No. 829,366. PATENTED AUG. 21, 1906.

W. J. BURRAN.

CAR COUPLING.

APPLICATION FILED APR. 9, 1906.

2 SHEETS—SHEET 1.

FIG. 1.

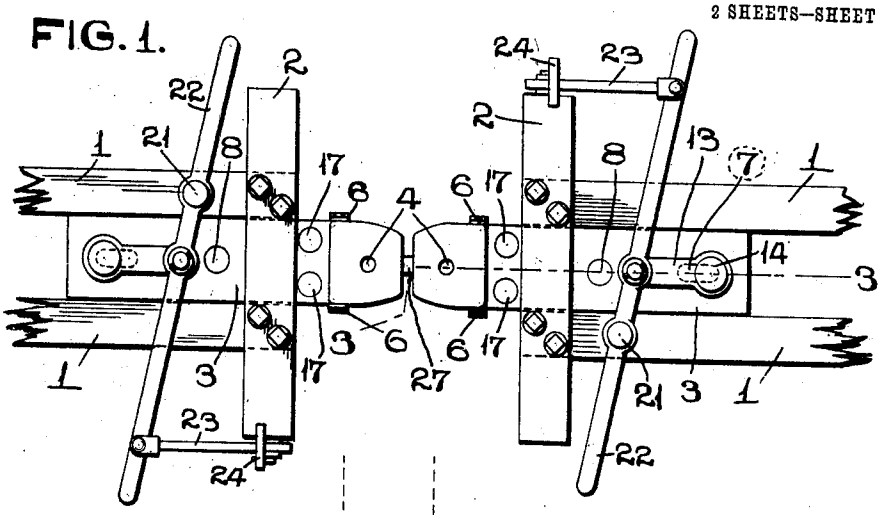


FIG. 2.

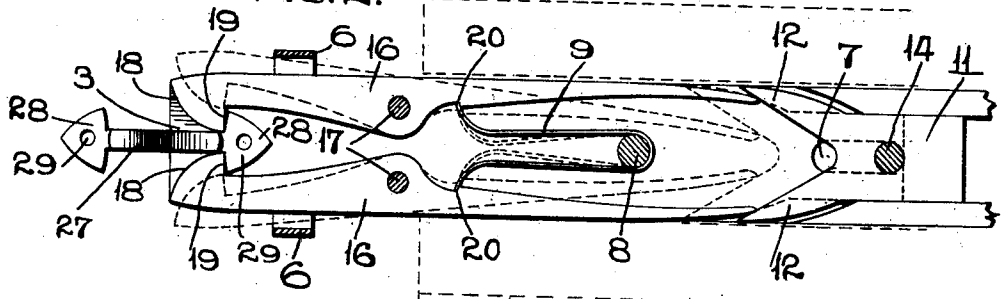
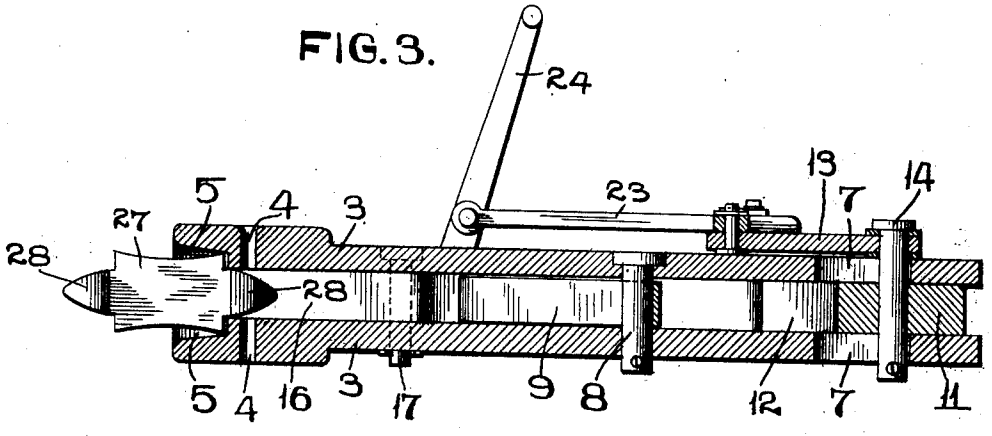


FIG. 3.



ATTEST.

H. C. Fitzpatrick.

M. P. Smith.

INVENTOR.

W. J. BURRAN.

BY Higdon & Longan.

ATTY'S.

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2 SHEETS—SHEET 2.

FIG. 4.

