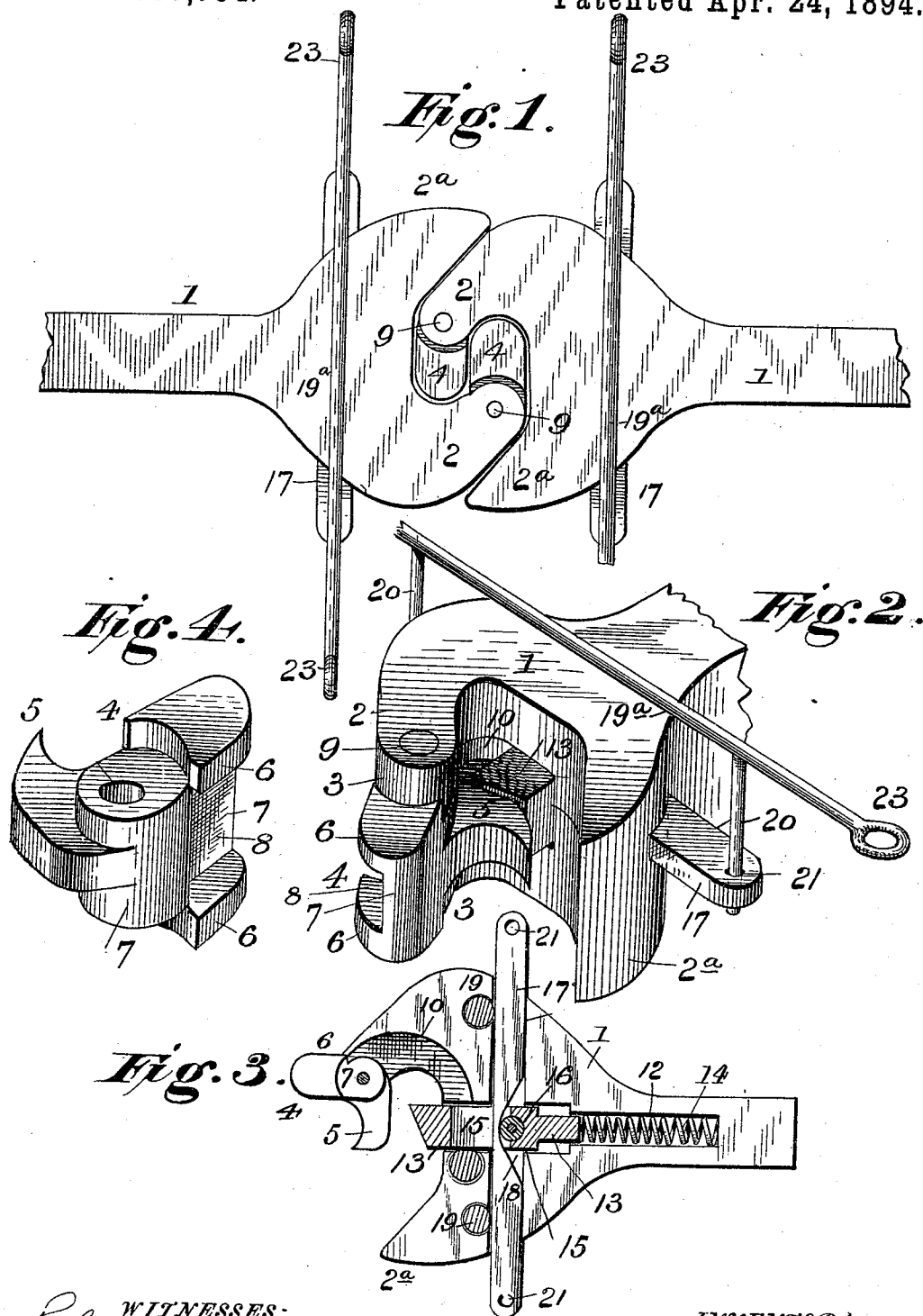


(No Model.)

J. R. HALL, Jr.  
CAR COUPLING.

No. 518,754.

Patented Apr. 24, 1894.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JOHN RILEY HALL, JR., OF FORT RECOVERY, OHIO.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 518,754, dated April 24, 1894.

Application filed August 26, 1893. Serial No. 484,143. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN RILEY HALL, Jr., a citizen of the United States, and a resident of Fort Recovery, in the county of Mercer and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in that class of car couplers known as "twin jaw" couplers, which automatically lock or couple themselves when two cars come together, thereby obviating the necessity of a brakeman or other person going between the cars for such purpose.

