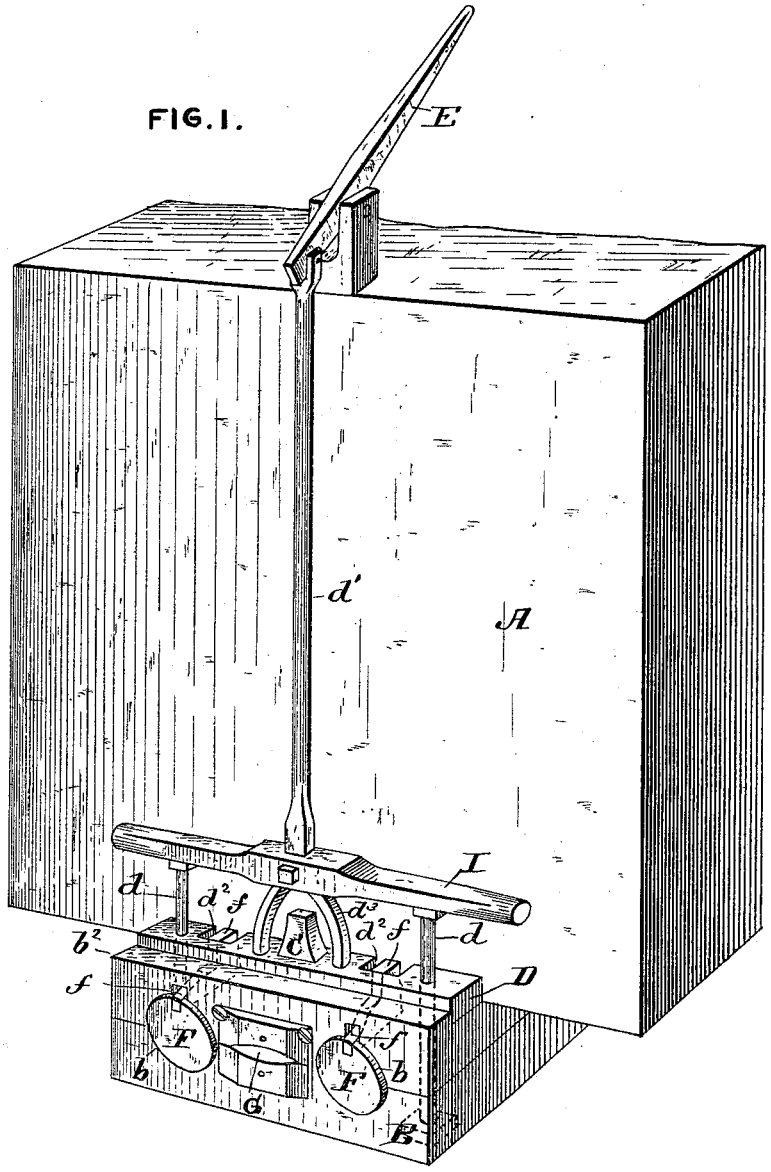
(No Model.) 2 Sheets—Sheet 1.

C. W. DEBOARD.

CAR COUPLING.

No. 386,060. Patented July 10, 1888.

FIG. 1.



ATTEST.
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INVENTOR.
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(No Model.) 2 Sheets—Sheet 2.

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No. 386,060. Patented July 10, 1888.

FIG. 2.

