 13 and 14 formed in the upper and lower walls of the same, an opening 15 formed in the lower of said walls at the termination of the depression 14, a knuckle 4 movably secured to the said draw-head and provided with the tail 6, and a pin 9 having a head 10 carried by the said knuckle, substantially as set forth.

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

WILLIAM J. WALKER.

Witnesses:
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EMIL STAREK.