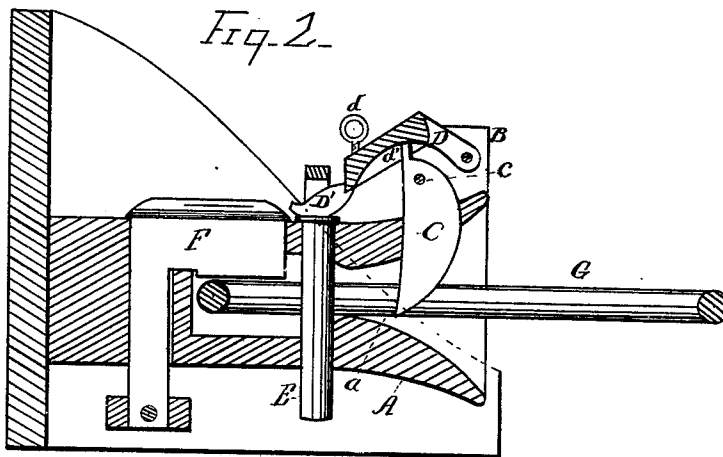
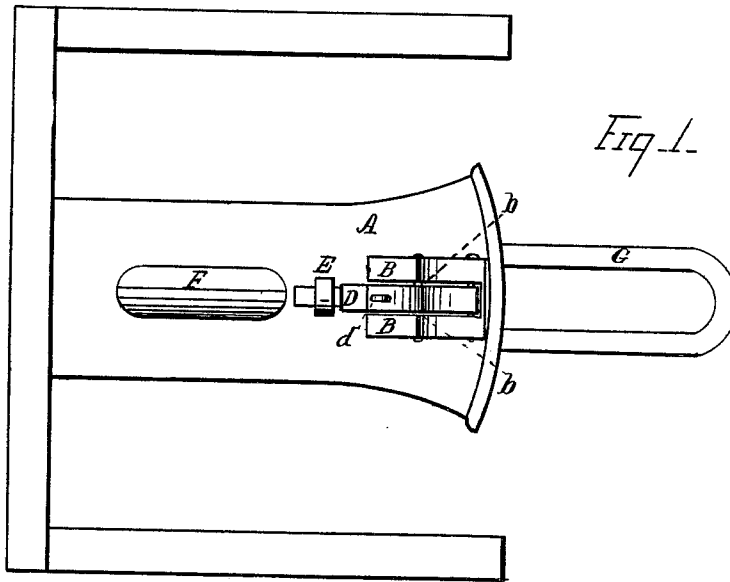


G. WORDEN.
CAR-COUPLING.

No. 176,396.

Patented April 18, 1876.



WITNESSES
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By

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UNITED STATES PATENT OFFICE

GEORGE WORDEN, OF PITTSTON, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **176,396**, dated April 18, 1876; application filed August 5, 1875.

To all whom it may concern:

Be it known that I, GEORGE WORDEN, of Pittston, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Car-Coupling; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification:

My invention relates to car-couplings, and is designed as an improvement upon the several patents granted to me, respectively, January 2, 1872, No. 122,509; December 31, 1872, No. 134,503; and May 5, 1874, No. 150,454.

In the drawings, Figure 1 represents a plan view of my invention, and Fig. 2 a longitudinal section of the same.

My invention consists in the appliances and devices hereinafter set forth and claimed.

A is the draw-head of a car, whose bell-mouth narrows from its lip on every side so as to present a throat of just sufficient vertical dimensions as to allow the entrance of the coupling-link, and is so designed in order that the mechanical movement to which the pin is exposed may be as small as possible. By this means the pin will not bend under the same pressure as if the throat *a* were larger. B is any suitable casing, placed on the roof of the draw-head, which forms a housing for the pin-lever, and is provided with a longitudinal slot, extending through it and connecting with a corresponding slot in the roof of the draw-head. Playing in this slot *b* is the primary lever C, which is pivoted at the point *c* in the casing B, and it is of semi-diskal shapes—that is, the line of direction of its outer surface is at an angle to that of its inner surface. The upper extremity serves as a fulcrum for the pin-lever D, which is provided with a suitable groove-symbol, *d'*, at its under side. The upper end of the pin-lever is pivoted in the head of the casing B, and is at an angle considerably above its lower extremity, where it is attached to the coupling-pin E. This pin-

lever may be provided at its top with any suitable means, *d*, for raising it. The weighted slide F I do not claim in this application, since it is the same as has been claimed in one of my preceding patents.

The link connecting with an opposing car striking the primary lever C, causes it, through its eccentricity, to raise the pin-lever D, which is also provided with an eccentric shoulder or lug, which latter lever at once and easily raises the coupling-pin so that the link is allowed to pass beyond the slot of the coupling-pin; then the pin-lever, the force offered by the primary lever having been withdrawn by the passage of the link, falls back by its own gravity into its longitudinal slot, carrying the coupling-pin into its corresponding slot, thus coupling the cars effectually.

The mechanical appliance *d* on the pin-lever can be at any time so operated as to cause the coupling-link to be loosed.

Thus it is manifest that the present invention is an improvement upon any of my previous ones, and forms the simplest of the series, since the number of the elements engaged are greatly decreased, and both the cost of construction, the greater simplicity, and the more positive action, all serve as strong features of improvement.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In an automatic car-coupler, the curved-faced primary lever or trigger C, pivoted at its top end in the casing B above the draw-head A, and inclined lever D, constructed in its under edge with a curved slot or groove, *d'*, into which the end or nose of the trigger C enters and operates said lever D and pin E by the passage of the incoming link, as described.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of August, 1875.

GEORGE WORDEN.

Witnesses:

M. L. PERRIN,
C. S. STARK.