

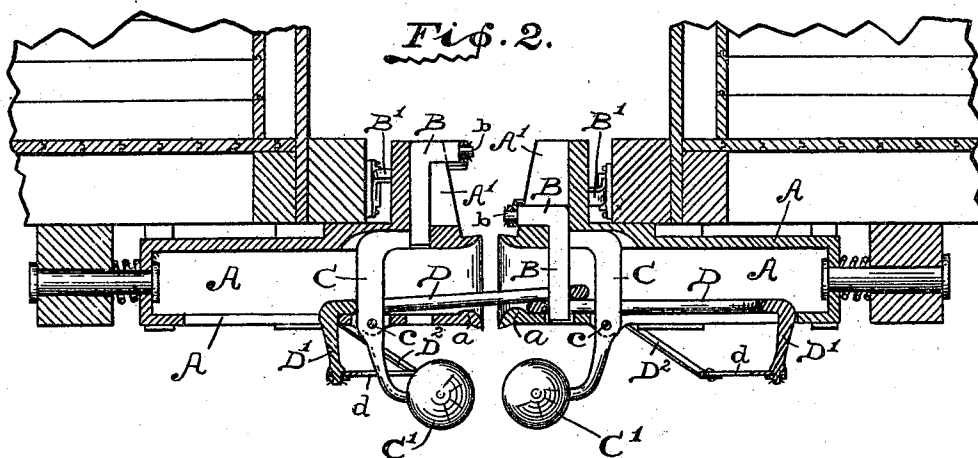
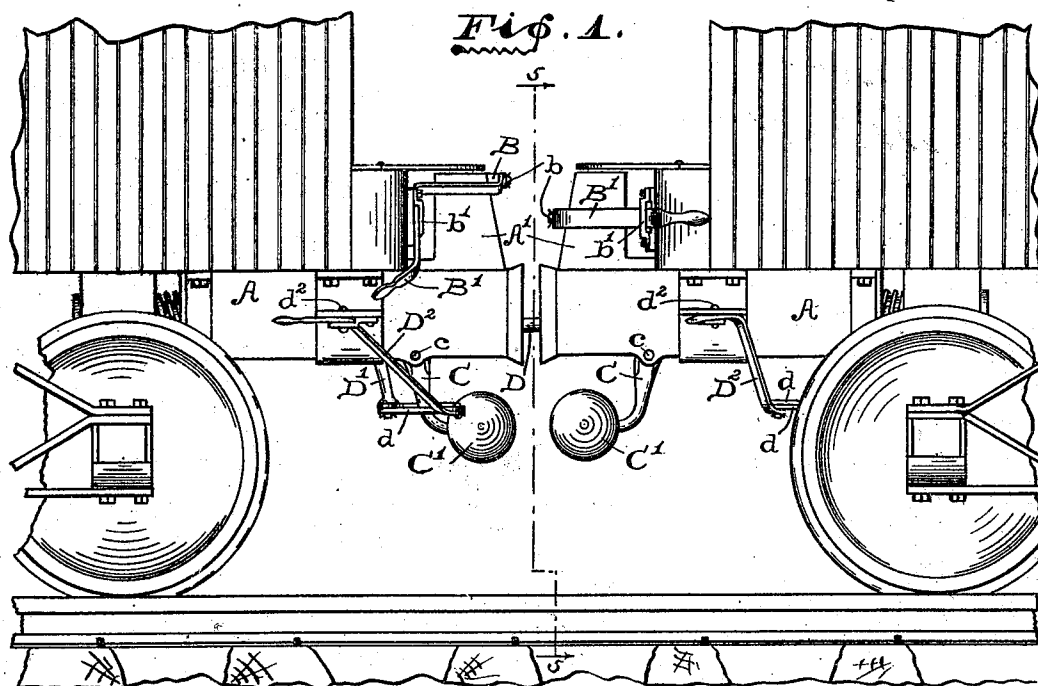
(No Model.)

3 Sheets—Sheet 1.

D. A. LEE & M. F. SNYDER.
CAR COUPLING.

No. 502,304.

Patented Aug. 1, 1893.



WITNESSES:

J. W. Warner.
J. A. Walsh.

INVENTORS

David A. Lee
Michael F. Snyder,
per Chester Bradford,
ATTORNEY.