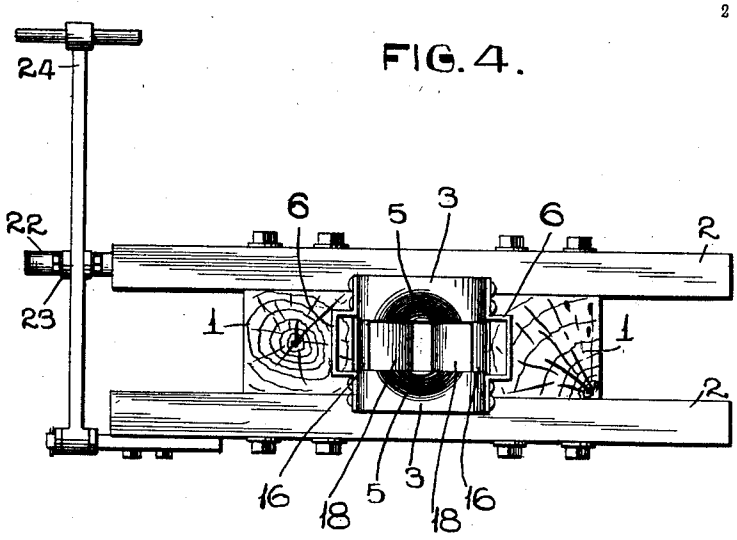


FIG. 5.

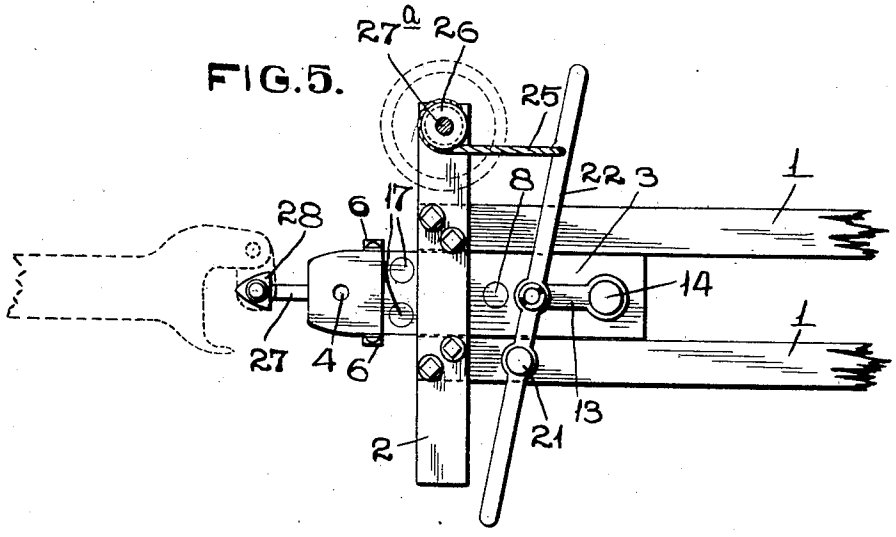
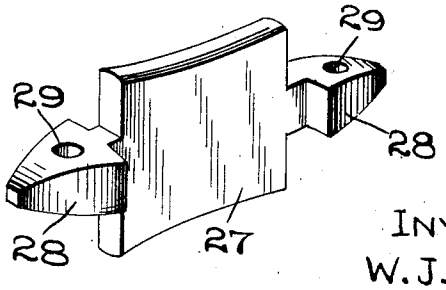


FIG. 6.



ATTEST.

H. G. Fletcher.

M. P. Smith

INVENTOR.

W. J. BURRAN.

BY Higdon & Tougas.

ATTY'S.

UNITED STATES PATENT OFFICE.

WILLIAM JEFFERSON BURRAN, OF WECHES, TEXAS.

CAR-COUPLING.

No. 829,366. Specification of Letters Patent. Patented Aug. 21, 1906.

Application filed April 9, 1906. Serial No 310,797.

To all whom it may concern:

Be it known that I, WILLIAM JEFFERSON BURRAN, a citizen of the United States, and a resident of Weches, Houston county, Texas, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved car-coupling; and the object of my invention is to construct a simple inexpensive car-coupling which will be practically automatic when in operation and which may be easily released when uncoupling.

A further object of my invention is to construct a car-coupling making use of a coupling-link of a peculiar shape and which is engaged by spring-actuated jaws arranged in the coupler-head and which link is adapted to be coupled to the link-and-pin type of coupler or the coupler which is now in general use, which is provided with a swinging jaw.

To the above purposes my invention consists of certain novel features of construction and arrangement of parts, which will be hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of two of my improved couplers in coupled position. Fig. 2 is a horizontal section taken through the center of a coupler of my improved construction, showing the spring-jaws therein and the link held by said jaws. Fig. 3 is a vertical section, enlarged, taken on the line 3 3 of Fig. 1. Fig. 4 is a front elevation of the coupler. Fig. 5 is a plan view of one of the couplers and showing the link connected to the type of coupler now in general use. Fig. 6 is a perspective view of the link made use of in my improved coupler.

Referring by numerals to the accompanying drawings, 1 1 designate the center sills of a car, on the outer ends of which are fixed the usual transverse buffer-blocks 2. Located between the outer ends of each pair of sills 1 and between the buffer-blocks 2 is a draw-head, composed of a pair of plates 3, one arranged immediately above the other, and formed through the outer ends of the plates 3 are the vertically-alined coupling-pin apertures 4. Formed in the outer ends of the plates 3 are the coupling-link recesses 5, and connecting each pair of plates 3 on the sides thereof adjacent their forward ends are the vertically-arranged straps 6. Formed through each plate 3 adjacent its rear end is a slot 7, and passing through each pair of plates adjacent their centers is a pin 8, around which passes the center of a forwardly-extending double leaf-spring 9. Arranged for reciprocation between the rear ends of each pair of plates 3 is a block 11, the forward end of which is provided with a pair of forwardly-projecting diverging arms 12.

