

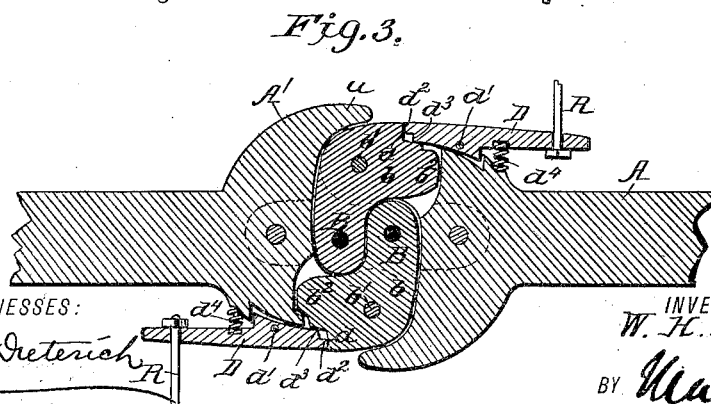
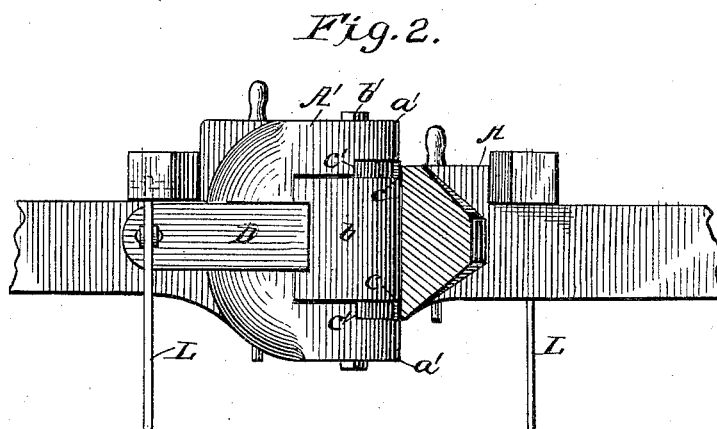
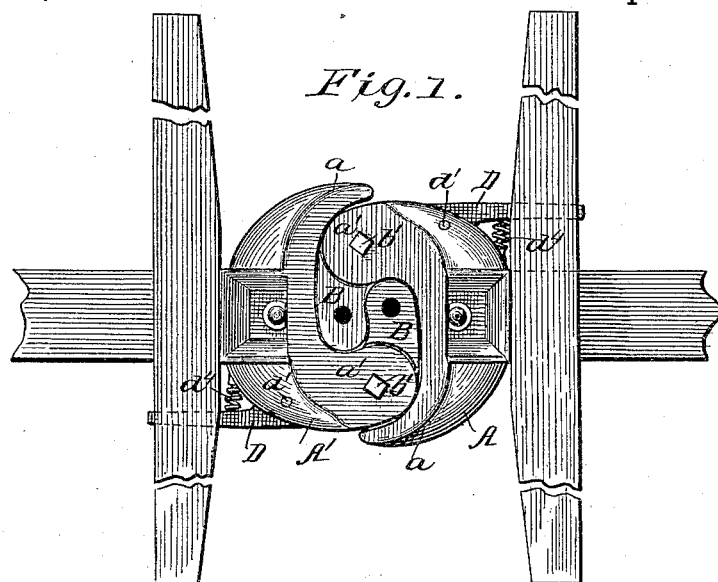
(No Model.)

2 Sheets—Sheet 1.

W. H. HARRIS.
CAR COUPLING.

No. 436,660.

Patented Sept. 16, 1890.



WITNESSES:

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INVENTOR:

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

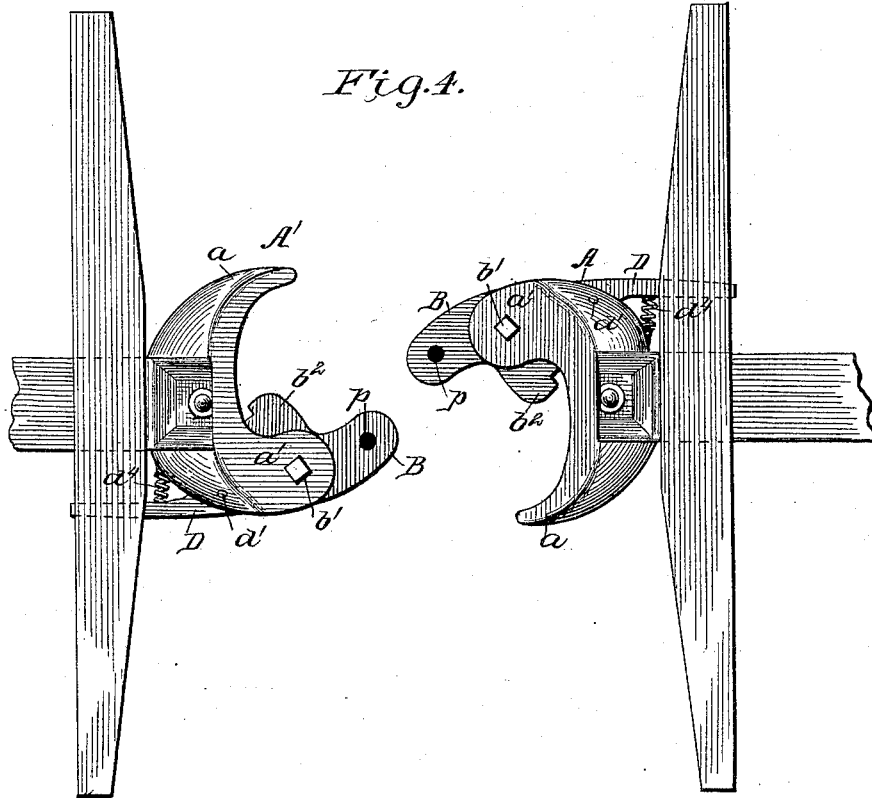
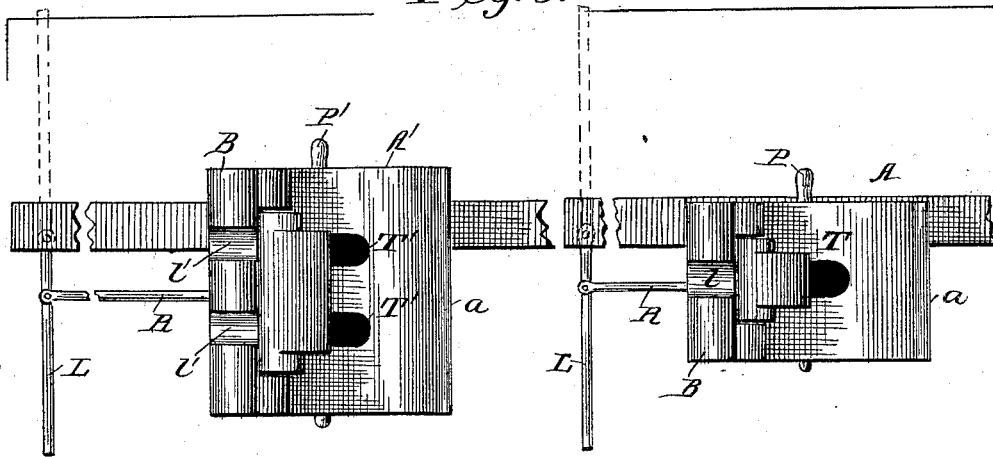


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM HAMILTON HARRIS, OF NEWBERRY, SOUTH CAROLINA, ASSIGNOR
TO HOLMES & HARRIS, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 436,660, dated September 16, 1890.

Application filed July 3, 1890. Serial No. 357,642. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HAMILTON HARRIS, of Newberry, in the county of Newberry and State of South Carolina, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention relates to that form of automatic car-coupling in which each draw-head is made with a rigid and a movable jaw, and in which the movable jaw is articulated about a vertical axis and is provided with locking devices for holding it in position.

It consists in the peculiar construction and arrangement of parts operating upon this principle, whereby a simpler and cheaper construction is obtained and the coupling and uncoupling are effected in a more certain, safe, and convenient manner, as hereinafter fully described.

Figure 1 is a plan view with the two draw-heads coupled. Fig. 2 is a side view of the same, partly in section. Fig. 3 is a horizontal longitudinal section. Fig. 4 is a plan view with draw-heads uncoupled, and Fig. 5 is an inside end or face view of the two draw-heads.

