J. D. CONNER & L. FRITZ.

Car-Coupling.

No. 163,746. Patented May 25, 1875.

Fig. 1.

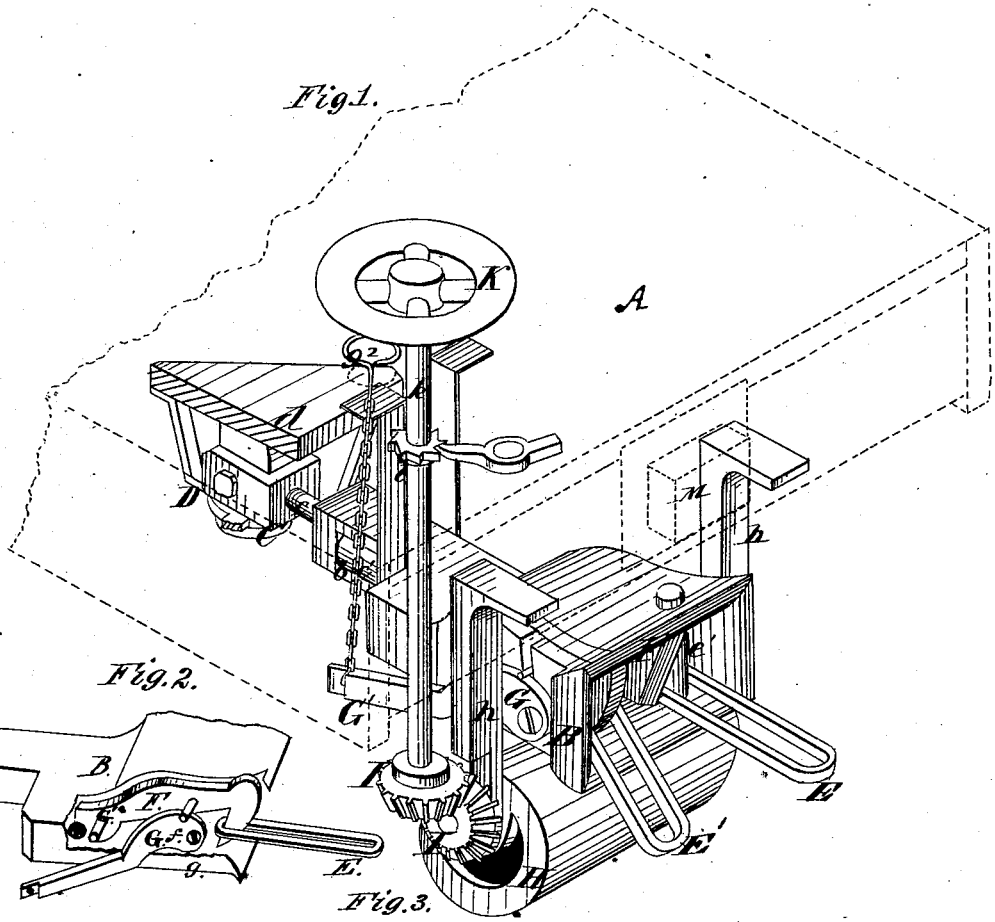


Fig. 2.

Fig. 3.

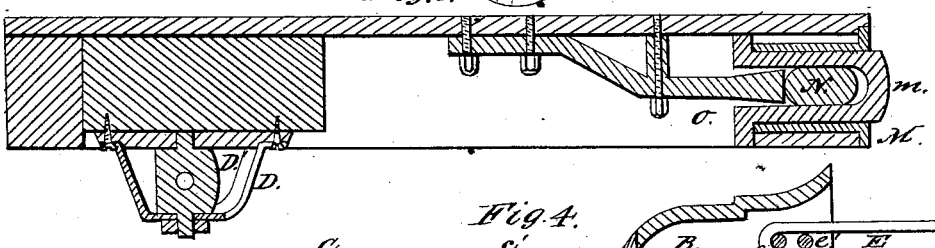
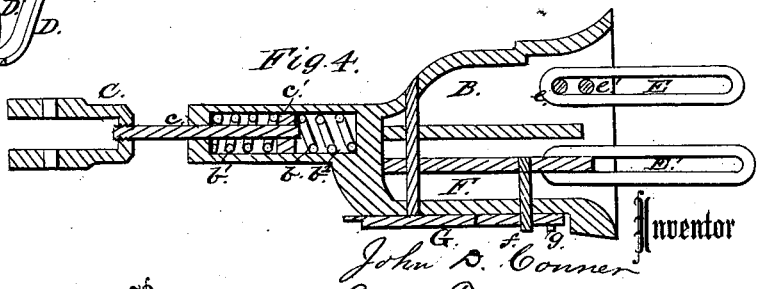


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN D. CONNER AND LOUIS FRITZ, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **163,746**, dated May 25, 1875; application filed February 20, 1875.