13 designates a link located on top of the rear end of each upper plate 3, and passing through the rear end of each link through the slots 7 in the plates 3 and through the corresponding block 11 is a pin 14. A pair of jaws 16 are longitudinally arranged between the plates 3 and being pivoted to the vertical pins 17, which pass through said plates 3 at points adjacent the forward ends thereof. The forward inner ends of these jaws 16 are curved inwardly, as indicated by 18, and shoulders 19 are formed at the inner ends of the curved faces 18. The rear ends of the jaws 16 bear against the inner faces of the forwardly-projecting arms 12. Notches 20 are formed on the inner faces of the jaws 16 immediately to the rear of the pivot-pins 17, and the forward ends of the double leaf-spring 9 engage in said notches 20.

Pivotally arranged at 21 to one of the sills 1 is a transversely-arranged uncoupling-lever 22, to which is pivotally connected the forward end of the link 13. A link 23 is pivotally connected to the opposite end of this lever 22 and is in turn pivoted at its outer end to a vertically-disposed operating-lever 24, which is fulcrumed at its lower end to the outer end of the lower buffer-block 2. In some instances this operating-lever 24 and connecting-rod 23 may be dispensed with and replaced by a cable or weight 25, which passes around a drum 26, located upon a vertically-disposed shaft 27^a, which is journaled in the corresponding ends of the buffer-block 2. (See Fig. 5.)

27 designates the coupling-link, which is in the form of a vertically-disposed flat plate and provided on each end with an integral arrow-head projection 28, through which projections are formed the vertically-disposed apertures 29.

When cars equipped with my improved coupling are coupled together, the arrow-head projections 28 on the ends of the link 27

are engaged behind the shoulders 19 at the forward ends of the jaws 16, and the central portion of the link occupies the recesses 5 in the forward ends of the plates 3.

The pressure exerted by the spring 9 forces the rear portions of the jaws outwardly, and thus maintains the forward ends thereof together. This forms a very effective coupling, and the link is free to swing to a slight degree either laterally or vertically as the cars travel around curves or over slight variations in the track.

When it is desired to uncouple the cars, the operator engages either end of the lever 22 and moves the same forwardly or rearwardly, as the case may be, to swing said lever on its pivot-point and move the link 13 forwardly. This action moves the block 11 forwardly, and in so doing the pin 14 travels forwardly through the slots 7. The inclined faces of the arms 12 bear against the rear ends of the jaws 16 and move the same inwardly, as shown by dotted lines in Fig. 2, and this action necessarily compresses the forward ends of the springs 9 and moves the forward ends of the jaws 16 apart, so that the coupling-link is disengaged. The cars are now free to be separated, and the pressure of the forward ends of the spring 9 will cause the jaws to reassume their normal positions and to move the block 11 to its rearward position, thus setting the coupler for the next coupling operation.

The vertically-disposed operating-lever 24 is made use of when the coupler is applied to box or gondola cars, so that the cars may be uncoupled by an operator on top of the car.

By providing the apertures 4 an ordinary link-and-pin type of coupler may be coupled between the plates 3, and by providing the apertures 29 in the arrow-head projections 28 the link 27 may be coupled to a swing-jaw or a link-and-pin coupler.

A coupling of my improved construction is applicable for use on all forms of cars, is easily released or uncoupled, comprises a minimum number of parts, and can be cheaply manufactured and easily repaired.

I claim—

1. In a car-coupling, a draw-head, a pair of longitudinally-disposed jaws pivotally arranged in said draw-head, there being shoulders formed on the inner faces of the forward ends of said jaws, a spring arranged to force the rear ends of the jaws apart, a block arranged to slide in the rear end of the draw-head and force the rear ends of the jaws together, means whereby said block is moved, a link adapted to enter the forward end of the draw-head, and arrow-head projections integral with each end of the link and adapted to engage behind the shoulders on the forward ends of the jaws; substantially as specified.

2. In a car-coupling, a draw-head, a pair of longitudinally-disposed jaws pivotally fixed at points adjacent their centers in said draw-head, there being shoulders formed on the inner faces of the forward ends of said jaws, means arranged between the rear portions of said jaws whereby their forward ends are normally moved toward one another, means arranged in the rear of the draw-head for forcing the forward ends of the jaws apart, and a link adapted to enter the forward end of the draw-head, and arrow-head projections integral with the ends of the link and adapted to engage behind the shoulders on the forward ends of the jaws; substantially as specified.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

WILLIAM JEFFERSON BURRAN.

Witnesses:
H. A. McCELVEY,
W. P. CONNER.