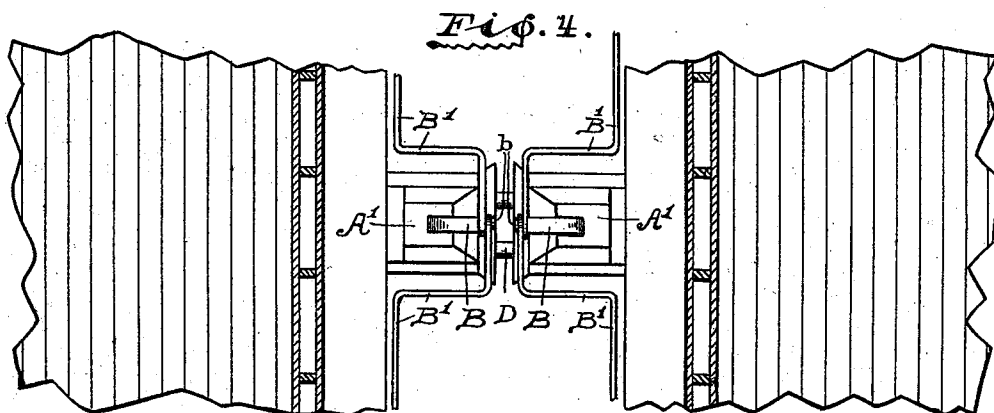
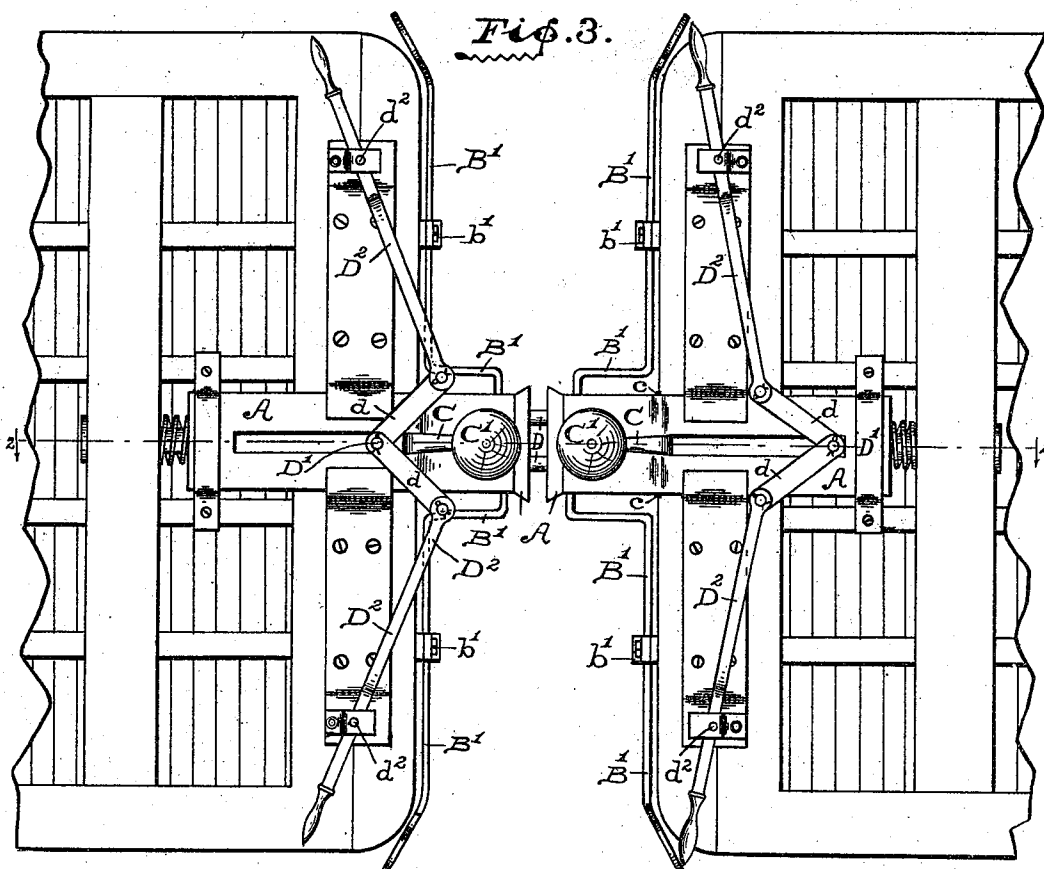
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Fig. 5.

