

W. S. McGINNIS.

CAR COUPLING.

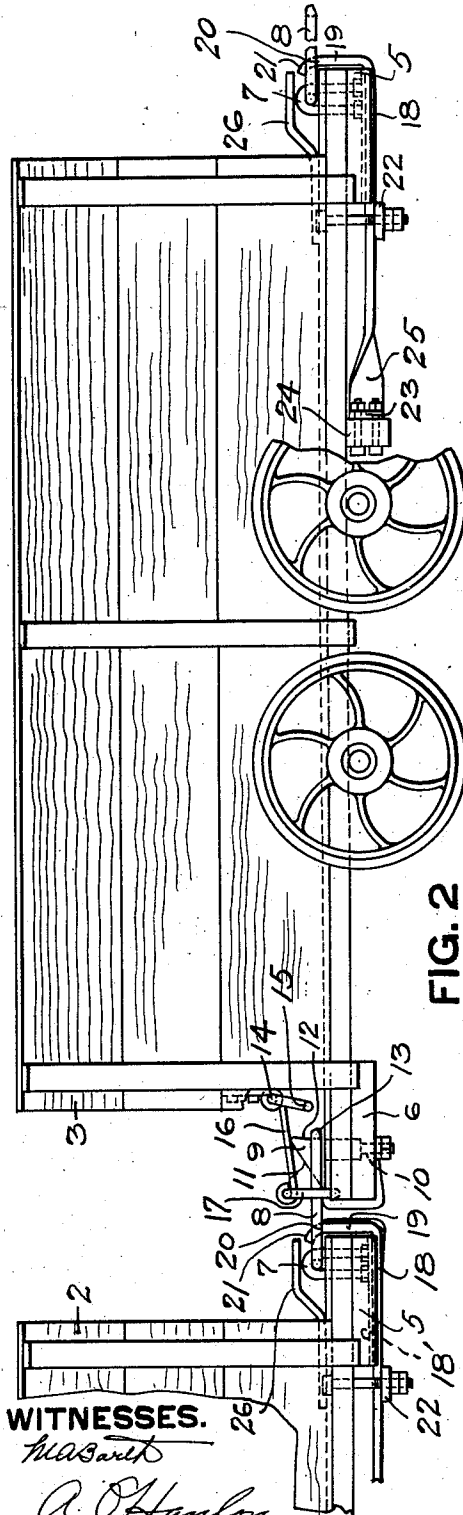
APPLICATION FILED MAY 2, 1910.

1,022,796.

Patented Apr. 9, 1912.

2 SHEETS-SHEET 1.

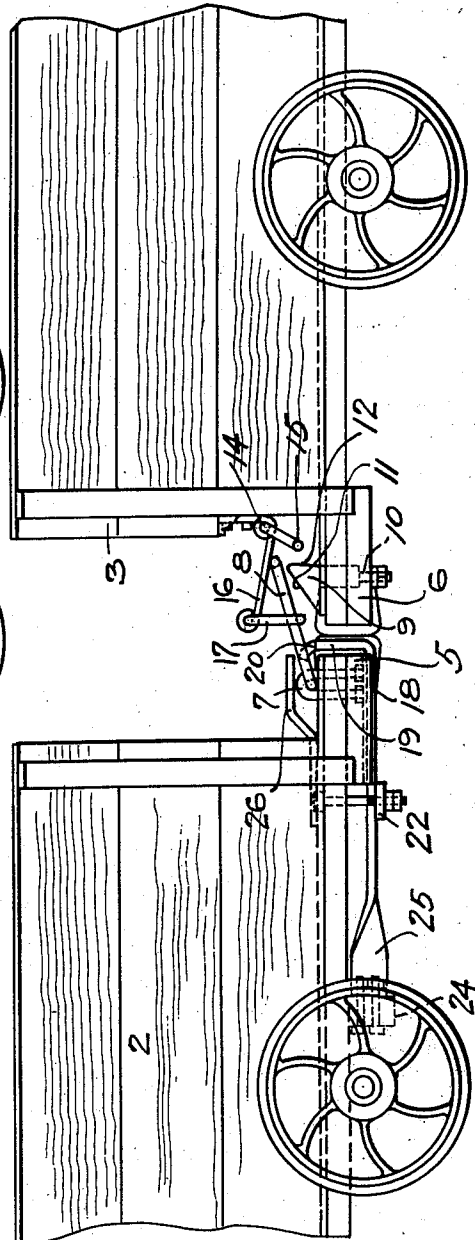
FIG. 1



WITNESSES.

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A. O. Hanlon

FIG. 2



INVENTOR.

