G. E. WEBER
Car-Coupling.

No. 203,679. Patented May 14, 1878.

Fig. 1.

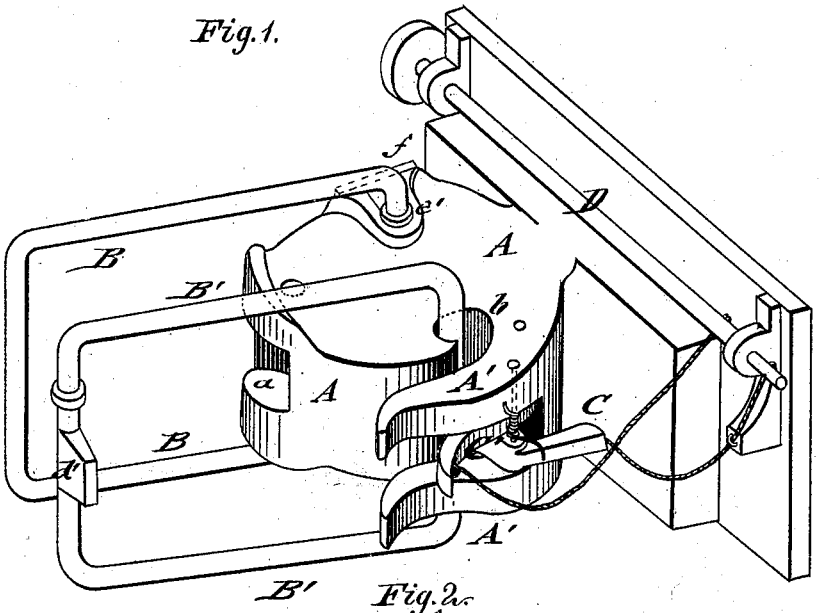


Fig. 2.

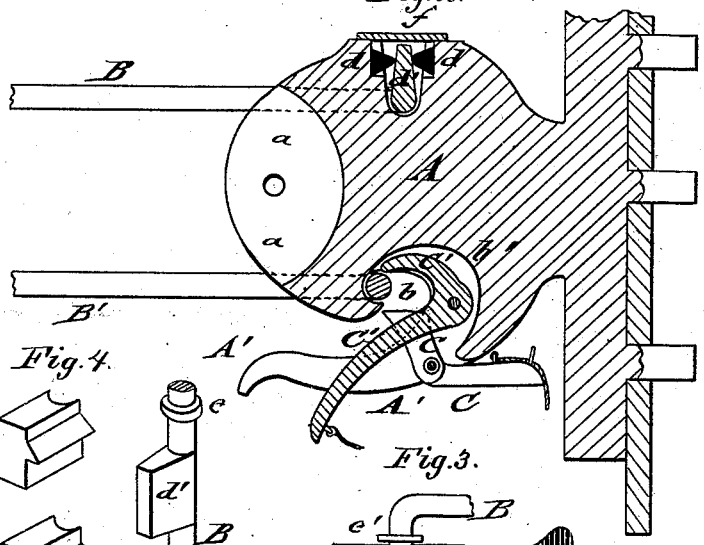


Fig. 4.

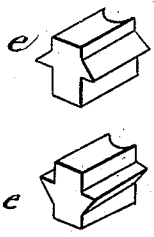
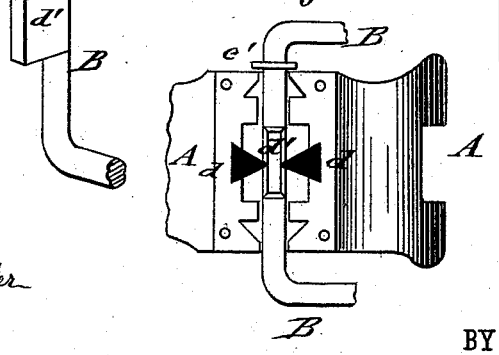


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE E. WEBER, OF OPELIKA, ALABAMA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **203,679**, dated May 14, 1878; application filed March 19, 1878.

