S. R. & Z. M. HIBBARD.

Car-Couplings.

No. 153,167. Patented July 21, 1874.

Fig. 1.

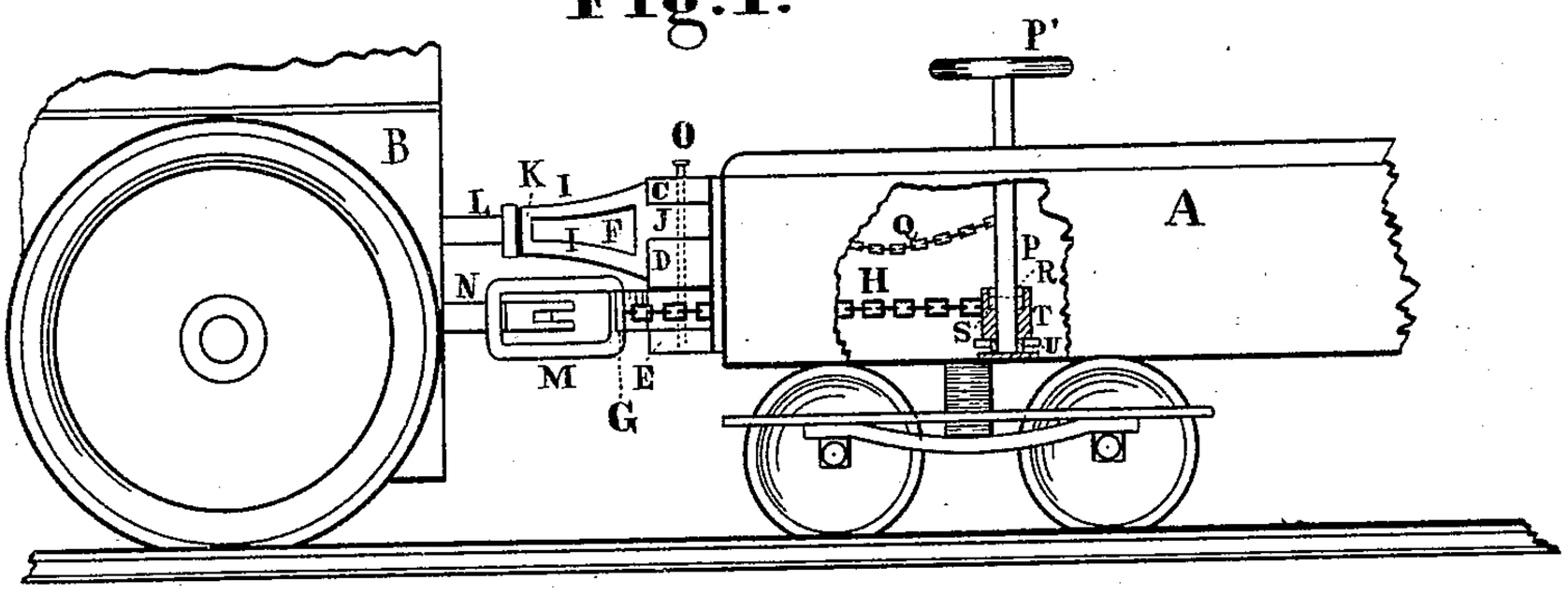


Fig. 2.

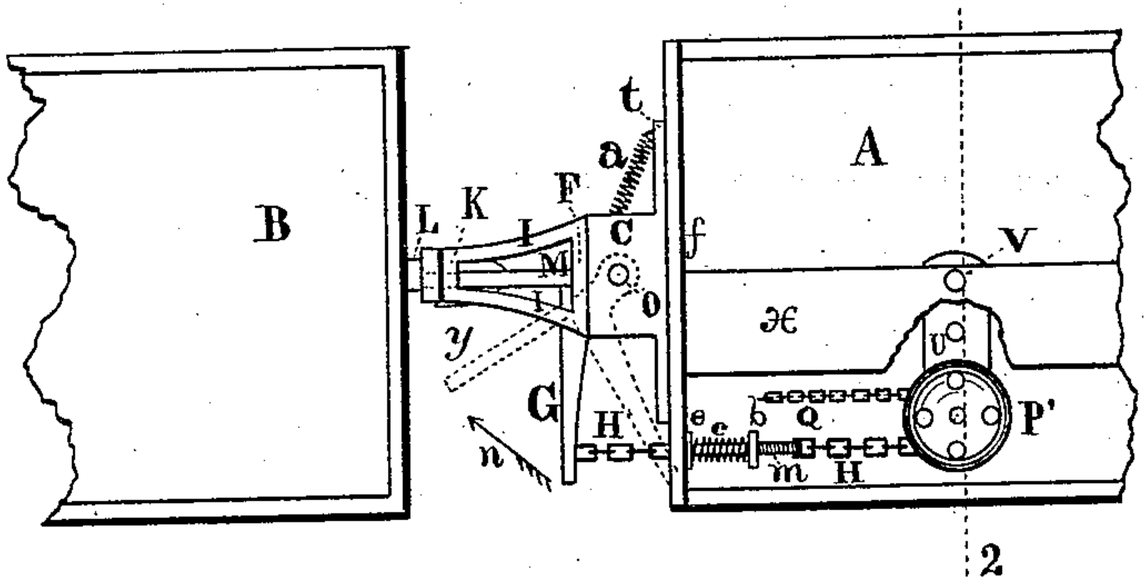


Fig. 3.