To all whom it may concern:

Be it known that we, JOHN D. CONNER and LOUIS FRITZ, both of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car Couplers and Buffers; and we 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of the car coupler and buffer. Fig. 2 is a perspective, partly broken, of the draw-head, showing hook and uncoupling-lever. Fig. 3 is a vertical longitudinal section of bumper and swivel-post. Fig. 4 is a horizontal longitudinal section of draw-head and swivel, showing relative position of links.

A in the drawing represents the platform of the car, and B the draw-head. C is a swivel, having a rod, *c*, which enters a chamber, *b*, in the draw-head, and is there fastened to a head, *c'*, which works against draw-springs b^1 b^2. D is a hanger, to the central swiveled post of which, D', the swivel C is fastened by a bolt or pin, *d*. By this double-swiveled arrangement the draw-head B may be moved both vertically and laterally. E and E' represent the links, there being two links between every two draw-heads instead of one link, as is customary. The link E is designed to remain fast in position, being held by a rivet or bolt, *e*, while the link E' comes into engagement with a hook, F. In other words, each link is fastened at one end by a pin and at the other end by a hook, so that when two couplers of our improved construction come together the link E will be fastened at one end by a pin and at the other by a hook, the link E' being similarly fastened, and the hooks and pins of each link being at alternate ends. An india-rubber-pin, *e'*, is also employed to steady each link and hold it in position for coupling, while permitting the necessary lateral motion in turning curves. G represents a lever, fulcrumed at *g*, and connected by a chain, g^1, with a handle, g^2. On raising the handle g^2 the lever G comes in contact with the stud *f* on the hook F, elevating the latter and permitting the disengagement of the link E', a similar movement on the platform of the adjacent car disengaging the opposite end of the link E and effecting the uncoupling of the cars. G' is an elastic ball or other spring for holding down the hook F. H is an eccentric, sustained by hangers *h h*, and supporting the outer end of the draw-head B. I I are beveled gear-wheels, actuated by a hand wheel and shaft, K *k*, having a pawl and ratchet, L *l*. On turning said hand-wheel the eccentric H will be revolved and the draw-head B raised or lowered, as may be desired, to accommodate cars having platforms of varying heights. For this eccentric gear and hand-wheel any suitable form of lever for raising the draw-head may be substituted. M represents the buffer, consisting of a U-shaped piece of metal, fitting in a recess in the end framing of the platfom A, and containing in its chamber *m* a rubber or other spring, *n*, which impinges upon the tongue O, fastened to the platform A, and serving as a cushion between said tongue and the buffer M.

The advantages of the foregoing construction are briefly as follows: The car-coupler being swiveled may be adjusted both vertically and laterally to accommodate platforms of different heights, and to prevent straining in turning sharp curves. Cars will couple automatically, and may be easily and readily uncoupled by raising the engaging-hooks. There being two links between every two draw-heads there is but little liability of cars becoming disengaged by the breaking of the link or pin, a frequent source of accident being thus avoided. The gum pin in the link serves to steady it, and yet permits lateral vibration in turning curves, and in cases where it may be desired to couple with an ordinary draw-head, into the center of which the link would pass, requiring a somewhat oblique or diagonal arrangement of said link. The buffer prevents injury to the draw-heads and links by taking up the jar resulting from violent contact of the cars, and serves also to keep the platforms of the cars apart and the links straight when coupled. Each link being

fast at one end by a fixed or rigid pin, the inconvenience heretofore resulting from lost or mislaid links is wholly avoided.

Although we have described and illustrated a spring-bumper, we purpose making the same the subject of a separate application. We therefore do not here make the same the subject of any claim.

We claim—

1. In combination with the swivel C and draw-head B, the swiveled post D to permit the lateral movement of said draw-head, as set forth.

2. The draw-head B, swiveled vertically and laterally, as and for the purposes set forth.

3. The combination of the draw-head B, having the chamber *b*, holding-springs b^1 b^2, with the rod *c*, having a head, *c'*, working in said chamber, as set forth.

4. The draw-head B, having a hook, F, in combination with link E', pin *e*, and link E, substantially as set forth.

5. In combination with a draw-head, B, and link E, an auxiliary holding-pin, *e'*, of india-rubber, substantially as and for the purpose set forth.

6. In combination with the draw-head B, holding the hook F, the lever G, engaging with the stud *f* on said hook, substantially as and for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 9th day of February, 1875.

JOHN D. CONNER.
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Witnesses:
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