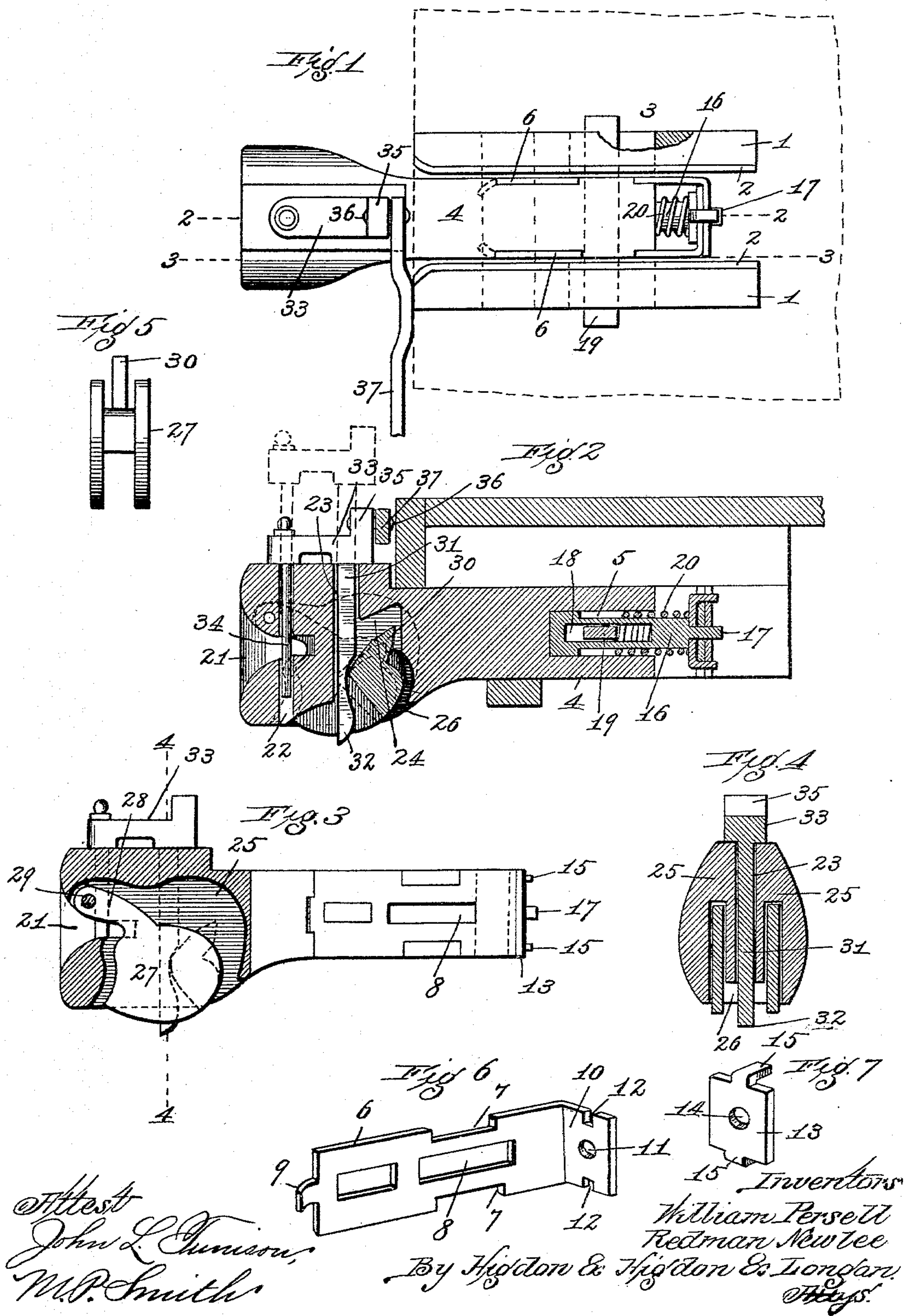


(No Model.)

W. PERSELL & R. NEWLEE.  
AUTOMATIC CAR COUPLING.

No. 545,305.

Patented Aug. 27, 1895.





# UNITED STATES PATENT OFFICE.

WILLIAM PERSELL AND REDMAN NEWLEE, OF WELLSVILLE, MISSOURI.

