

(No Model.)

W. C. POTTS & R. L. DANIEL.
CAR COUPLING.

No. 542,495.

Patented July 9, 1895.

Fig. 1.

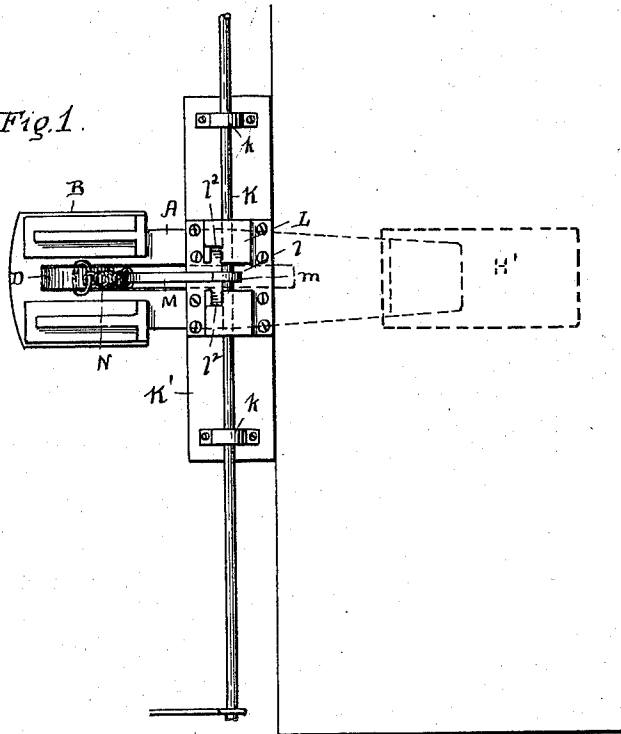


Fig. 3.

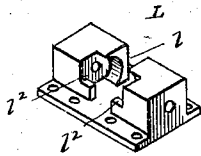
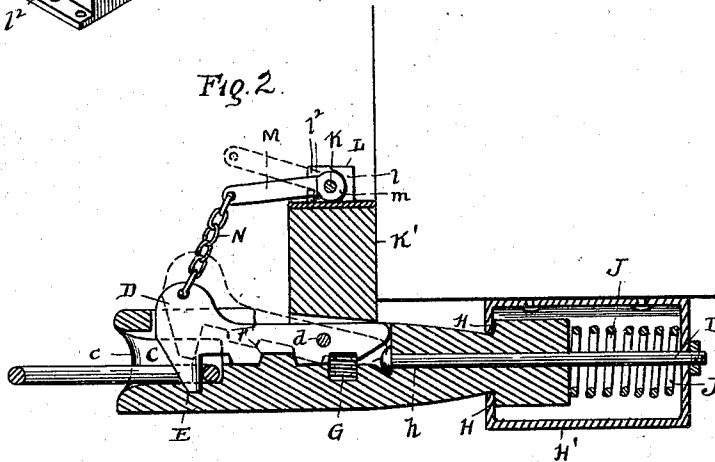


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

WARREN C. POTTS AND ROBERT L. DANIEL, OF PRESCOTT, ARIZONA TERRITORY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 542,495, dated July 9, 1895.

Application filed January 21, 1895. Serial No. 535,665. (No model.)

To all whom it may concern:

Be it known that we, WARREN C. POTTS and ROBERT L. DANIEL, citizens of the United States, and residents of Prescott, in the county of Yavapai and Territory of Arizona, have invented certain new and useful Improvements in Self-Coupling Draw-Bars; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a top plan view of the invention. Fig. 2 is a vertical longitudinal section of same, and Fig. 3 is a perspective view in detail of the central bracket L.

This invention has relation to certain new and useful improvements in car-couplings, and is designed to provide a simple, efficient, and cheap coupling capable of attachment to all classes of freight-cars, the operation of coupling being effected entirely by impact and the uncoupling by especially provided means which obviate the necessity for the employes to enter between the cars.

With this object in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates our improved draw-head, which is designed to be cast to fit the hangers with which any particular car may be equipped in order that the necessity for a special form of hanger may be obviated and the expense of the adoption of the improved coupling by any road may be confined to the cost of the coupling itself.

