

No. 609,792.

Patented Aug. 30, 1898.

**H. R. COCHRAN.**  
**AUTOMATIC CAR COUPLING.**

(Application filed Mar. 10, 1898.)

(No Model.)

2 Sheets—Sheet 1.

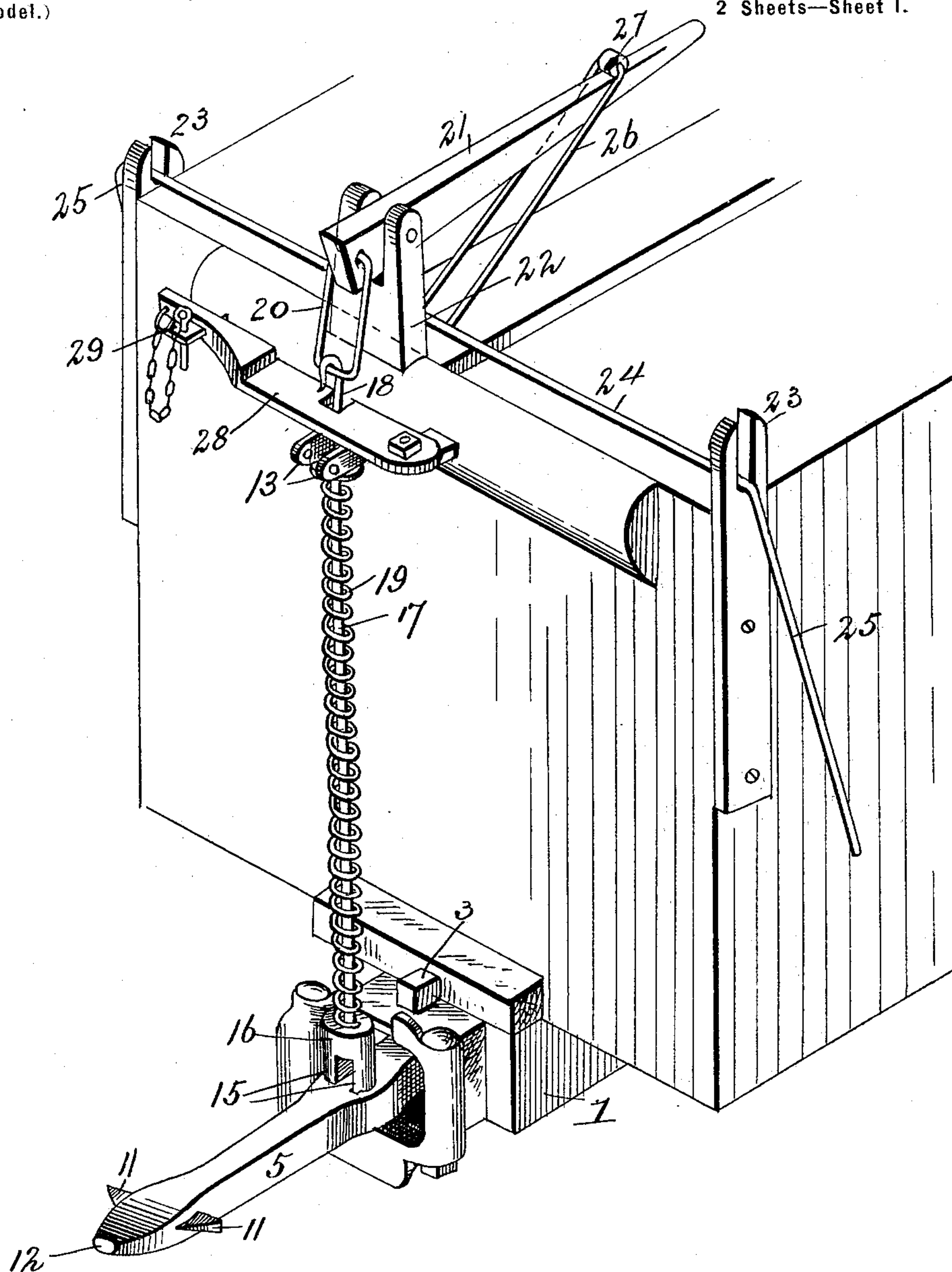


Fig. 1.

Witnesses  
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Attorney

No. 609,792.

