

UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 258,704, dated May 30, 1882.

Application filed April 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, SANFORD BRAY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

The object of my invention is to provide a cheap, simple, convenient, and durable automatic car-coupling which is adapted to couple together when the opposite draw-bars are brought into contact; or, if desired, the draw-bars may be brought together without coupling, as occasion may require, and is equally adapted to couple with or be coupled to the common draw-bar having a link and pin, as now in use; and it consists in the construction, combination, and arrangement of a link hinged at one end to the car-body and provided with a projection or end adapted to contact with a shoulder or projection formed upon the draw-bar when same is forced inwardly by the opposing draw-bar, and thus cause the link to fall or swing downward and drop over the bent end or projecting portion of a coupling-pin arranged in such opposite draw-bar, and in details of construction hereinafter more fully described, and set forth in the claims.

Figure 1 represents a perspective view of a car-coupling constructed according to my invention. Fig. 2 represents a vertical longitudinal section of the same.

A represents the end of a common freight-car provided with the blocks or "dead-wood" B, as usual, and beneath the car-body is secured the spring-buffer or draw-bar E, which is provided with the mouth or opening T, extending within the end as heretofore, and adapted to receive therein the common link when desired to couple with the common pin. I provide a coupling-link, C, one end of which is hinged directly to the end of the car-body A by suitable eyes or connections, and is provided with a projecting end or projecting pin or portion, D, so arranged as to project downward and forward when the link C is turned up vertically against the end of the car-body, as shown in Fig. 1, so that when the opposing draw-bar of another car is brought into contact with the end of the said draw-bar E, forcing it inwardly, a projection or shoulder, H, is

brought to contact with said projection D of the hinged link C, and thereby cause the link to fall downward, its opposite end passing over the curved end J of the pin L, such curved end preventing the said link from being forced or thrown upward by any sudden movement of the cars; and, in order to further guard against liability of such link to uncouple therefrom, I provide a projecting guard, G, or upward-curved spring secured to the draw-bar at one end, the opposite forward end extending beneath the said curved end J of the coupling-pin L, which is provided with a small guard-link, N, which is adapted to pass downward over the curved projection or horn P, provided near the outer end of the draw-bar on the top thereof, so as to prevent such curved end J of the said pin L from turning in the opposite direction while the draw-bars are coupled together. But when it is desired to permit such link C to uncouple from the connection the small link N is raised from the horn P, and the pin is turned one-half around, so as to bring the curved end J forward and resting upon the horn, as shown in dotted lines, when the coupling-link C is free to be drawn over the same by motion of the car, or may be again turned into its former vertical position preparatory to being automatically thrown or turned downward again, as above described.

It will be seen in Fig. 2 that the lower end of the said pin L is provided with a short horizontal pin or projection, r, which prevents the said pin L from being thrown or forced upward when in position to hold the coupling-link C, but that when the said pin is turned one-half round the said projection r is permitted to pass within the groove s, formed in the lower portion of the said draw-bar E, thus allowing the pin L to be drawn or raised upward through the hole formed vertically through the draw-bar until the projection r strikes against the upper side of the draw-bar mouth to prevent its being withdrawn. When in this position any common link may be received into the mouth T of the said draw-bar and then said pin inserted through such link, as usual.

When it is desirable to prevent the coupling of two such draw-bars when brought together the coupling-link C is turned downward over

the end of the draw-bar, so as to be retained in a pendent position beneath the draw-bar, as shown in dotted lines in Fig. 1.

It will be understood that the coupling-pin L may be secured against turning within the draw-bar by means of a latch instead of the link and horn, which may be omitted, or by means of a ring adapted to engage with the projecting end of the guard or spring G, and thus prevent the coupling-link C from becoming detached or thrown upward over the end of the said coupling-pin when the train of such cars is suddenly stopped, the momentum of the cars bringing the heads of the draw-bars together with great force, thereby tending to throw such coupling-links upward when relieved of strain.

Having thus described my invention, what I claim is—

1. The coupling-links C, hinged to the end of the car-body, and provided with a projection, D, adapted to contact with a projection or shoulder, H, formed upon the draw-bar E, when the said draw-bar is forced inwardly by contact with an opposing draw-bar in the act of coupling, as and for the purposes set forth.

2. The combination, with the draw-bar E, having the horn P and guard or spring G, and provided with the coupling-pin L, having the curved upper end portion, J, provided with the guard-link N, and its lower end provided with a short pin or projection, r, and the hinged coupling-link, C provided with the projection D, substantially as described, as and for the purposes set forth.

3. The combination, with the draw-bar E, having the projecting horn P, of the coupling-pin L, having the curved upper end portion, J, provided with the guard-link N, adapted to engage with said horn, as and for the purposes set forth.

4. The combination, with the draw-bar E, having the shoulder H, and provided with the coupling-pin L, having the bent upper portion, J, of the coupling-link C, adapted to be turned down to couple by the horizontal or inward movement of the said draw-bar, substantially as described, as and for the purposes set forth.

SANFORD BRAY.

Witnesses:

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