The object of the invention is to provide a novel coupler of the above character which will possess superior advantages with respect to efficiency in operation.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings: Figure 1 is a plan view of two draw heads constructed in accordance with my invention, showing the same coupled together. Fig. 2 is a perspective view of one of the draw heads, the pivoted or movable hook being open, ready for engagement with the coupler head of another car. Fig. 3 is a horizontal sectional view of the same. Fig. 4 is a perspective view of one of the pivoted hooks detached.

In the said drawings, the reference numeral 1 designates the draw head formed with the jaws 2 and 2<sup>a</sup>, one of which, 2, is formed with lugs 3, in which is pivoted a coupling hook 4, consisting of a metal block, having a rearwardly extending curved projection 5, flanges 6, and a head 7, formed on its under or outer side with a recess 8. This hook is formed with an aperture through which and aligned apertures in the lugs 3, a pin 9 passes by which it is pivotally connected with the draw head. The jaw 2 is formed with a central recess 10, in which the projection 5 of the hook is seated when coupled, with a similar jaw on another car. The draw head is formed with a cen-

tral horizontal recess 12, to receive a horizontally reciprocating locking bar 13, the rear end of which abuts against a coiled spring 14, also located in said recess, and the tendency of which is to force said bar outwardly. This bar intermediate of its ends is provided with a slot 15, in the rear end of which is journaled a roller 16. A transverse bar 17, passes through this slot and also through aligned apertures in the draw head, and at its center is provided with a curved recess 18, with which the said roller engages. Rollers 19 are journaled in recesses in the draw head, against which the front side of bar 17 works.

Connected with the car platform is a transverse shifting rod 19<sup>a</sup>, provided with downwardly extending arms 20, which pass loosely through apertures 21 in the bar 17. This shaft is provided with operating handles 23 at each end so that the jaws may be uncoupled from either side of the car.

The operation will be readily understood. When ready to be coupled the pivoted jaw of each car is in the position shown in Fig. 2. As the cars approach each other, the stationary jaws will engage with each other and the head 7, of one hook will strike the curved projection 5 of the other hook, said hooks turning on their pivots, so that the projections 5 will be forced into their seats in the draw head, when the locking bars will be forced outwardly by the coiled springs, so that their front ends will engage with the recesses 8, in the heads of the opposite hooks. The hooks will now be coupled together the ends of the projections 5 engaging under the end of the locking bar, thereby securely locking said hooks and preventing disengagement thereof until the locking bar is retracted, which can be readily done by shifting the transverse rod laterally which will throw the roller 16 out of the curved recess 18, so that the locking bar will be moved rearwardly and its front end disengaged from the hook which will now be unlocked.

It will be noted that not only does the locking bar lock the hook, but by reason of the recess in the hook with which it engages, the draw head will be held and prevented from falling to the ground in case of breakage of the draw bar with which it is connected. It will also be noted that the arms of the oper-

ating rod 19<sup>a</sup>, pass loosely through the apertures in the ends of the transverse bar 17, so that in case of breakage of one of the draw heads, said bar will slip off the arms without uncoupling the hooks.

5 Having thus described my invention, what I claim is—

1. In a car coupler the combination with the draw head formed with jaws at its front end, 10 one of which is formed with a central recess and the pivoted jaw, comprising a curved projection and a head with a recess in its outer or lower side, of the reciprocating spring actuated locking bar and means for actuating 15 the same; substantially as described.

2. In a car coupler the combination with the draw head formed with two jaws at its outer end one of which is provided with a central recess and lugs, and the hook pivoted to said 20 lugs, comprising the curved projection and the head having a recess in its outer or un-

der side, of the horizontally reciprocating locking bar seated in a recess in the draw head, having a slot and a roller, the coiled spring located in said recess and bearing 25 against said bar, the transverse bar passing through said slot and through the draw head and having a curved recess in its rear edge with which said roller engages, the rollers 30 journaled in the draw head against which the front edge of said bar works, and the shifting bar having depending arms passing loosely through holes or apertures in the said transverse bar; substantially as described.

In testimony that I claim the foregoing as 35 my own I have hereunto affixed my signature in presence of two witnesses.

JOHN RILEY HALL, JR.

Witnesses:

R. P. ARRICK,  
N. W. VAN KIRK.