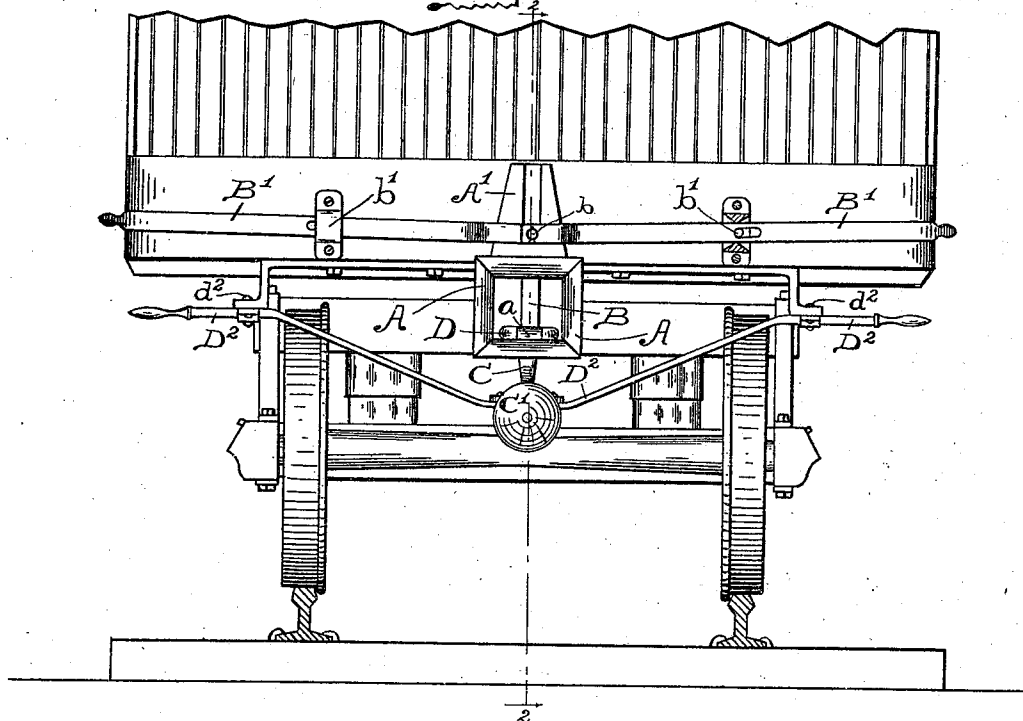
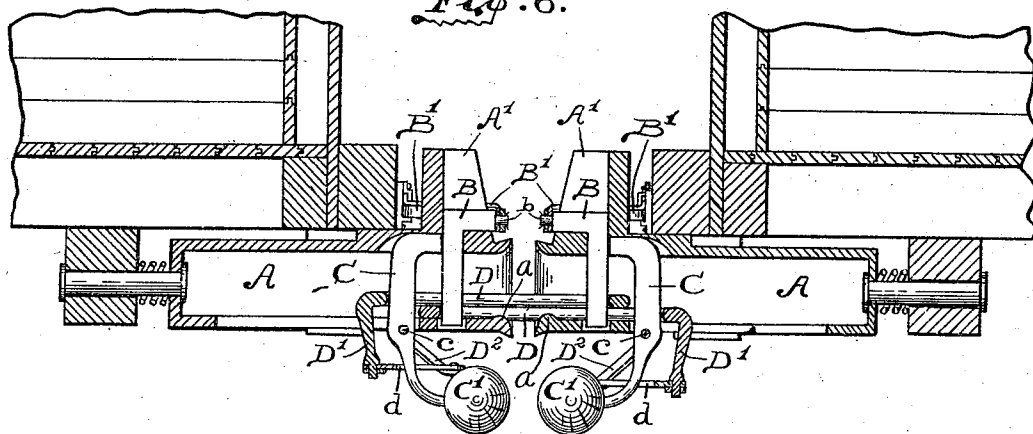


Fig. 6.



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UNITED STATES PATENT OFFICE.

DAVID A. LEE AND MICHAEL F. SNYDER, OF MARIETTA, INDIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 502,304, dated August 1, 1893.

Application filed March 14, 1893. Serial No. 465,863. (No model.)

To all whom it may concern:

Be it known that we, DAVID A. LEE and MICHAEL F. SNYDER, citizens of the United States, residing at Marietta, in the county of Shelby and State of Indiana, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

The principal object of our said invention is to produce a car coupler which can be fully operated from a position to the sides of the cars, outside of the track, and beyond danger.

Further objects are convenience of operation, durability, and security in use.

Said invention will be first fully described and then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts. Figure 1 is a side elevation of fragments of the ends of cars with couplers embodying our said invention; Fig. 2, a central sectional view through said couplers, on the dotted lines 2 2 in Figs. 3 and 5; Fig. 3, an under side plan view; Fig. 4 a fragmentary top plan view; Fig. 5 an end elevation of one car separately, as seen from the dotted line 5 5 in Fig. 1, and Fig. 6 a view similar to Fig. 2, but showing the use of both links, instead of one only, as shown in the other views.

In said drawings the portions marked A represent the draw-bars; B the vertically moving pins; C pivoted bars, and D the links. The draw-bars A are secured to the frame-work of the cars in any desired manner, a simple and easily understood method of attachment being shown. They are slotted underneath, for purposes presently to be described, and on the upper side have projections A' in which are ways for the pins B, and which at the same time serve as "bumpers," which, when the cars come together, will, (if the impact is too violent to be resisted by the usual springs, when said springs have been compressed to the determined extent,) come in contact with the frame-work of the car, and prevent further movement, as will be readily understood. Within these draw-bars are suitable openings for the pins and links, as shown.