## AUTOMATIC CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 545,305, dated August 27, 1895.

Application filed May 21, 1895. Serial No. 550,146. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM PERSELL and REDMAN NEWLEE, of the city of Wells-ville, county of Montgomery, State of Mis-  
5 souri, have invented certain new and useful Improvements in Automatic Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.  
10 Our invention relates to an improved auto-  
matic car-coupling; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

In the drawings, Figure 1 is a top plan view  
15 of our improved coupling, the same being shown in its proper bearings and relative to the car-body. Fig. 2 is a longitudinal vertical sectional view taken approximately on the indicated line 2 2 of Fig. 1. Fig. 3 is a lon-  
20 gitudinal sectional view taken approximately on the indicated line 3 3 of Fig. 1. Fig. 4 is a vertical cross-sectional view taken approxi-  
mately on the indicated line 4 4 of Fig. 3. Fig. 5 is a rear elevation of a pivoted block  
25 located in the draw-head of our improved car-coupling. Fig. 6 is a view in perspective of one of the plates located upon the side and rear end of the draw-head. Fig. 7 is a view in perspective of a plate located on the rear  
30 end of the draw-head.

Referring by numerals to the accompanying drawings, 1 1 indicate timbers that are located upon the under side of the car-body, and the inner faces of said timbers are provided with  
35 metallic plates 2. Formed in these timbers 1 and plates 2 are horizontally-aligned slots 3.

4 indicates the draw-head of our improved coupling, the same being constructed with a recess 5 in its rear end.

40 6 6 indicate metallic plates that are let into the sides of the rear end of the draw-head, and said plates are provided with notches 7 and longitudinal slots 8, that coincide with the slots 3, formed in the timbers 1 and plates  
45 2. Tongues 9 are formed on the forward ends of said plates 6 and extend into recesses formed in the sides of the draw-head. The ends 10 of these plates 6 are bent inwardly and overlap each other, and said ends 10 are

provided with coinciding apertures 11 in their 50 centers and rectangular notches 12 in their top and bottom edges. A rectangular metallic plate 13 is provided with a centrally-ar-  
ranged aperture 14, that coincides with the apertures 11, and said plate 13 is provided 55 with laterally-projecting tongues 15, that extend through the rectangular notches 12. A plunger 16 is positioned within the recess 5 in the under side of the draw-head, and said  
60 plunger is constructed with a lateral projec-  
tion 17, that passes through the aligned aper-  
tures 14 and 11 in the plates 13 and 6. A horizontally-arranged slot 18 is formed in this plunger that is in direct horizontal align-  
65 ment with the slots 8 in the plate 6 and the  
slots 3 in the side timbers 1. A bar 19 is lo-  
cated in said aligned slots, and a coil-spring  
20 is located upon the body of the plunger 16,  
between the bar 19 and the ends of the plates  
in the rear of the plunger. By this construc- 70  
tion slight longitudinal movement is allowed the entire draw-head.

Formed in the forward end of the draw-head is an ordinary link-recess 21, and pass-  
ing vertically through the forward end of said 75  
head is a vertical bore or passage 22, through  
which the pin passes. Passing vertically  
through the head directly in the rear of this  
aperture or passage 22 and to the rear of the  
link-recess 21 is a bore or passage 23, that 80  
communicates with a recess 24, formed in and  
extending upwardly from the bottom of the  
head of the draw-bar. Formed in said head  
on each side of this vertical passage 23 and  
communicating with the link-recess 21 and 85  
the lower face of the head are vertical recesses  
25. The lower portions of the recesses 24 and  
25 are formed into a single recess 26.

27 indicates a block the entire forward por-  
tion of which is bifurcated and formed integral 90  
with the walls formed by this bifurcation, and  
extending forwardly and upwardly is a pair  
of arms 28, that extend into the forward ends  
of the recesses 25, and a pin 29 is passed  
through apertures formed in the forward ends 95  
of these arms 28 and through apertures formed  
in the forward end of the draw-head above  
the link-recess 21. Thus said block and arms



are pivoted in the recesses 24 and 25. Said block 27 is not wide enough to fill said recesses. Therefore it is capable of a slight vertical movement. A tongue or lug 30 is formed integral with the upper end of the block 27 and projects into the recess 24. A bar 31, having an inclined lower end 32, is arranged to move vertically through the vertical passages 23, and formed integral with the upper end of said bar 31 is a block 33, that extends forwardly over the pin-aperture 22. Passing through the aperture formed in the forward end of this block 33 is a pin 34, that passes through the vertical aperture 22. The block 33 is provided with an upwardly-extending lug 35 at its rear end, and a pin 36 is passed through said lug 35 and through the rear end of an operating-lever 37, that is pivoted to the end of the car-body in a plane slightly above the draw-head.

