

UNITED STATES PATENT OFFICE.

FRANK H. STANFORD, OF ELIZABETH, NEW JERSEY.

CAR-COUPLING.

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To all whom it may concern:

Be it known that I, FRANK H. STANFORD, of Elizabeth, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention consists, mainly, of a link of special form, the peculiarities being, first, a shoulder underneath, combined with a rear extension of the link, and with a corresponding shoulder in the lower face of the throat, whereby the link is held in place for coupling with the draw-head of an opposing car, and, second, an inclined rear end, combined with an inclined raising-block in the rear part of the throat of the draw-head, whereby the coupling-link may be held with its front end depressed and lying in the lower surface of the mouth, (in a specially-fitted depression to cover the point of the link, if desired,) when the link is pushed back to admit the link of an opposing draw-head of the ordinary pattern.

It consists, also, of a special form of drop-pin, combined with the link and above-described head, all as hereinafter described.

In the accompanying drawings, Figure 1 shows the coupling in side view and in section. Fig. 2 shows a longitudinal section with a lifting device for an opposing link of the ordinary pattern. Fig. 3 is a transverse section on line *xx* of Fig. 2. Fig. 4 is a perspective view of the link.

In the drawings, A represents the draw-head, which is composed of a head, *a*, and an extended shank, preferably open on the sides, the draw-head being adapted to be substituted in the place of an ordinary draw-head without change in the construction of the car-frame. The mouth B has the ordinary flare, but in the lower surface is a shoulder, *c*. The link D is formed with a heavier and thicker rear portion, *d*, the rear end of which is beveled, as shown, on the under surface. A little in front of the transverse line of the center of gravity of the hook are spurs *e*, one on each side, the rear face of the spurs being adapted to bear against the shoulder *c*, whereby the link is held in place for coupling. The rear

heavier end holds the link horizontal and in position to enter the mouth of the opposite head. The spurs and shoulder prevent the link from being pushed back in the act of coupling. In the rear end of the throat is a block, *f*, having an inclined face, 1, and vertical face, 2, adapted to turn upward the rear end of the link. When the link is pushed back, the inclined end is caused to run up on the blocks. This holds the front end depressed, and it may lie in a special depression, 3, if desired, to cover the point. This depression of the front end of the link adapts the head to couple with another head of the ordinary style. The link is held in the rear position by the spurs resting in cavities M.

The drop-pin G is bifurcated, having prongs *g g'*. Of these *g* extends quite through the head and the slot in the link. The front prong is rounded on its forward edge, and is raised automatically by the opposite link. The two heads being alike in form and equipment, whichever link enters uppermost lifts the pin of the other and couples thereon. The other is simply turned down. The link may be pushed back by hand when used with an ordinary draw-head on the opposite car, or I may use an eccentric, *h*, on a shaft, *k*, which, being turned, lifts and pushes back the link. There may be a bail, *l*, for reversing the pin.

I claim as my invention—

1. In a car-coupling, the draw-bar having the shoulder *c*, combined with the link having a spur, *e*, adapted to the shoulder of the draw-bar, and having a weighted rear end extension, whereby the link is held in a horizontal position, substantially as described.

2. In a car-coupling, the combination of a link having a weighted rear end and a pin arranged longitudinally with the draw-head, consisting of the body portion G, a long prong, *g*, in the rear, and a short prong, *g'*, in front, substantially as described.

3. In a car-coupling, the draw-head, the link weighted at its rear end, and having a wedge shape, combined with the block *f*, having an inclined face, 1, adapted to turn the weighted end of the link upward, substantially as described.