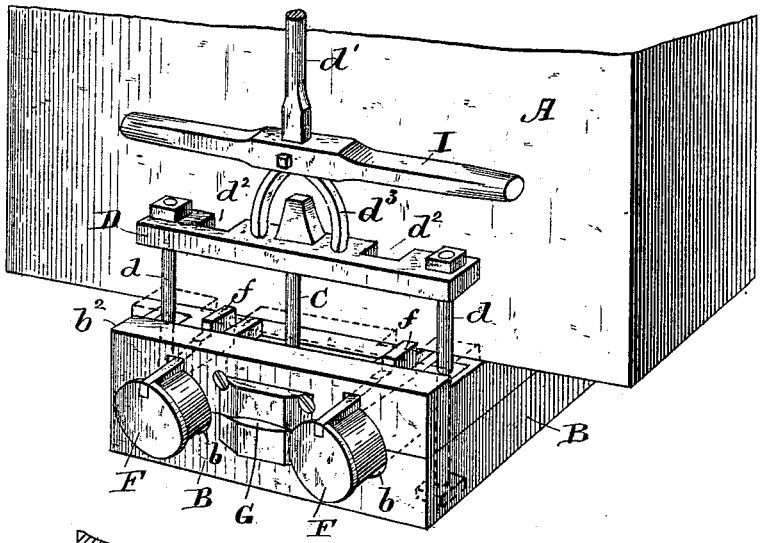


FIG. 3.

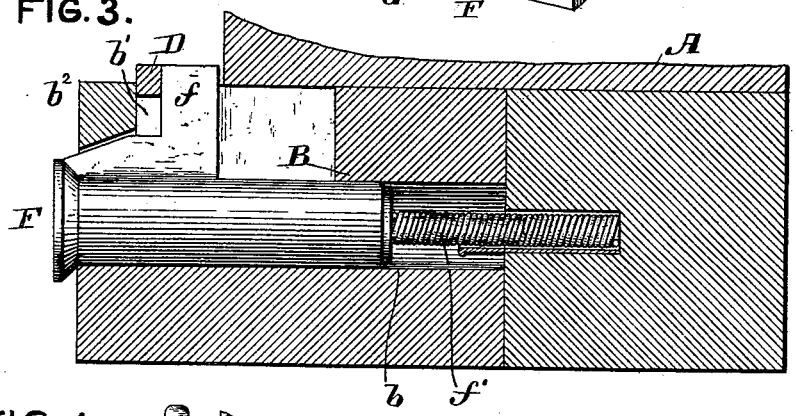
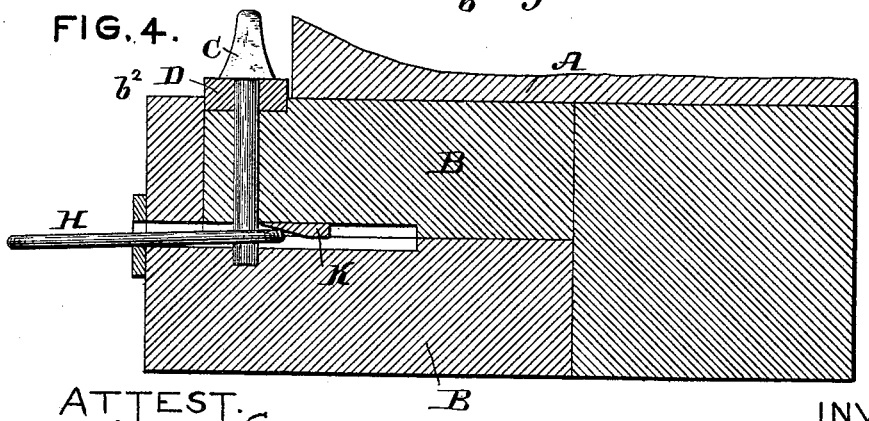


FIG. 4.



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INVENTOR.

Cyrenous W. Deboard

By L. Deane.

Atty.

UNITED STATES PATENT OFFICE.

CYRENOUS W. DEBOARD, OF HOLTON, KANSAS, ASSIGNOR OF ONE-HALF TO J. B. GARDNER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 386,060, dated July 10, 1888.

Application filed January 12, 1888. Serial No. 260,524. (No model.)

To all whom it may concern:

Be it known that I, CYRENOUS W. DEBOARD, a citizen of the United States, residing at Holton, in the county of Jackson and State of Kansas, have invented certain new and useful Improvements in Car-Couplers; and I do hereby 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.

Figure 1 is a perspective view of a car having the coupler attached, the parts of the coupler being in the position when the link has just been outdrawn. Fig. 2 is a front elevation showing the coupling-link in the draw-head. Fig. 3 is a longitudinal section on line *x x* of Fig. 1, showing one bumper and its actuating-spring. Fig. 4 is a central vertical section of the coupler.

This device belongs to that class of devices known as "car-couplers."

