

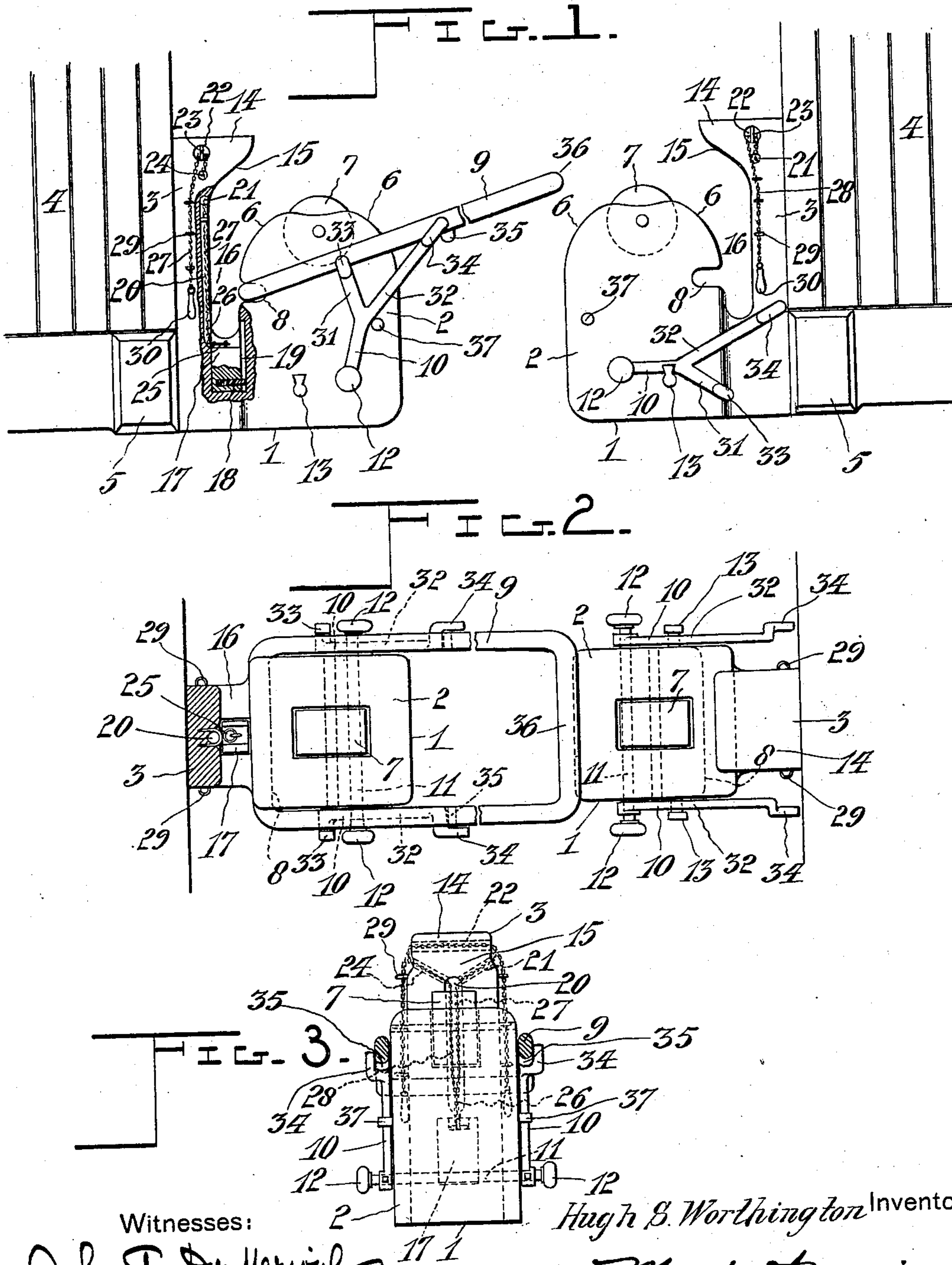
No. 723,349.

PATENTED MAR. 24, 1903.

H. S. WORTHINGTON.
CAR COUPLING.

APPLICATION FILED NOV. 24, 1902.

NO MODEL.



Witnesses:

John F. Dufferin
J. D. Bunker

Hugh S. Worthington Inventor,
By *Marion Marion*
Attorneys

UNITED STATES PATENT OFFICE.

HUGH STANDISH WORTHINGTON, OF COATICOOK, CANADA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 723,349, dated March 24, 1903.

Application filed November 24, 1902. Serial No. 132,535. (No model.)

To all whom it may concern:

Be it known that I, HUGH STANDISH WORTHINGTON, a subject of the King of Great Britain, residing at Coaticook, in the county of Stanstead, in the Province of Quebec, Dominion of Canada, 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, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to car-couplers; and its object is to provide an automatic coupler which is simple in construction and reliable in operation, completely obviating the necessity for the brakeman's standing between the cars when they are being coupled.

The invention consists in a certain construction and combination of parts, to be more fully described hereinafter and definitely set forth in the claims.

In the drawings, Figure 1 represents a portion of the ends of two cars substantially in side elevation, showing the couplers with their parts in the arrangement which they assume when the act of coupling is taking place, a portion of one of the couplings being shown in section, as will appear, and the coupling-link broken away, as indicated. Fig. 2 is substantially a plan view of the two couplers in the same relative positions as in Fig. 1, a portion of one being shown in section, as will appear. Fig. 3 is substantially a front elevation of one of the couplers, the coupling-link being shown in section.

Throughout the drawings the same reference-numerals indicate like parts.