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FIG. 3

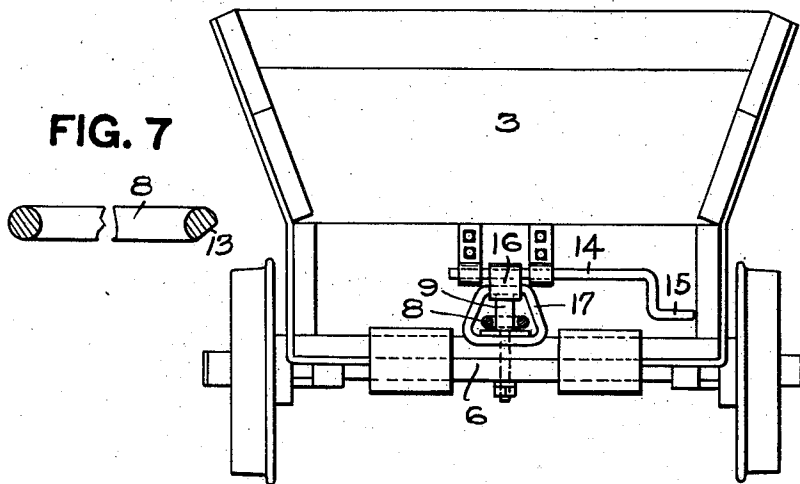


FIG. 4

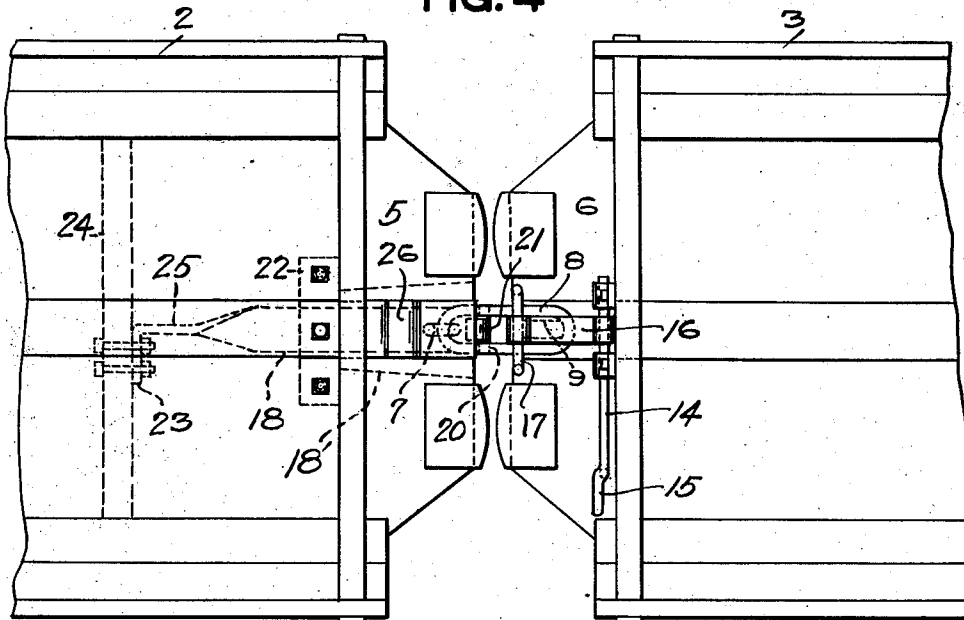
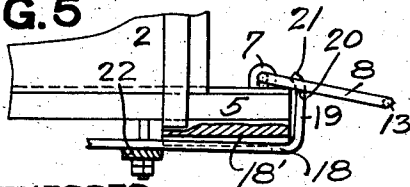


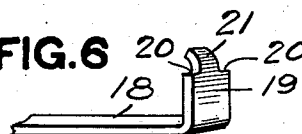
FIG. 5



WITNESSES.

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FIG. 6



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UNITED STATES PATENT OFFICE.

WILLIAM S. MCGINNIS, OF MAHONINGTOWN, PENNSYLVANIA.

CAR-COUPLING.

1,022,796.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed May 2, 1910. Serial No. 558,853.

To all whom it may concern:

Be it known that I, WILLIAM S. MCGINNIS, of Mahoningtown, county of Lawrence, and State of Pennsylvania, have invented a certain new and useful Improvement in Car-Couplers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to car couplers, more particularly to couplers of the link type and for use on mining and quarry cars and the like. Its primary object is to provide a link coupler whereby there is obviated the necessity of going between the cars, with its attending danger, for manipulation of the link in coupling and uncoupling thereof.

I will now describe my invention referring to the accompanying drawings, so that others skilled in the art to which it appertains may understand and construct the same.

Figure 1 is a side elevational view of the coupled end of two mining cars, showing my improved coupler applied thereto, the cars being partly broken away, and having the bumpers on the forward side removed; Fig. 2 is a similar view, showing manner of shifting the link to uncoupling position; Fig. 3 is a front elevation of the end of the car which carries the link guide and shifter, the link being in section; Fig. 4 is a plan view of the coupled cars; Fig. 5 is a fragmentary perspective view of the yieldable support for holding the link in coupling position; Fig. 6 is a detail perspective view of the end of the yieldable support for the coupling link; and Fig. 7 is a sectional view of the coupling link showing an end thereof being beveled to enable the ready reception of the link by the link engaging means.

