G. E. LACY.

CAR-COUPLING.

No. 170,092. Patented Nov. 16, 1875.

Fig 1

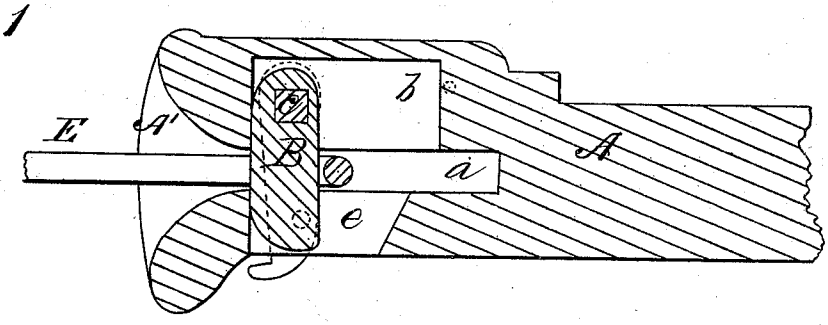


Fig 2

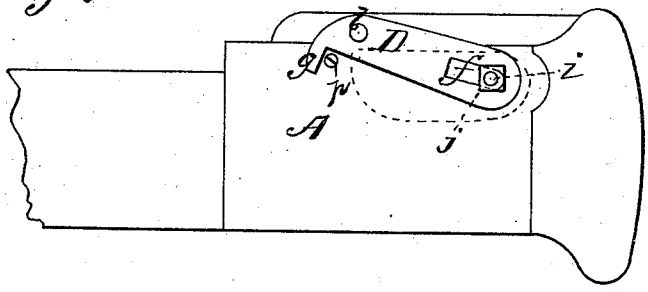
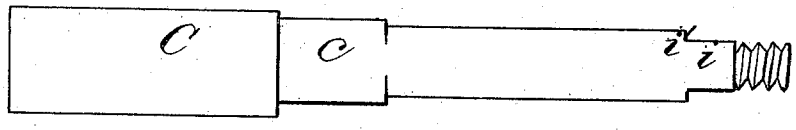


Fig 3.



WITNESSES

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GEORGE EDGAR LACY, OF SUSPENSION BRIDGE, NEW YORK.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **170,092**, dated November 16, 1875; application filed April 10, 1875.

To all whom it may concern:

Be it known that I, GEORGE E. LACY, of Suspension Bridge, in the county of Niagara and State of New York, have invented a new and valuable Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a longitudinal vertical section of my car-coupling, and Fig. 2 is a plan view of the same. Fig. 3 is a detail view.

This invention has relation to improvements in automatic car-couplings; and the nature of the invention consists in combining, with a vertically-vibrating coupling-dog, applied upon a bolt passing transversely through the draw-bar, and adapted to be thrust up into a chamber in the upper part of the same by the contact of a link in the draw-bar of a car approaching to be coupled, an endwise-movable uncoupling-lever, keyed or otherwise suitably secured upon the end of the said bolt, whereby a simple and effective means is provided for operating the dog, for the purpose of effecting an uncoupling, and for preventing a coupling when not desired, as will be hereinafter more fully explained.

In the annexed drawings, A designates a rectangular draw-bar presenting the usual well-known form and appearance, and provided with a narrow rectangular chamber, *a*, and a flaring mouth, A′. This draw-bar is also provided with a rectangular recess, *b*, in its upper part, adapted to receive a vertically-vibrating coupling-arm, B, which is provided with a rectangular opening in one end, by means of which it is applied upon a correspondingly-shaped part, *c*, of a suitable bolt, C, passing transversely through the upper part of the draw-bar from side to side thereof.

When arm B is struck by the link in the draw-bar of a car approaching to be coupled, it will be caused to vibrate backward and upward into recess *b*, allowing the link to enter into chamber *a*, passing into which the link will relieve the coupling-arm of restraint, and will allow it to fall through the former with its lower end engaged in the front end of a slot, *e*, cut in the floor of the draw-head, as shown in Fig. 1, thereby effecting a coupling.

D represents an uncoupling-arm, having a slot, *f*, in one end, and a hook, *g*, upon the other, which is applied upon the reduced end *i* of bolt C, and is there secured by a suitable nut, *j*, which is screwed upon the end of the said bolt against a shoulder, *i′*, thereof, but without clamping lever D against the side of the draw-bar.

By this means this lever is allowed to have endwise movement on bolt C to the extent of the length of slot *f*, but is not allowed to have vibratory motion with relation thereto; hence, when it is thrust upward from the position shown in Fig. 1 to that shown in Fig. 2, it will cause coupling-arm B to be vibrated upward into recess *b*, out of the slot of link E, and by separating the cars an uncoupling will be effected.

When the operator releases lever D coupling-arm B will automatically gravitate downward into the position shown in Fig. 1, ready set for a subsequent coupling.

If it be desired at any time to bring two or more cars together without coupling them, throw lever D up into the position shown in Fig. 2, then draw the same, by means of a handle, *l*, away from bolt, and engage its hooked end over a pin, *p*, rigidly secured to the side of the draw-bar. By reversing this movement the coupling-arm will be relieved of the restraint of pin *p*, and will gravitate, as above described, into position ready set for coupling.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupling, the endwise-movable and vertically-vibrating lever D, in combination with the bolt C and coupling-arm B, substantially as specified.

2. The lever D, having hook *g* and slot *f*, in combination with a rest or pin, *p*, and a vertically vibrating and gravitating coupling-arm, B, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE EDGAR LACY.

Witnesses:

H. C. LACY,

CHAS. H. CUTTING.