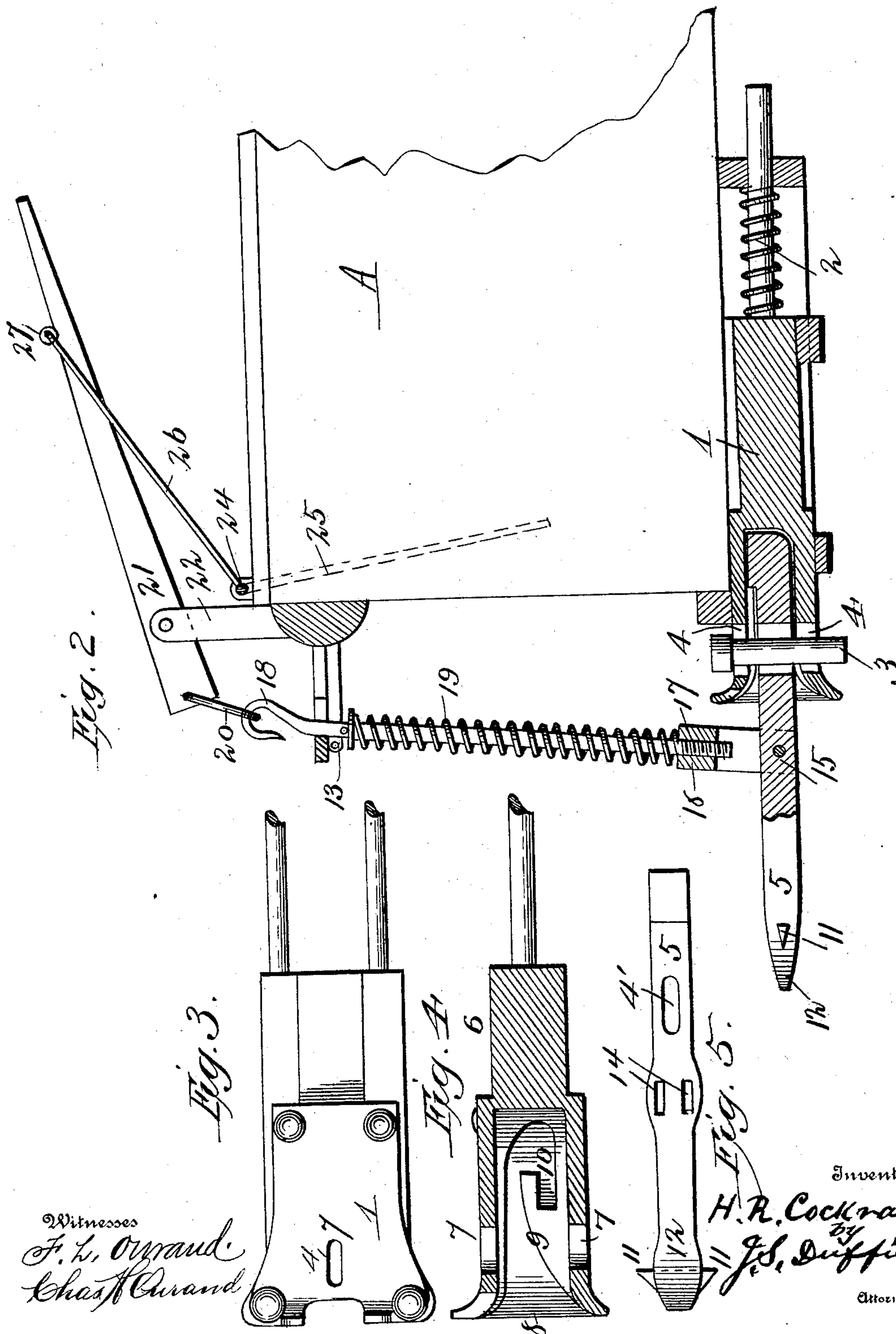
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**2 Sheets—Sheet 2.**





# UNITED STATES PATENT OFFICE.

HENRY RUSSELL COCHRAN, OF BEARDEN, ARKANSAS.

## AUTOMATIC CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 609,792, dated August 30, 1898.

Application filed March 10, 1898. Serial No. 673,362. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY RUSSELL COCHRAN, a citizen of the United States of America, residing at Bearden, in the county of Ouachita and State of Arkansas, have invented certain new and useful Improvements in Automatic Car-Couplers; and I 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.

My invention is an automatic car-coupler consisting of two draw-heads for receiving and holding a coupling-bar, the coupling-bar being slotted and pivoted at one end, its dart end catching in the opposite draw-head, a spring for holding said dart end down in its place, and means for uncoupling the coupler from the top of the car or from either side thereof.

In the accompanying drawings, Figure 1 is a perspective view with one part of my coupler and means for operating the same attached thereto. Fig. 2 is a side elevation of Fig. 1, partly in section. Fig. 3 is a top plan view of one of the draw-heads which receives and holds the slotted end of the coupling-bar. Fig. 4 is a longitudinal sectional view of the draw-head that receives and holds the dart end of the coupling-bar. Fig. 5 is a top plan view of the coupling-bar.

My invention is described as follows:

A is the front end of a coach. Under said coach is secured a draw-bar 1, provided with draw-bar springs 2. In the front end of said draw-head 1 is pivoted the coupling-bar 5 by means of a bolt 3, which passes through the upper and lower slots 4 of the draw-head 1 and the slot 4' of the coupling-bar 5. The purpose of the slots 4 and 4' is to give slack to the coupler.

