

P. M. THOMPSON.
Car-Couplings.

No. 142,965.

Patented September 16, 1873.

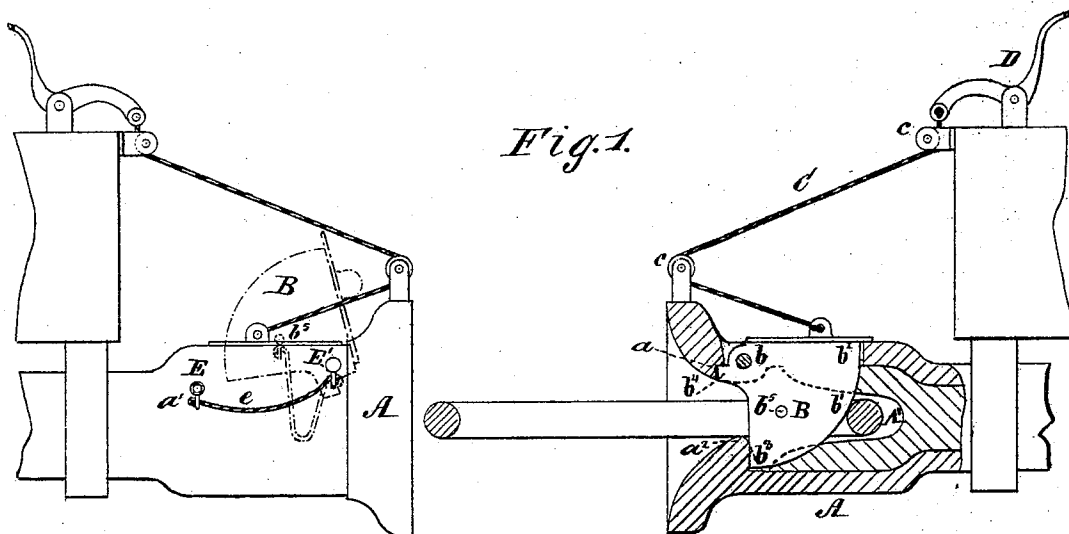


Fig. 1.

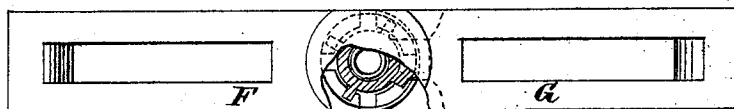


Fig. 2.

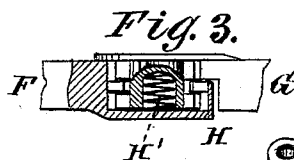


Fig. 3.

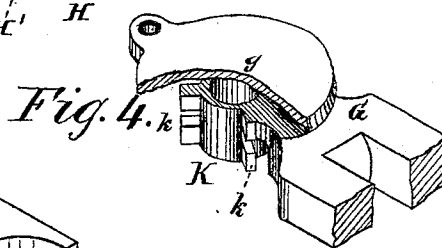


Fig. 4.

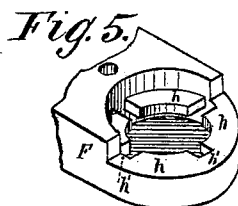


Fig. 5.

Witnesses:
G. Mathys.
John Kenyon.

Inventor:
Philip M. Thompson
PER *Thompson & Co.*
Attorneys.

UNITED STATES PATENT OFFICE.

PHILIP M. THOMPSON, OF TORONTO, CANADA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 142,965, dated September 16, 1873; application filed January 11, 1873.

To all whom it may concern:

Be it known that I, PHILIP MAUGHAN THOMPSON, of Toronto, in the Province of Ontario and Dominion of Canada, have invented a new and useful Improvement in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification.

It consists in a novel mode of constructing the coupling-plate, so as to take off any frictional resistance from its contact with link when the former is being elevated. The invention consists in the improvement of car-couplings, as hereinafter described and pointed out in the claim.

In the drawing, Figure 1 is a side elevation with parts broken out. Fig. 2 is a top view of the coupling-link partly broken out. Fig. 3 is a vertical section of the link, and Figs. 4 and 5 represent two parts separately in perspective.

A represents a draw-head, slotted on top to allow a pivoted-plate, coupling-pin, or lever-catch, B, to swing therein. It has a flaring mouth, and inner chamber A' converging to a narrow aperture at the rear. To a stud on upper edge of the lever-catch B is attached a cord, C, which passes over pulleys *c c*, and connects with a foot-lever, D, on platform of car. This arrangement allows the plate to be easily and conveniently raised, while gravity will force it within the link, and thus lock the two cars together. This coupling-plate B is fulcrumed on a pivot, *b*, and has a curved surface, *b*¹, against which the link bears. This curved surface is, however, not the arc of a circle, or equally distant at all points from the pivot *b*, but decreases from top *b*² to the bottom *b*³ in its distance from the fulcrum. This construction allows a perfect clearance to the coupling-plate B when being raised, preventing it from frictional contact with the link. *a*² is the shoulder, against which the coupling-plate B bears at the bottom. *b*⁴ is a projection, annular or otherwise, on coupling-plate B, and fits into the corresponding recess *a* of draw-head, so as to take the horizontal

strain from the pivot *b* when the cars are in motion. E is a pin, connected by cord *e* to a staple or eyebolt, E'. When not in use this pin is inserted in the hole *a*¹ of draw-head, but when the cars are in the depot or on side track, it is not desirable that they should be coupled, but remain ready to be used in greater or less number for making up trains. The pin is then inserted into the hole *b*⁵ of coupling-plate B, which has been elevated so as to admit of this insertion. F G is the coupling-link, made in two parts, one of which turns on the other, and both of which lock together and preserve their union until a certain relative position is produced by one of the cars running off the track. H is a cup in part F, having an annular flange, *h*, which projects horizontally inward, and is notched at *h'*, and also a spring, H', pressing upwardly. K is a tube, placed under the cover *g* of part G, and provided with radial studs or projections *k*. If two of the notches *h'* are aligned with the axis of link and two others at right angles thereto, as shown in the drawing, the studs *k* are all placed at an oblique angle to the plane of said axis.

By this construction the part G is placed over and at an angle to the part F, so that by pressing down the spring H' the studs *k* will enter notches *h'*, and sink below the level of flange *h*. The part G is then turned until it comes in line with the part F, when the two parts of the link will be found completely locked together.

When one of two cars between which my two-part link is used runs off the track the turn produced thereby causes the studs *k* and notches *h* to register with each other, the spring H' to throw out the part G, and the car that has run off to become detached without carrying any of the train along with it.

To guard against one part of the link being casually separated from the other when the link is not in use, or when projecting from the draw-bar of a car standing alone, I provide the part G' with an extension with an aperture in it, which, when the two parts of the link are in alignment, will coincide with a similar aperture in the part F, and into these aper-

tures I place a pin which holds the two parts against independent lateral movement, and thus prevent them from being separated.

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

1. The two-part coupling-link FG, provided, respectively, with notched cup H *h* *h'* and studded tube K *k*, the studs and notches being so arranged in relation to the parts of the link upon which they are formed as that when locked together the two parts of the link can-

not be separated except they be turned out of line with each other, as and for the purpose specified.

2. The flanged and notched cup H *h* *h'* of part G, provided with a spring, H', combined with the studded tube *k* *k*, arranged under cover *g* of part F, as and for the purpose specified.

P. M. THOMPSON.

Witnesses:

SOLON C. KEMON,
THOS. D. D. OURAND.