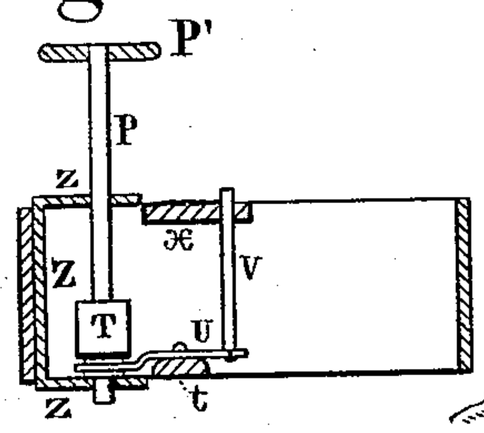
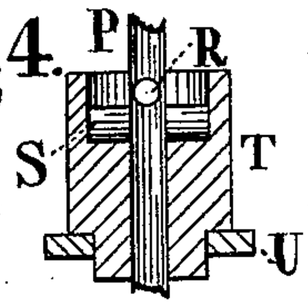


Fig. 4.



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UNITED STATES PATENT OFFICE.

SCOTT R. HIBBARD, OF CHICAGO, AND ZEBINA M. HIBBARD, OF FREEPORT, ILLINOIS.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **153,167**, dated July 21, 1874; application filed May 18, 1874.

To all whom it may concern:

Be it known that we, SCOTT R. HIBBARD, of Chicago, in the county of Cook and State of Illinois, and ZEBINA M. HIBBARD, of Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Locomotive-Coupling, of which the following is a specification:

The nature of the present invention consists, first, in the novel construction of an elbow-link, which is uncoupled by means of a chain attached to the staff of the brake-wheel, a spring being fastened to the middle of the coupling-chain to allow the coupling-link to have sufficient lateral movement to lock onto the catch attached to the car; second, in the novel construction of a buffer attached to the draw-bars, whereby the coupling is protected; third, in the novel construction of a trip-lever as it is arranged and combined with a loose drum on the brake-staff, whereby the turning of the latter will uncouple the cars, as the whole is hereinafter described and shown.

In the drawings, Figure 1 is a broken elevation of a car and locomotive-tender to which our coupling devices are attached; Fig. 2, a broken plan view of the same; Fig. 3, a section of the devices on line 2 2, Fig. 2; Fig. 4, an enlarged section of parts shown in Fig. 1.

A B represent broken elevations of a car and locomotive-tender constructed on the ordinary plan. C D E represent the draw-bars of the tender, to which the coupling and buffer are attached. The buffer is shown at F, and, for the convenience of attaching it to the draw-bars C D, it is provided with a tongue, J, Fig. 1, and is held in place by a pin, O. The bars I terminate in a head, K, which strikes against a buffer L, on the car and prevents the coupling N M from being injured. The coupling-link M is provided with a laterally-projecting lever, G, and is pivoted to the draw-bars D E by the pin O, the link being considerably deeper than the catch N, that the tender may have the necessary vertical movement, relative to the car, without binding or breaking the parts. H′ represents a chain connecting with a rod, *m*, and lever G, and H a chain connecting with the rod *m* and brake-staff P. On this rod *m* is placed an adjustable nut, *b*, and collar *e*, and between the collar and nut, and on the rod *m*, is placed a coil-spring, *c*.

This arrangement is such that the lever G may move a short distance in the direction of dart *n*, and allow the link M to couple into the catch N.

To hold the link M to the side catch N, a coil-spring, *a*, is attached to it and to the main plate *t′* of the front end *f* of tender A, Fig. 2. The chain H is attached to a drum, T, which is placed loosely on the brake-staff P, and is provided at its upper end with two or more slots, S, in which a pin, R, put through staff P, may be caused to catch and rotate the drum T, and wind thereon the chain H, and, consequently, turn link M, as shown by dotted lines *y*, Fig. 2, and uncouple the tender A, the brake-chain Q being longer than the coupling-chain, that the latter may be operated without affecting the brake.

To bring the pin R into said slots S, a lever, U, is pivoted to a fulcrum, *t*, Fig. 3, and is operated by a rod, V, attached to it, and put through a frame-piece, X, on the top of the tender A.

This drum T is necessary, because the brake-chain Q is attached to the brake-staff P, and if the drum T were not loose on the staff, the cars would be uncoupled every time the brakes were used.

Inventors have stated that the elbow-link M G and buffer F may readily be removed by lifting out the pin O, that other forms of couplings may be attached to the draw-bars C D F.

The brake-staff P is supported in the usual manner in the tender by a bridge, Z Z Z, and to uncouple the tender, the foot is to be placed, with some downward force, on the top end of the rod V, at the same time turning the brake-wheel P′ in the same direction as for braking the tender.

We claim, and desire to secure by Letters Patent—

1. The combination of the elbow-link M G, chains H′ H, rod *m*, nut *b*, collar *e*, spring *c*, drum T, staff P, with pin R, lever U, and rod V, as and for the purpose set forth.

2. The buffer F, combined with the draw-bars C D E, elbow-link M G, and catch N, as and for the purpose described.

3. The combination of the lever U, fulcrum *t*, rod V, drum T, staff P, and chain H′ H, for operating the elbow-link M G, substantially as described.

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