In the neighbor car is secured a draw-head 6, which, like draw-head 1, is provided with draw-bar springs, and is also provided with slots 7, similar to slots 4 in draw-head 1, so that the slotted end of the coupling-bar 5 may be changed to this draw-head 6, if desired. The said draw-head 6 has rising from its mouth 8, on each side, an inclined plane 9, provided each with a recess 10 for the purpose of holding the barbs 11 of the dart end 12 of the coupling-bar 5. The draw-head 1

is also provided with the inclines 9 and the recesses 10, so that said coupling-bar may change ends at any time it becomes necessary, and each coach may be provided with an abutment 13 and means for raising the dart end of the coupling-bar.

In front of the slot 4' of the coupling-bar 5 are two slots 14, in which are secured the bifurcated ends 15 of a threaded nut 16. In this threaded nut is screwed the threaded end of a rod 17, its upper end terminating in a hook 18, and around this rod 17 is a coiled spring 19, its lower end abutting against the upper end of the nut 16 and its upper end against the lower face of the abutment 13. Said spring is set at such tension as to keep the dart end of the coupling-bar down, so that when said dart end enters the mouth of the draw-head 6 and the barbs 11 ascend the inclined planes 9 they drop over the ends thereof and are forced down against the bottom walls of the recesses 10, and when the coupler is pulled on they are forced into the said recesses 10, and the cars are thereby coupled. In the hook 18 is a link 20, its upper end pivoted in the short end of lever 21, fulcrumed in a bearing 22, mounted on the top of the coach A. The tension of the said spring 19 is so set as to also keep the short end of this lever 21 down and the long end up.

When the cars are coupled and run together—that is, slackened up—and we wish to uncouple them, a man on top of the coach bears down the long end of the lever 21, which lifts the dart end of the coupling-bar 5 and raises the barbs above the surface of the inclines 9, and the coupler is uncoupled.

Attached to each side and the end of the coach and extending a little above the top thereof are two bearings 23, and in these bearings works a rod 24, having at each end elbow-arms 25, which work against the outer face of the bearings 23 and extend down within easy reach of a man on the ground. Rigidly secured to this rod 24 and immediately under the lever 21 and extending back over the long end thereof is a U-shaped brace 26, its unbroken end bearing a roller 27, which works against the upper edge of the lever 21.

When the man on the ground moves one of the arms 25 forward, it throws the lever 26 down, which carries down with it the long



end of the lever 21, and thus raises the dart end of the coupling-bar 5 by means of the mechanism just above described.

5 The front end of the bearing 13 is bifurcated, so that the rod 17 may be slipped between the two parts, and just above said bearing is pivoted a plate 28 to hold said rod 17 in place. The free end of said plate is secured to the front end of said coach by means  
10 of a staple and bolt 29. When I wish to remove rod 17 and spring 19, this plate 28 is set free at its free end and turned back out of the way.

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

1. In combination with a car-coupler, substantially as shown and described, a threaded nut, 16, secured to the coupling-bar, 5; a rod,  
20 17, its lower end secured in nut, 16, its upper end secured to a link, 20; link, 20, pivoted in the short end of a lever, 21; lever, 21, fulcrumed in a bearing, 22, mounted on the top of the coach, said lever adapted to raise  
25 the rod, 17, and thereby the dart end of the coupling-bar; rod, 24, working in bearings 23, extending above the top of the coach; its ends bent down forming levers, 25, and having rigidly secured to said bar a lever, 26, adapted  
30 to press down the long arm of lever, 21; coil-spring, 19, its lower end resting on the upper end of the nut, 16, its upper end resting against the lower face of the abutment, 13,

said spring adapted to press the dart end of the coupling-bar, 5, downward; and plate, 35 28, secured above the abutment, 13, and adapted to hold the upper end of rod, 17, in place, substantially as shown and described.

2. A car-coupler, consisting of the draw-heads, 1, and 6, having upper and lower slots, 40 4, inclines, 9, and recesses, 10; a coupling-bar, 5, having slots, 4', and, 14; dart end, 12, provided with barbs, 11, said coupling-bar pivoted in one of the draw-heads by a bolt, 3, and its other end, 12, adapted to enter the  
45 mouth of the opposite draw-head, its barbs, 11, to catch in the recesses, 10; threaded nut, 16, secured to the coupling-bar, 5; rod, 17, its lower end secured in nut, 16, and its upper end to the link, 20; link, 20, pivoted in the  
50 short arm of lever, 21; lever, 21, fulcrumed in bearing, 22, mounted on the top of the coach; rod, 24, working in bearings, 23, and having arms, 25; lever, 26, rigidly secured to the rod, 24, and adapted to press down the  
55 long arm of the lever, 21; coil-spring, 19, encircling rod, 17, and working between the bearing, and nut, 16; substantially as shown and described and for the purposes set forth.

In testimony whereof I affix my signature 60 in presence of two witnesses.

HENRY RUSSELL COCHRAN.

Witnesses:

JAMES HENRY JORDEN,

THOMAS JEFFERSON OWENS.