To all whom it may concern:

Be it known that I, GEORGE E. WEBER, of Opelika, in the county of Lee and State of Alabama, have invented a new and Improved Car-Coupling, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a perspective view of my improved car-coupling; Fig. 2, a horizontal section of the same; Fig. 3, a side view of the draw-head, showing connection with permanent coupling-link, the face-plate being removed; and Fig. 4, detail perspective views of the link-retaining wedge-pieces and of a part of the coupling-link.

Similar letters of reference indicate corresponding parts.

This invention relates to an improved self-coupler for cars that is arranged to couple with cars of different heights on any curve without going in between the cars, and which is also so arranged as to connect cars having the common pin and link coupling.

The invention consists of a solid draw-head of circular or oval shape, that is arranged at the center with a cavity and pin-holes for the common pin and link. At one side of the draw-head is secured a vertically-swinging and cushioned coupling-link, the opposite side being provided with a hook-shaped recess, curved guide-horns, and with locking and releasing hooks, that are uncoupled by cord or chain connections with an uncoupling-shaft. The permanent coupling-link is cushioned in the socket of the draw-head by a projection on its vertical part and elastic cushions, and retained by wedge-pieces above and below the projection on the link and by an exterior closing-plate.

Referring to the drawing, A represents a solid metallic draw-head, that is made of wrought-iron plates, riveted together or cast in one piece with a supporting-plate, by which it is attached to the end of the platform or bed-frame of the car, as shown in Figs. 1 and 2. The draw-head A is made of round or oval shape, and at the central front part of the same arranged with a cavity, *a*, with top and bottom pin-holes, for the purpose of coupling with cars having draw-heads with the common pin and link.

Each draw-head is provided with a permanent coupling-link, B, that is secured vertically into a socket-recess at one side of the same, while the link B′ of the connecting draw-head couples with a hook-shaped recess, *b*, at the opposite side of the draw-head. The permanent link B is retained in the socket of the draw-head A by means of rubber cushions *d*, of square, triangular, or other shape, that bear on each side of a projection, *d′*, on the vertical part of the link, and by means of wedge-pieces *e*, that are shown in Fig. 4, and which bear on the link above and below the projection *d′*, and retain it thereby, in connection with a collar, *e′*, above the draw-head, rigidly in position. The socket-recess is closed, so as to prevent any detaching of the link or of the retaining-wedges, by an exterior side plate, *f*. The permanent link is intended to couple with the hook-shaped recess *b* of the connecting draw-head, and is guided along curved side horns A′ into the hook-shaped recess *b*. The guide-horns A′ are cast in one piece with the draw-head A, and are separated by an intermediate space or recess, in which are arranged two swinging and fulcrumed hooks, C C′, of which one extends back into an extension, *b′*, of the hook-shaped recess *b*, while the other extends across the same and is acted upon by a spring so as to be returned to this position. The link, when passing along the draw-head and horns, strikes first against the locking spring-hook C, forces the same back, and passes then into the hook-shaped recess, being prevented by the spring-hook from escaping therefrom.

For uncoupling the link, the second releasing-hook, C′, is brought into action simultaneously with the spring-acted hook C by means of connecting cords or chains attached to the lateral shaft D, turning in bearings of the car-frame, and having a hand-wheel at the end, so that by turning the shaft the inner hook engages the coupling-link, while the spring-acted hook is simultaneously drawn back to permit thereby the escape of the coupling-link along the guide-horns. Any other uncoupling mechanism may be employed by which the locking and releasing hooks may be operated simultaneously for the purpose of releasing the link from the draw-head.

The vertical coupling-links adjust themselves readily to cars of different heights, forming a reliable and automatical coupling with the draw-heads, and, by the solid construction of the draw-heads and double connection of the links, a reliable, strong, and durable connection of the cars.

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

1. The combination, with a solid draw-head, having a socket-recess with interior cushions, of a permanent coupling-link, having central projection, of retaining wedge-pieces, and of a socket-closing plate, substantially as and for the purpose described.

2. The combination of a solid draw-head, having hook-shaped side recess, with a horizontal extension, with a vertical coupling-link, and with a locking spring-hook and a releasing-hook, which are both fulcrumed to the horns of the draw-head, and simultaneously actuated by uncoupling mechanism to uncouple the link, substantially as set forth.

GEORGE EGBERT WEBER.

Witnesses:

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EDDIE DOUGLASS.