(No Model.)

J. H. POLLARD.

CAR COUPLING.

No. 347,511. Patented Aug. 17, 1886.

Fig. 1.

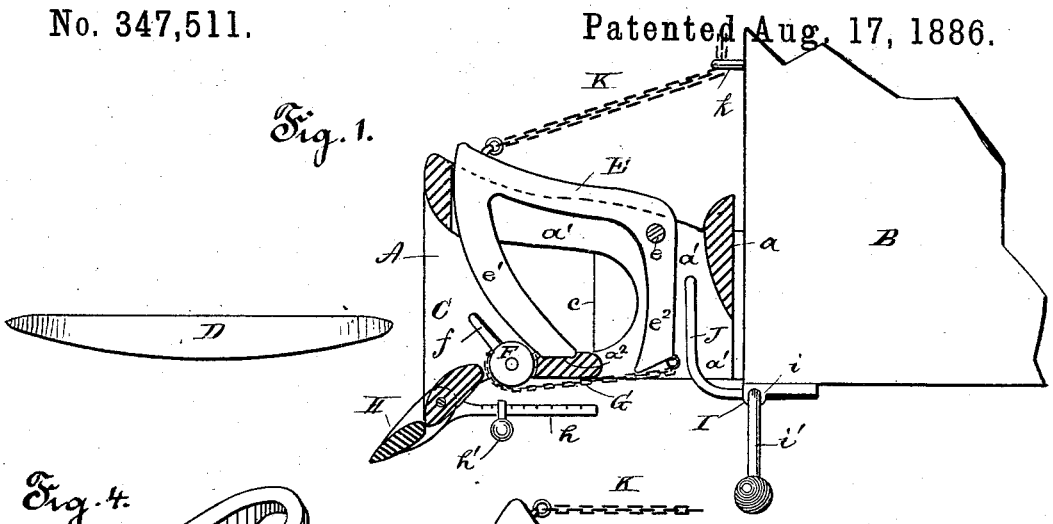


Fig. 4.

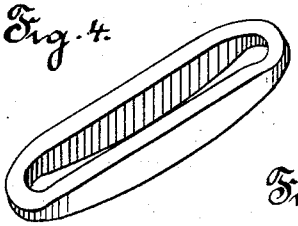


Fig. 2.

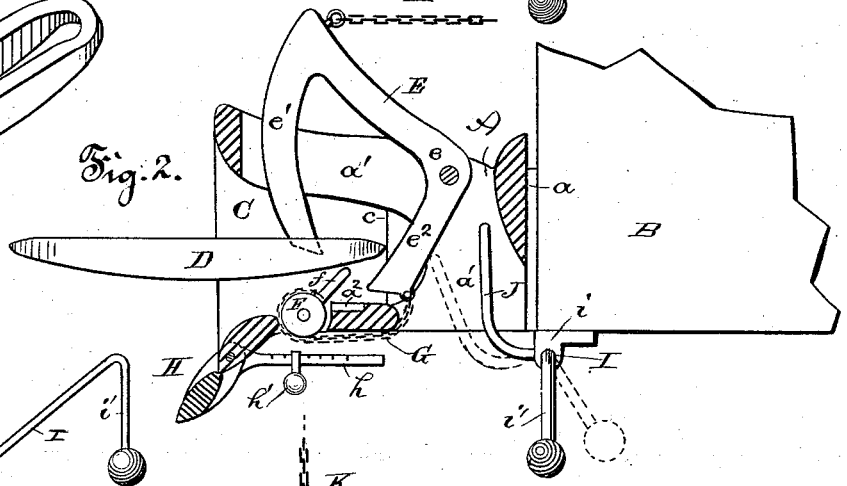


Fig. 5.