In the drawings, A and A' represent the two draw-heads, which are made substantially alike, except that A' is made of greater vertical depth than A, for the purpose hereinafter described. Each draw-head is formed of cast metal in one piece, with a rigid jaw *a* upon one side and ears *a'* *a'* upon the other side, between which is pivoted or hinged the lug *b* of the movable coupling-jaw B, which swings horizontally about an axial bolt *b'*, passing vertically through both the ears and the lug of the coupling-jaw. The draw-heads themselves are free from all superfluous metal and are made as light as possible consistent with strength, and their rear tubular extensions are intended to be provided with spring-draft connections after the usual manner.

On the outside of the lug of the coupling-jaw (see Fig. 2) are formed two stop-shoulders *c c*, which, when this coupling is thrown to its extreme open position, strike against stationary stop-shoulders *c' c'*, formed on the draw-head, which thus limit the outward movement of the coupling-jaw. Upon the in-

side of the lug of the coupling-jaw is formed a projection *b²*, which is intended to be struck by the coupling-jaw of the opposite car to cause the coupling-jaws (see Fig. 4) to turn inwardly upon their vertical bolts and lock together, so as to couple the cars. To hold these coupling-jaws in the closed position and lock them so as to stand the draft strain, a notch *d*, Fig. 3, is formed in the outer surface of the lug of this coupling-jaw, and a spring-detent D is arranged in a recess in the outside surface of the draw-head so as to drop into this notch and lock this movable jaw in its closed position. This detent is arranged as a lever fulcrumed about the vertical pin *d'*, fixed in the draw-bar, and has its forward end formed with a notch, affording two locking ends *d² d³*, one slightly in advance of the other. The rear end of this detent projects past the swelled end of the draw-head as a handle, and is forced outwardly by a spring *d⁴*, interposed between the draw-head and the rear end of the detent, the object of this spring being to hold the front end of the detent into locking engagement with the notch of the movable coupling-jaw, and also to hold the coupling-jaw open when the cars come together.

The object in making the two locking ends *d² d³* on the detent is to enable the detent to lock the coupling-jaw at different points, which is sometimes necessitated by the fact that the cars are not always in perfect alignment, and when they are brought together to be coupled out of alignment (on a curve, for instance) if one notch does not catch the other will.

In constructing the draw-heads the smaller one has a central link-throat T, Fig. 5, to receive an ordinary link-coupling, which is engaged by a pin P, extending vertically through the draw-head. To give passage to this link the middle part of the coupling-jaw B is cut away at *l*. The upper and lower sections of this coupling-jaw, above and below the opening *l*, are provided with pin-holes *p* for receiving a link-pin; but I prefer to use the link in the throat of the draw-bar, as it finds there a more solid anchorage and is less liable to be lost. The other draw-head, which is made of greater vertical depth, is provided with two

link-throats T' T' and a coupling-pin P', and its coupling-jaw B' has two openings *l' l'*. This provision permits the shallow draw-head to be coupled either against the upper or lower part of the deeper draw-head, and thus permits cars of different heights to be coupled.

For uncoupling the cars the rear end of one or both of the detents D is forced inwardly. This may be accomplished by hand, or it may be accomplished by a rod R and hand-lever L, extending downwardly from a fulcrum-point on the car. For passenger-cars this lever L would be reversed—*i. e.*, it would extend upwardly from the draw-head, as shown in dotted lines.

Having thus described my invention, what I claim as new is—

1. The combination, with a draw-head and coupling-jaw constructed as shown, of a spring-actuated detent D, which is pivoted and vibrates in the same plane with the said jaw and is constructed with two or more lock-

ing-shoulders *d² d³* at its front end and with a shoulder in rear of its pivot for engaging a corresponding one formed in the side of the draw-head, as shown and described.

2. The combination, with the draw-head having ears *a' a'* and stop-shoulders *c' c'*, of the hinged coupling-jaw B, having a lug *b*, with stop-shoulders *cc*, and the detent D, pivoted about a vertical axis upon the outside of the draw-head and arranged to abut against the coupling-jaw, substantially as shown and described.

3. The combination of the two draw-heads A A', one having less vertical depth than the other and respectively constructed with a central link-throat T and two link-throats T' T', and the pivoted coupling jaws and pins, all as shown and described, for the purpose stated.

WILLIAM HAMILTON HARRIS.

Witnesses:

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W. A. FAUT.