The chief aim in the present invention is to provide a device in which the parts will be always ready for use and can be operated safely and certainly either on the car or from the ground, and which will help protect the cars by rendering the jar incident to coupling as slight as possible. It is also not complicated or expensive in structure nor easy to get out of order; and the novelty consists in the construction and combination of the several parts, all as will now be fully set out and described, reference being had to the accompanying drawings.

In the drawings, A denotes the ordinary car, and B the draw-head. The coupling-pin C passes through a yoke, D, which is parallel to the end of the draw-head and operated on the guides *d* up and down near the front end of the draw-head by means of the lever E, secured at any convenient place on top of the car, and the vertical standard *d'*, connecting the lever and the yoke. As now shown, this connection is made through its bifurcated end d^3. Each of the bumpers F in the draw-head, one at each side of its mouth G, is placed in a socket, *b*. Upon the upper edge of each is the projection or shoulder *f*, adapted to move in the slots *b'* in the draw-head. This limits the outward movement of the bumper, since it strikes against the upper edge, b^2, of the face of the draw-head when the car is uncoupled. This projection *f* on the two bumpers may also serve to hold up the yoke D when the bumpers project beyond the face of the draw-head, as is the case when the cars have been unshackled. This outward movement of the bumpers is caused by a spring, *f'*, in the end of each socket.

To shackle the cars together, the pin C having been raised by the lever E, so as to be held up by the projections on the bumpers, as shown in Fig. 2, then the link H, fixed in the draw-head of the approaching car, will enter the mouth G of this draw-head. The force of the impingement is almost wholly deadened by means of the bumpers and their springs. The bumpers being pushed in, the yoke D falls down behind and substantially flush with the upper edge, *b'*, of the face of the draw-head. When in this position, the slots d^2 in each side of the yoke at its rear constitute a lock to engage the upward projection *f* of the bumpers, and thus hold the bumpers in their sockets.

In order to raise the coupling-pin, the lever E can be actuated on the top of the car; or by the arm-piece I, projecting from the side of the standard *d* and across the face of the car, can be raised by a person standing on the ground at the side of the car. These arms may be made of a single straight piece attached at its middle to the standard. Inside the mouth of the draw-head, permanently fixed on its upper side, and just beyond the opening through which the pin passes, is placed the incline or bevel K, against which the coupling-link strikes when placed within the mouth. When thus in position, the outer end of the link is always at the suitable height and in the proper position to enter the draw-head in the approaching car. There will consequently be no need of any manipulation of the link by the train-hand in the act of coupling. The mouth of the draw-head may be made flaring or in any usual or ordinary way. In shackling the car the pin can also be raised by this arm-piece, if it shall be desired.

By means of the construction above stated a car-coupler is provided in which the jar of coupling is avoided—a matter of large conse-

quence in the wear and tear of the cars themselves, and also of their contents. The process of coupling and uncoupling can be performed in the easiest and most convenient manner, and the coupler is quite simple in structure, and not liable easily to get out of order or repair. By its use there will be the very least possibility of harm to the train-hand.

Having now described my invention, what I consider new, and desire to secure by Letters Patent, is—

1. A draw-head having in suitable socket spring-actuated bumpers at each side of the mouth provided with projections on their upper side, and a yoke carrying the coupling-pin adapted to hold up said pin when the car is to be shackled and to lock the yoke and to keep the pin down when the car is shackled, substantially as described.

2. In a draw-head, the combination of the spring-actuated bumpers with the yoke, coupling-pin, and lever, substantially as described.

3. The yoke D, having slots d^2 in each side at the rear and carrying the coupling pin, combined with the bumpers having projections and with means for raising it from the top of the car or from the ground.

4. The draw-head having slot b' and sockets b and upwardly-projecting front edge, b^2, the bumpers F, and having shoulders or projections, the springs f^2, the yoke D, slotted at d^2, and means, as described, for raising the yoke.

In testimony whereof I affix my signature in presence of two witnesses.

CYRENOUS W. DEBOARD.

Witnesses:
JOHN A. RAFTER,
JAMES F. NAYLOR.