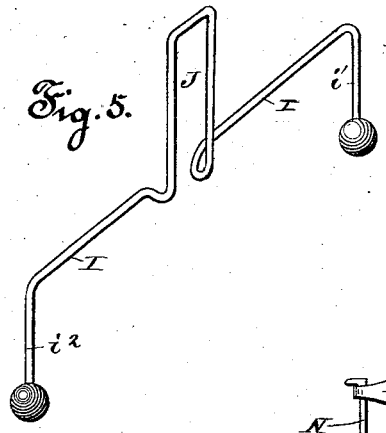
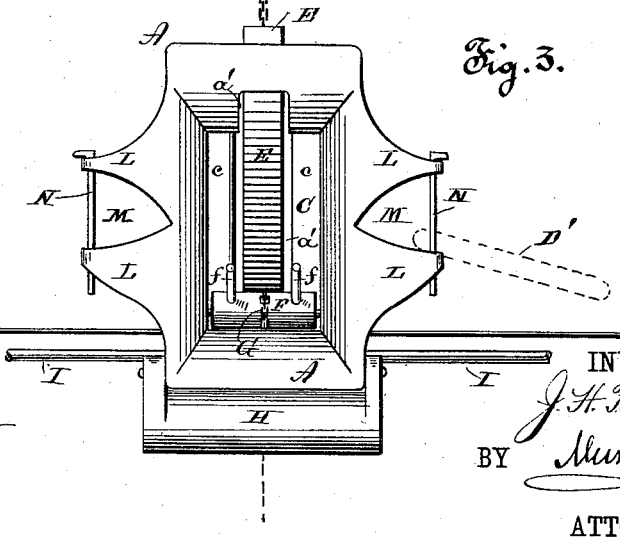


Fig. 3.



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JAMES H. POLLARD, OF CLARENCE, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 347,511, dated August 17, 1886.

Application filed June 18, 1886. Serial No. 205,548. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. POLLARD, of Clarence, in the county of Shelby and State of Missouri, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

My invention relates to car-couplings, and has for its object to provide a simple, inexpensive, and substantial coupling which will couple automatically with a link of an approaching car having any ordinary link-and-pin draw-head, and may be uncoupled from either side of the car or from the top of the car, thus obviating the necessity of train-men standing between the cars and exposing themselves to injury.

The invention consists in certain novel features of construction and combinations of parts of the car-coupling, all as hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of my improved coupling and the adjacent part of a car to which it is attached, and with the coupling-hook down and a link (supposed to be held by an approaching car) about to enter the draw-head to be coupled automatically. Fig. 2 is a like view showing the link in the draw-head and the coupling-hook about to fall through it, and also indicating in dotted lines how the coupling-hook may be raised for uncoupling by a cranked rod extending to the sides of the car. Fig. 3 is a front end view of the coupling. Fig. 4 is a perspective view of the coupling-link, and Fig. 5 is a perspective view of the cranked rod for operating the coupling-hook by hand.

The draw-head A of the coupling is fitted to slide on the car-body B with any suitably-arranged buffer-springs to sustain the shocks of coupling as the cars come together, and has a shoulder at *a* to limit its inward movement. The link-receiving socket C of the draw-head extends backward to the line *c*, to prevent further backward movement or entrance of the end of the link D of an opposing car, and the front end of the draw-head is flared on all sides around the link-socket to facilitate the entrance of the link D. In a vertical slot, *a'*, made through the draw-head there is arranged on its pivot *e* a coupling-hook, E, which has a forward pendent horn, *e'*, which is to engage the coupling-link, and a rear arm or part, e^2, which is adapted to be struck by the entering link in effecting the coupling, and as presently explained. In the floor of the link-socket C there is journaled a roller, F, which has two pins, *f f*, fixed in it and spaced sufficiently to allow the horn *e'* of the coupling-hook E to pass freely between them, and to the roller F is connected one end of a chain or cord, G, the other end of which is attached to the extremity of the arm e^2 of the coupling-hook. A plate, H, is pivoted to the lower forward end of the draw-head, and is provided with an arm, *h*, on which a counterbalance-weight, *h'*, is hung, and may be adjusted to balance the outer part and upper face of the plate H higher or lower, for raising up the drooping end of a link approaching the draw-head and guiding it safely into the draw-head. The plate H will be swung backward unharmed as the two draw-heads strike each other.