In describing my invention, the reference numerals 2 and 3 indicate two mining cars of common type, having the platform or underframe extensions 5 and 6. Carried by the extension 5, by means of the suitable U-bolt 7, is the ordinary coupling link 8 which is adapted to have coupling engagement with the catch 9 mounted on the extension 6 of the next adjacent car 3. The catch 9 is preferably secured to the extension 6 by means of the depending threaded shank 10 and is provided with the forward inclined face 11 upon which the link, when advanced with the car, rides and the rear vertical or substantially vertical face 12 behind which

the end of the link lodges when the cars have been brought to coupling position. The free end of the link is preferably provided with the beveled lower face 13, shown in Fig. 7, which insures ready reception of link by the inclined face 11 of the catch as the cars are brought together.

Mounted above the extension 6 in suitable bearings on the car body 3 is the rocker rod 14 having the operating hand crank 15. Fixedly carried by the rod 14 is the arm or link 16 which extends across and normally rests upon the catch 9 and to which is pivotally secured the yoke 17 which is so positioned as to lie, normally, forward of and across the inclined face 11 of the catch 9. As the cars are brought together for coupling, this yoke 17 receives and guides the coupling link 8 against lateral displacement as it passes to the catch and is adapted, as described below, to shift the link 8 out of engagement with the catch to uncoupling position. The arm 16 lying across the catch 9, prevents the link 8 from rising out of engagement with the face 12 through jarring.

Means for holding the coupling link 8 in position for coupling embodies the resilient strap-like member 18, mounted beneath the car 2 and having engagement with the link 8 by means of the upwardly extending finger 19 as shown in Fig. 6; the finger being provided with the shoulders 20 by means of which the link may be held in the proper horizontal plane for reception by the catch, and the intermediate terminal tongue 21 which is received by and holds the link against lateral displacement for reception by the yoke. This strap-like member 18 passes over and rests upon the transversely arranged bar 22, and terminates in the angularly disposed flange 23 which is bolted to the cross-piece 24 of the car. And a half turn or twist in the strap forms the vertically disposed leaf 25 which enables the member 18 to swing laterally over the bar 22 with the play of the coupling link 8. By adjustably mounting this bar 22, the member 18, by reason of its resiliency, may be raised and lowered to bring about, through the medium of the finger 19, horizontal shiftable adjustment of the coupler link 8 with respect to the catch 9.

In order to bring about coupling of the cars while occupying a curve in the track, the yoke 17 is downwardly flared, as shown

in Fig. 3, in such a manner as to enable reception thereby of the coupling link when, by reason of the angular position of the cars, incident to occupying the curve, it is caused to assume a tangential position with respect to the center of the track or an angular position with respect to the catch. As the cars are brought together and the coupling link is received by the yoke 17, the link is laterally shifted to proper position with respect to the catch 9 by means of the upwardly converging sides of the yoke as the respective end of the link rises on the inclined face 11 to coupling engagement with the catch face 12. The lower flare of the yoke 17 also permits of play of the coupling link, incident to irregularity of travel of the cars and of the cars taking curves in the track; it being understood that the coupling link, in its normal position, and in engagement with the catch 9, occupies the lower flared portion of the yoke.

When it is desired to uncouple the cars, the rod 14, by means of the crank 15, is rotated in such a manner as to cause the yoke 17, through the intermediary of the rocker arm 16, to be elevated so as to cause an upward shifting or swinging of the link 8 from engagement with the vertical face 12 of the catch 9, as shown in Fig. 2; the elevation of the arm 16 allowing the end of the link to pass from the catch as the cars separate to uncoupling position.

The underface of the extension 5 of the car 2 is preferably recessed as at 18' to receive the forward portion of the strap-like member 18; such recess enabling mounting of the member 18 flush with the lower face of the extension 5, thus protecting the member 18 against destructive bottom swipes, as in the case of wrecks and when the ends of the cars buckle and ride upon one another. A plate 26 projecting over the U-bolt 7 and the finger 19 of the member 18, serves to protect these members from being battered by falling material in the unloading of the cars. And, as will be noticed by referring to Fig. 5, the finger 19 of the mem-

ber 18 preferably engages with the link 8 at a point near the U-bolt fulcrum 7 so that should the uncoupled link be positively forced downwardly against the extension 5, as by falling material, the yieldable finger 19 will be only slightly driven downwardly and not to such extent as would injuriously bend the member 18 downwardly across the bar 22.

The advantages of my invention will be appreciated by those skilled in the art.

My improved coupler is simple and durable in construction and efficient in operation.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. In a car coupler, the combination with adjacent cars, of a coupling link carried by one of the cars, link engaging means carried by the other car and adapted to receive the coupling link when the cars assume coupling position, and a vertically shiftable guiding yoke mounted on the last named car and forward of the link engaging means, said yoke being adapted to guide the coupling link to the engaging means when the link approaches said means, and to shift the link from the engaging means in the uncoupling of the car.

2. In a car coupler, the combination with adjacent cars, of a coupling link carried by one of the cars, means carried by the other car and adapted to engage the coupling link when the cars assume coupling position, and a downwardly flared yoke mounted on the last named car and forward of the link engaging means, the said yoke being adapted to laterally guidingly direct the coupling link to the engaging means for coupling thereof.

In testimony whereof, I hereunto set my hand.

WILLIAM S. MCGINNIS.

Witnesses:

M. ARTHUR FULLER,
M. A. BARTH.