(No Model.)

C. E. MARK.

CAR COUPLING.

No. 296,026. Patented Apr. 1, 1884.

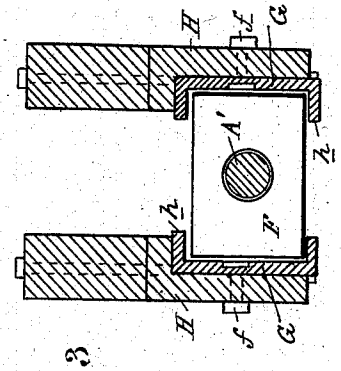


Fig. 3

Fig. 1

Fig. 2

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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 296,026, dated April 1, 1884.

Application filed February 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLIE EDGAR MARK, of Flint, in the county of Genesee and State of Michigan, have invented new and useful Improvements in Car-Couplings; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in the construction of continuous draw-bars for railway-cars, such draw-bars being provided at their ends with means for securing the links, by means of which the adjacent cars are coupled, and said draw-bar is extended, including the coupling ends, the whole length of the car.

The invention consists in the peculiar manner of supporting such draw-bar, and in the construction and combination of parts, as more fully hereinafter described.

Figure 1 is a longitudinal vertical section through the center of the draw-bar and its coupling ends. Fig. 2 is a perspective detail, showing one of the pieces of the timber with the means attached thereto for supporting the draw-bar, there being two such pieces of timber—one upon either side of the draw-bar—and secured to the bottom of the car, and provided with the fellow of the supporting means shown. Fig. 3 is a vertical cross-section on the line X X in Fig. 2.

In the accompanying drawings, which form a part of this specification, A′ represents a hook coupling-bar, the hook end thereof being adapted to engage with a coupling-link, B, by means of the hook *a*, after the link has entered the flaring mouth *d* of the metallic box C, which incloses the hook end of the draw-bar, and guides the entering link into the chamber *c* through the contracted mouth *d*, leading thereto. Upon this portion of the draw-bar A′ is sleeved a follower-plate, D, and the buffer-spring E is sleeved upon this section of the draw-bar in rear of the follower-plate D; and F is another follower-plate sleeved on this section of the draw-bar in rear of the spring.

G is a three-sided box, provided with flanges *e*, by means of which and suitable bolts, *f*, such box is secured within a recess, *g*, in the timber H, there being a fellow of this box secured within the recess to the fellow of the timber H. The upper and lower sides, *h*, of this box are cut away about half their length, as shown in Fig. 2, and the box is of sufficient entire length to allow of the free movement of the follower-plates D F therein in compressing the spring E. The follower-plate F fits within the two sides *h* of the box in such a manner as not to interfere with its free reciprocating motion, but so that it is held rigidly in position as against any other than such a reciprocating motion. The follower-plate D has a similar motion in that portion of the box wherein the sides are cut away, but must have, from the construction and operation of my device, a slight vertical radial movement as the front end of the draw-bar is lifted or depressed for the purpose of coupling or uncoupling, the follower-plate F forming the fulcrum for such movement. To the rear end of this section of the draw-bar the center section, I, is secured by means of a swivel joint and key, *i*. The inclosing-box C above the flaring mouth presents a solid face, *k*, and its rear end is pivotally secured to the section A′ of the draw-bar by the bolt *l*. The opposite end of the center section, I, of the draw-bar is connected by a similar swivel and key to a similar section of draw-bar like that described, as A′, provided with like followers and spring, such followers being supported in similar boxes, like G, in the adjacent portions of the timber, the whole being so constructed and operating that the necessary vertical movements of the outer ends of the outer sections of the draw-bar for the purposes of coupling or uncoupling, these movements being vertically radial, find their fulcra in the followers F within the box G, as described. The front and projecting end of the inclosing-box C is supported by means of a swinging bracket, J, in such a manner as not to interfere with the retraction or projection of the draw-bar within the limits of the compression or expansion of the buffer-spring E.

What I claim as my invention is—

1. As a means of supporting the fulcra in a continuous draw-bar composed of two end

coupling-sections and an intermediate connecting-section, the ends of such outer sections having a vertical radial movement for the purposes of coupling or uncoupling, the boxes G, let into and secured to the coincident faces of the supporting-timbers, and constructed to allow of a horizontal movement of the fulcra and prevent a vertical movement of the same, substantially as described.

2. In combination with a continuous draw-bar consisting of three sections, as described, the followers D F, inclosing between them the buffer-spring E, and the boxes G, secured to the supporting-timbers H, and having their upper and lower sides, *h*, cut away for a portion of their length, whereby the follower F forms a fulcrum, and is prevented from any motion except a horizontal reciprocating one, while the follower D has a vertical movement, substantially as and for the purposes set forth.

3. In a car-coupling, and in combination with the follower-plates thereof, a three-side box, G, having flanges *e*, for securing it to the timbers, and provided with upper and lower sides, *h*, to retain one of the followers, and parts cut away for a portion of their length, to allow a vertical motion of the other follower, substantially as described.

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Witnesses:
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