The operation is as follows: Previous to making a coupling between two cars equipped with our improved coupler the operator bears downwardly upon the outer end of the lever 37, and this movement raises the block 33, carrying the bar 31 and pin 34. As the lower end 32 of the bar 31 passes above the body of the block 27 said block will fall to its lowermost limit of movement and the inclined lower end 32 of said bar 31 will rest directly upon the inclined forward face of the body of the block 27 and in the recess 24. The lower end of the pin 34 will, with this movement, have been drawn into the pin-aperture 22 above the link-recess 21. The coupler is now set and in position to receive the link carried by the coupler located upon the approaching car. Said link in the opposite coupler will enter the link-recess 21 in the usual manner, and in so doing will strike against the lower edges of the forwardly-projecting arms 28, and as said link moves rearwardly in the link-recess 21 said arms and the entire block 27 will be raised in the recesses 24 and 25. As soon as said block 27 is raised a distance sufficient to allow the bar 31 to pass through the vertical aperture 23 said bar will, by reason of its weight and the weight of the block 33, drop to its lowermost position, and with said movement the pin 34 will pass downwardly through the pin-aperture 22 and through the link, which has now passed into the link-recess 21. Thus a coupling is effected.

To uncouple two cars equipped with our improved coupler the operator bears downwardly upon the outer end of the lever 37, and the block 33, carrying the bar 31 and pin 34, is drawn upwardly. The link is now free to move out of the link-recess and the coupler is set to make the next coupling.

A coupler of our improved construction is entirely automatic during the act of coupling, is so arranged as that the operator does not have to go between the cars in effecting a

coupling or uncoupling, and said coupler possesses superior advantages in point of simplicity, durability, and general efficiency.

We claim—

1. In an improved car coupling, a pair of timbers fixed to the underside of the body of the car, a draw-head arranged between said timbers, said draw-head having a recess formed in its rear end, a movable pin or plunger located in said recess, plates located in and lying flush with the sides of the draw-head, a bar extending transversely through slots formed in the parallel timbers, the draw-head and the plunger, and a coil-spring interposed between said bar and the rear ends of the plates.

2. In an improved car coupling, a pair of timbers lying parallel with each other and fixed to the underside of the car body, plates located upon the inner faces of said timbers, a draw-head arranged between said timbers and having a recess formed in its rear end, plates located in and lying flush with the sides of the rear end of the draw-head, the rear ends of said plates being turned inwardly to overlap each other, an end-plate arranged and held upon said overlapping ends of the plates, a plunger located in the aperture of the draw-head and having its end passed through the end-plate and overlapping ends of the side-plates, a bar passing transversely through the parallel timbers, draw-head, plates thereon and plunger, and a coil-spring interposed between said bar and the end-plate.

3. In an improved car coupling, a draw-head having the ordinary link-recess formed in the forward end thereof and having a pair of vertical passages through the forward end of said draw-head and having recesses formed in and extending upwardly from the under side of said draw-head, a block having a bifurcated forward end pivoted in said recesses, a bar arranged to move vertically through one of said vertical bores or passages, a block formed integral with the upper end of said bar, a coupling-pin carried by the forward end of said block and passing through the remaining one of the vertical passages, and an operating lever attached to said block for raising and lowering the same.

4. In an improved car coupling, a draw-head having the usual link-recess formed in the forward end thereof and having a pair of vertically arranged passages formed through the forward end of the draw-head, said draw-head being also constructed with a pair of vertically arranged recesses extending upwardly from its under side, a block having a bifurcated forward end, arms formed integral with and extending forward from the bifurcated forward end of said block, said block being pivoted in the vertical recesses in the under side of the draw-head, a vertically ar-



5 ranged bar passing through the rear one of  
the vertical passages, the same resting upon  
the block when the device is uncoupled, a  
block formed integral with the upper end of  
said bar, a coupling pin carried by the for-  
ward end of said block and arranged to move  
in the vertical pin-aperture or passage, and  
an operating hand-lever pivoted to the rear  
end of the block and fulcrumed to the end of  
10 the car-body.

In testimony whereof we affix our signa-  
tures in presence of two witnesses.

WILLIAM PERSELL.  
REDMAN NEWLEE.

Witnesses to signature of William Persell:

MAUD GRIFFIN,  
JOHN C. HIGDON.

Witnesses to signature of Redman Newlee:

JAMES L. BARKER,  
S. M. BARKER.