To the car-body there is journaled in suitable bearings, *i*, a transversely-ranging rod, I, which has a cranked arm, J, at its central part, and extending into the draw-head slot *a'* behind the arm e^2 of the coupling-hook E, and whereby, as the crank-arm J is thrown forward by turning the rod I, as in dotted lines in Fig. 2, by swinging back either one of the handle-arms i' or i^2 of the rod at opposite sides of the car, the horn *e'* of the hook will be raised to allow the link D to be pulled from the draw-head for uncoupling two cars and without requiring the train-men to stand between the cars and expose themselves to injury. A chain or cord, K, connected to the outer end of the coupling-hook E, passes through suitable guide eyes or loops, as at *k*, and runs to the top of the car, to allow the hook to be raised by a man on the top of the car to uncouple two cars in this way when desired. The coupling-hook normally falls by its own weight, when the extremity of the horn *e'* of the hook rests in a recess, a^2, in the floor of the link-socket C, and when the upper end of the hook may fall against the draw-head at the front end of its slot *a'*, all as shown in Fig. 1 of the drawings.

At the sides and front the draw-head is pro-

vided with laterally-extending lugs L L, providing a space at M to receive the ends of spare links D', which may be held to the draw-head by pins N, passed through the ends of the lugs, and allowing a spare link to be easily removed should it be required for use.

I make the coupling-link D with its lower face rounding or convexed lengthwise of the link, and the ends of the link at its upper face will preferably be rounded over a little, as clearly shown in Figs. 1, 2, and 4 of the drawings. When the coupling-hook E falls, it will draw upon the chain or cord G and turn the roller F so its pins *f f* project forward and upward, as in Fig. 1, and when the link D approaches for coupling on another car the link will strike the pins *f* and turn the roller F, and thereby draw on the chain or cord G and lift the horn *e'* of the coupling-hook, to allow the end cross-bar of the link to pass behind the horn *e'* and strike the rear arm, e^2, of the hook, and thereby force the horn *e'* downward within the link to effect the coupling, the pins *f f* of roller F then standing within the link.

To uncouple the cars either the crank-arm I J or the pull chain or cord K will be operated to lift the horn *e'* and allow the link to escape from the draw-head, as hereinbefore explained.

By the extension of slot *a'* through the bottom of the draw-head dust and dirt may escape from the link-socket or will not lodge therein to interfere with the proper working of the coupling-hook and its connections.

It will be noticed that as the coupling-link cannot pass back of the end *e* of the link-socket the arm e^2 of the coupling-hook and the crank-arm J cannot be broken by pressure of the link against them.

For coupling cars having draw-heads of different heights, a coupling-link bent flatwise in the center and having opposite ends in different horizontal planes will be used, as will readily be understood.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination, with the draw-head A, provided with a link-socket, C, and a vertical slot, *a'*, extending behind the end *e* of socket C, of a coupling-hook, E, pivoted at *e* in the slot *a'*, and provided with a link-confining front horn, *e'*, and a rear arm, e^2, substantially as shown and described, whereby the entering link will pass the raised horn *e'* and strike the arm e^2 to lower the horn, and without danger of breaking said arm e^2 or the mechanism behind it, as set forth.

2. In a car-coupling, the combination, with the draw-head A, having a link-socket, C, and a vertical slot, *a'*, of a pivoted coupling-hook, E, provided with a horn, *e'*, and arm e^2, a roller, F, journaled at the floor of the link-socket and provided with pins *f f*, and a chain, G, connecting the roller F with the arm e^2 of the coupling-hook, substantially as described, for the purposes set forth.

3. In a car-coupling, the combination, with the draw-head A, having a link-socket, C, and a vertical slot, *a'*, and a coupling-hook, E, pivoted at *e* in said slot, and provided with a link-holding horn, *e'*, and a rear arm, e^2, of a rod, I, journaled across the car-body, and having a crank-arm, J, projecting into the draw-head *a'* behind the arm e^2 of the coupling-hook, substantially as described, for the purposes set forth.

4. In a car-coupling, the combination, with a socketed draw-head, of a link lifter and guide, as at H, pivoted to the draw-head and provided with a counter-balance, substantially as shown and described, whereby the link-lifter may be held at any required angle to catch and guide the link of an approaching car, as set forth.

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Witnesses:
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