The pins B are rectangular in cross-section, and are mounted and move in ways in the draw-heads, as shown, the two positions be-

ing clearly illustrated in Fig. 2. The upper ends of said pins are bent outwardly, and extend through the slots in the projection A' to the outside, where a wrist *b* is provided on each. Levers B' mounted on pivots *b'* extend from the outside of the cars to and engage with said wrists, and thus said pins may be raised by means of said levers. These levers are illustrated most clearly in Figs. 3 and 5. They are slotted where they pass over the pivots *b'*, to permit of the necessary longitudinal movement at that point.

The bars C are pivoted at *c*, and extend up through the draw-heads. The upper ends are bent forward, and are arranged to normally come in contact with the back sides of the pins B, and thus sustain said pins in elevated positions after they are raised, until they are purposely released. Said bars extend downwardly and forwardly, and bear weights, C', which gives them the necessary frictional contact. As will be seen most plainly in Fig. 3, these bars are adapted to be swung slightly on their pivots, and the pins B released by the forward movement of the links, when operated by the levers attached thereto, as will be presently described. As will be seen by an inspection of the drawings, these bars C take a part of the service ordinarily performed by the pins B, as the inner ends of the links are held thereby, thus giving double strength.

The links D occupy the usual positions in the draw-heads, but are two in number, instead of only one, as usual. Each has an arm D' which extends down through the corresponding slot in the under side of the draw-head in which it is mounted, and is connected by means of links *d* to levers D² which extend across to near the outer sides of the cars, and are pivoted at *d*². By means of these levers and links the links D can also be manipulated as desired from the sides of the car, and one or both can be put in use as may be desired. Thus for heavy work on long trains, especially near the locomotives, where the strain is greatest, what is practically full double strength of attachment between the cars may be provided, where both cars are equipped with our improved coupler. At the same time the construction is such that only one link need be used if no more is required, and the links of either coupler can be used to couple to a

car having the ordinary equipment, without difficulty. It will be observed that as the link is forced forward to its place, and thrust into the opposite draw-head, it comes in contact with the front side of the bar C in said draw-head, thus forcing it back out of contact with the pin B, and permitting the latter to drop and pass through the link, which has entered into its place, thus securing the coupling of the cars. A projection *a* will be noticed within and close to the mouth of each of the draw-bars, over which the link must pass in entering the opposite draw-bar. This is provided as a fulcrum over which the links may be operated, by means of the levers D², so that its extending end can be raised or lowered to suit the other car to which the car bearing this device is to be coupled, should it be higher or lower than said car.

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

1. The combination, in a car coupler, of the draw-head, the coupling link having a downwardly projecting arm on its rear end which extends through a slot on the bottom side of said draw-head, and a lever connected to said arm whereby said link may be manipulated, substantially as set forth.

2. The combination, in a car coupler, of the draw-heads containing the coupling pins, pivoted bars also in said draw-heads, two coupling links one in each draw-head, said bars passing through said coupling links and serving as a means to secure them at the rear end, and the coupling pins passing through the links of the opposite draw-heads and securing them at the forward ends, whereby a double coupling is secured, substantially as set forth.

3. The combination, in a car coupler, of a draw bar, the rectangular coupling pin having a forwardly-extending arm, an upward projection on the draw-bar through a slot in the side of which said arm extends, a pivoted and weighted arm C passing through and securing the link in the draw-head and bearing against the rear side of the coupling pin B, sustaining the same until said contact is forcibly removed, substantially as set forth.

4. The combination, in a car coupler, of a draw-head, a coupling pin having a bend at its upper end, and a wrist on the end of said bend, the draw-head being provided with an upward extension A' slotted to receive said bend or arm, levers B' pivoted to the car frame attached to the wrist on the end of said bend, said wrists being slotted on their pivots, and said several parts being arranged and operating substantially as set forth.

5. The combination, in a car coupler, of two draw-heads each provided with a vertically moving coupling pin, levers whereby said coupling pins are operated, pivoted and weighted bars C mounted in said draw-heads the upper ends whereof come in contact with said coupling pins and links D, one in each draw-head, and secured therein by the bars C which pass through them, and adapted to be connected to the opposite draw-heads by the coupling pins B, all substantially as shown and described.

In witness whereof we have hereunto set our hands and seals, at Marietta, Indiana, this 10th day of March, A. D. 1893.

DAVID A. LEE.

MICHAEL F. SNYDER.

[L. S.]
[L. S.]

Witnesses:

GEORGE SNYDER,

IDA WILLIAMS.