The head B of the draw-bar is formed with a chamber C, and is of very solid and substantial form, its forward end being so shaped that in bumping cars together the heads will strike equally at top and bottom. The forward end is also transversely convexed, so that the contact is always the same whether on a straight track or on curves.

The side walls of the chamber C are hollowed out or cut away at *c c* to permit the necessary play of the link. This feature also

serves as a protection for the hand in holding the link in position to couple when making a coupling between a car having the old-style link-coupling and a car having our improved coupling.

D designates a link clutch or hook, which comprises a bar seated in a longitudinal slot of the draw-head and working upon a pivot-pin *d*, which passes through the bar and through the draw-head. The hook at the forward end of the bar which engages the link is arranged to have a bearing against the front wall of an opening E in the bottom of the chamber C to relieve to a great extent the strain on the pin *d*. The lower edge of the bar has an angular recess F, arranged to engage a corresponding projection in the bottom of the draw-bar slot for the same purpose and renders it impossible for the bar to be pulled from its position. The forward edge of the hook is beveled or rounded in order that the contact of the link therewith will throw it upon permit the link to pass under.

While the hook may be arranged to drop entirely by gravity, we prefer to seat under the rear end portion of the bar a spring G. Should this spring break, however, the hook will continue to operate by gravity.

The rear end portion of the draw-bar is formed with upper and lower shoulders H, which are engaged by a clasp or yoke H' on the car-frame. A rod or bolt I is passed through said yoke and through the longitudinal opening *h* in the draw-bar. Seated in said yoke and against the end of the draw-bar is a buffer-spring J. The rod or bolt I has a head at its forward end which has a bearing against the rear wall of the draw-bar slot, and its rear end is secured in the yoke by a nut. By this arrangement the said rod is made to bear a share of the pulling strain, and the yoke is relieved to this extent.

K designates the uncoupling device, which consists of a rod or shaft journaled transversely in brackets or bearings *k* on the dead-wood block K', its cranked end portions extending into position where they may be operated from the sides of the car. Said rod or shaft also has a bearing in a central bracket L, secured to said dead-wood block. This central bracket has a central slot *l*, at each side

of the upper portion of which the bracket is cut away, as indicated at l^2 , to receive a collar m on said rod or shaft K. Said collar carries a forwardly-projecting arm M, which projects
 5 into the vertical plane of the forward end portion of the hook or clutch D, to which it is connected by a link or chain N.

The rod or shaft K is capable of an endwise as well as a rocking movement in its bearings.
 10 When the hook or clutch is in coupling engagement the arm M is in the slot l of the bracket L; but when the rod or shaft is rocked to raise said hook or clutch it is also designed to be moved endwise in either direction to
 15 bring the collar m into one of the seats l^2 , which will maintain the hook or clutch in its raised or disengaged position.

It will be observed that it will not be necessary in uncoupling to back the engine to
 20 get sufficient slack to permit the uncoupling to be made. This is an important feature, since it saves a great deal of time, especially in making flying switches and in yards where time is limited.

25 P P designate guard-flanges on the upper surface of the draw-head.

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

30 1. In a car coupling, the combination with a draw-bar having a chambered draw-head, whose forward end is transversely convexed

and cut away laterally, as at c, c , and the bottom wall of the chamber of which is formed with the recess E, and a raised, angular projection 35 in rear of said recess, of a link clutch or hook, comprising a bar pivotally seated in the draw-bar, said bar having a nose at its forward end which is designed to engage the recess E, and an angular recess j in its lower edge arranged 40 to fit the said projection, substantially as specified.

2. In a car coupling, the combination with the draw bar formed with upper and lower shoulders H, of a yoke H' which engages said 45 shoulders, a rod or bolt I passing loosely through the said yoke, and through a longitudinal passage in the draw bar, said rod or bolt having a head at its forward end, a nut on its rear end, and a spring coiled around 50 said rod or bolt and bearing at one end against the yoke, and at the opposite end against the draw bar, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

WARREN C. POTTS.
 ROBERT L. DANIEL.

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