Referring more particularly to the parts, 1 represents the body of the coupler, which comprises an enlarged buffer or head 2 and a rear upwardly-extending portion 3, which is adapted to be secured to the body of the car 4 above and to the end bolster 5 below. As indicated, the buffer 2 projects somewhat upwardly, having rounded faces 6, and there is provided in connection with each buffer a wheel or roller 7, mounted as indicated, and projecting above the buffer, as shown. The rear sides of the buffers are provided with notches or recesses 8, which are adapted to receive the coupling-link 9. The buffers 2

are provided with substantially Y-shaped arms or supports 10, carried, respectively, upon arbors 11, extending completely through the buffers and provided with knobs or handles 12 for the purpose of moving the arms, as will be readily understood. Stops 13 are provided upon which these arms may rest when not in use, in which position the arms of the right-hand coupler are shown.

It should be observed that the portions 3 of the couplers are formed substantially into heads 14 with inclined forwardly-projecting faces 15, the purpose of which will appear hereinafter. It will also appear that behind the buffers there are formed large recesses 16, with which the aforesaid recesses 8 communicate. Below these recesses there are mounted the uncoupling-blocks 17, which are vertically guided, as will be readily understood, and provided with means for preventing their complete removal vertically, which means may consist substantially of a spring-pressed flange 18, running in a slot 19. Referring more particularly to Fig. 3, it will appear that the portion 3 of the coupler is provided with a vertical recess or slot 20, arranged substantially centrally and adjacent to the aforesaid block 17, as indicated. Branches 21 and 24 lead from this recess 20 to the outer sides of the coupler, and above this point there is provided a horizontal opening 22, passing from side to side of the coupler within the head 14. This opening 22 is provided with a longitudinal partition or wall 23. (Most clearly shown in Fig. 1.) The uncoupling-block 17 is preferably provided with a ring 25, to which is attached a chain 26, and to this chain are connected chains 27 and 28, which extend upwardly within the aforesaid recess 20, one of them passing through the branch opening 21 and the other through the opening 24. They then pass through the opening 22 aforesaid, passing in opposite directions, and hang down on opposite sides of the coupler, where they pass through suitable eyes 29. They are provided at their extremities with suitable handles 30 for pulling upon them.

Referring again to the arms 10, the forks 31 and 32 of these arms are adapted to engage the lower side of the link 9, as shown in Fig. 1. To this end the fork 31 is offset, as indi-

cated, so as to form a shoulder 33, upon which the lower side of the link may rest. The forward fork 32 is similarly offset, but at a lower point, its offset extension 34 being received by the lower face of a lug 35, projecting downwardly from the link 9, as shown. Rests 37 are provided, and these enable the link to be supported in substantially the position in which it is shown in connection with the left-hand coupler in Fig. 1, the rear portion of the link lying within the recess 8, and in this position the parts are adapted for coupling, as stated. It may be said, however, that the forward extremity 36 of the coupler is intended to be maintained at such a height that when the cars approach each other more nearly it will come into contact with the face of the roller 7 carried by the opposite coupler. This is for a purpose which will appear more fully in connection with the description of the mode of operation of the coupler. This mode of operation will now be described.

The coupling-link 9 having been arranged upon the supports or arms 10 in the manner shown, the cars approach each other, whereupon the portion 36 of the link strikes upon the disk 7 of the opposite coupler, as stated. This raises the extremity of the link, which passes therebeyond and impinges upon the inclined face 15, whereupon it is deflected downwardly, falling into the recess 16 of the opposite coupler, finding its way to the bottom thereof, so that it couples the cars. To uncouple the cars, the brakeman pulls upon any one of the handles 30, in this manner lifting the block 17, so as to raise the coupling-links.

It should be understood, of course, that the two couplers are identical in construction.

While I have shown in the accompanying drawings the preferred form of my invention, it will be understood that I do not limit myself to the precise form shown, for many of the details may be changed in form or position without affecting the operativeness or utility of my invention, and I therefore reserve the right to make all such modifications as are included within the scope of the following claims or of mechanical equivalents to the structures set forth.

Having described my invention, what I con-

sider as new, and desire to secure by Letters Patent, is—

1. In a car-coupler, in combination, a buffer, a rotatable member pivoted thereabove, a link, means for supporting the same upon the coupler of one car so that its outer extremity may engage the face of said rotatable member, there being recesses behind said buffer adapted to receive said link.

2. In a car-coupler, in combination, buffers having recesses therebehind, a link, at least one of said buffers having arms adapted to support said link, and a wheel carried by at least one of said buffers, and adapted to be struck by said link as the cars are coupled.

3. In a car-coupler, in combination, buffers, rotatable members carried thereabove, said buffers having recesses therebehind, a link, pivoted supports for said link carried by said buffers, said supports being adapted to maintain said link with its rear portion in engagement with one of said recesses, said disks being adapted to engage the forward extremity of said link.

4. In a car-coupler, in combination, buffers having recesses therebehind, a link, rollers carried by said buffers in the upper portion thereof, substantially Y-shaped arms pivotally mounted in said buffers and each adapted to support said link when the rear portion thereof is received by one of said recesses, said rollers being adapted to engage the forward extremity of said link to deflect same upwardly, and an inclined face therebehind, adapted to deflect the extremity of said link downwardly toward the recess of the opposite buffer.

5. In a car-coupler, in combination, buffers, a link adapted to lie around the same, vertically-guided members behind said buffers and which may raise the extremities of said link, said buffers having upward extensions with guide-openings therethrough, and chains passing through said guide-openings and connecting with said members.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

HUGH STANDISH WORTHINGTON.

Witnesses:

CHARLES A. KENNEDY,
RUSH M. DAWSON.