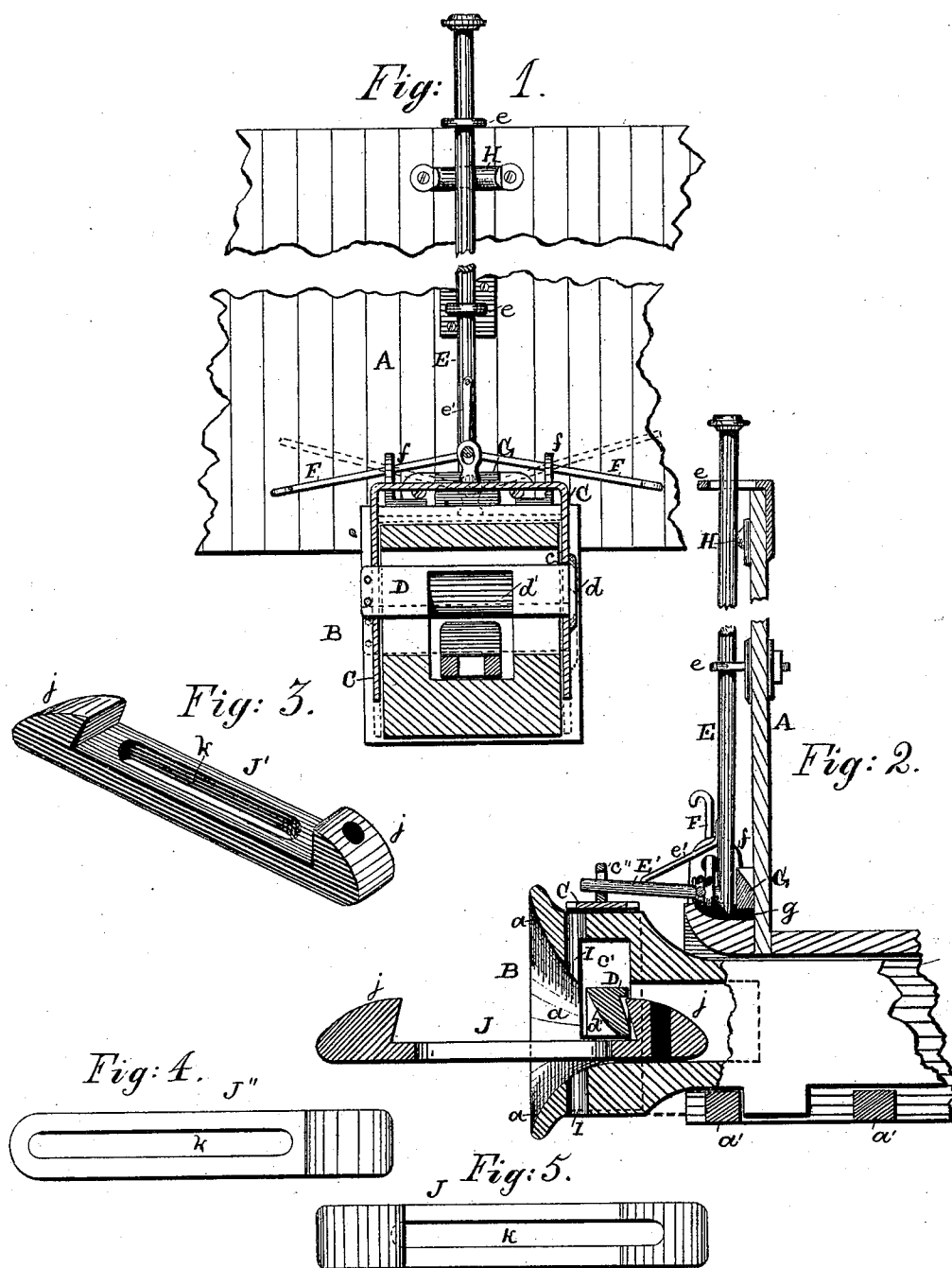


M. M. BROWN, D. D. MARTIN & H. GILBERT.
CAR-COUPLING.

No. 177,200.

Patented May 9, 1876.



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MORTIMER M. BROWN AND DAVID D. MARTIN, OF ONEIDA, AND HARVEY GILBERT, OF GILMAN, ILLINOIS.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 177,200, dated May 9, 1876; application filed February 2, 1876.

To all whom it may concern:

Be it known that we, MORTIMER M. BROWN and DAVID D. MARTIN, of Oneida, Knox county, Illinois, and HARVEY GILBERT, of Gilman, Iroquois county, same State, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification:

Our invention relates to car-couplers, our object being to provide a device which can be used for coupling or uncoupling railroad-cars without danger to the operator, and which can be operated with equal facility from either side of the car, or from the platform or roof, as occasion requires.

The invention consists in certain new and improved devices and combinations of devices, whereby the desired object is accomplished, and the coupling and uncoupling of the cars are effected in a simple and certain manner.

In the accompanying drawings, Figure 1 is a front view of the end of a railroad-car, showing the draw-head in section, and provided with our improved coupling device—the coupler raised to permit of the uncoupling of the cars, and suspended so that the cars will not couple when they come together. Fig. 2 is a side view of the same in section, showing the coupler in position for coupling, and when coupled. Fig. 3 is a detached view of our improved coupling-link, and Figs. 4 and 5 show modifications of the same.

Referring to the parts by letters, A represents the end of a railroad-car, and B the draw-head. The outer end or opening into this draw-head is made rectangular, with rounded inclined faces *a* for guiding the coupling-link as it enters within the draw-head to couple the cars. The inner end of the draw-head is also rectangular, and made so as to slide back and forth within a box or hollow way formed for its reception in the body of the car, the extent of its motion in either direction being limited by a vertical partition or bar, which extends down through the lower side of the draw-head, and comes in contact with cross-bars *a'* *a'*, which act as stops. Springs are provided and so arranged as to hold the draw-head out as far as the stop *a'* will permit, said springs receiving the thrust

and preventing any sudden check as the cars come together. C is a movable yoke, which fits the outside of the draw-head on top and sides, the parts which embrace the sides having elongated rectangular slots *c* formed through them, the one on one side being wider than the other. D is a movable cross-bar, which is passed through the slots *c* and through larger elongated slots *c'* formed in the sides of the draw-head. One end of the bar D fits the largest of the slots *c*, and has a head or projecting flange, *d*. The other end of the bar D is made to fit the smaller slot *c*, on the opposite side of the yoke C, and has lateral pin or bolt holes through it for the purpose of securing it in position by passing pins through the holes. The central portion of the bar D is beveled or formed with an incline, *d'*, extending from its upper front side to its lower rear side. *e'* is an eye projecting upward from the center of the upper sides of the yoke C. E is a vertical rod, which passes through eyes or slotted guides *e e* secured to the end of the car. The lower end of this rod E may be bent so as to project forward at right angles, or another rod, E', may be secured to or connected with the lower end of the vertical rod E, its forward end passing through the eye *e'* on the yoke C. *e'* is a brace connecting and strengthening the rod or rods E E'. F F are rods, the inner ends of which are pivoted to the lower end of the rod E. These rods F are passed loosely through holes or slots formed in brackets or standards *f* secured to the cars. The outer ends of the rods F extend to or near to the sides of the cars. G is a plate secured to and projecting slightly from the end of the car in position between the standards *f f*. *g* is a groove or depression formed in the end of the car immediately beneath the plate G. H is a plate having a rounded surface, which is secured to the end of the car some distance above and on a line with the plate G. I I are bolt-holes passing vertically through the draw-head for the reception of an ordinary coupling-pin, when such is desired to be used. J represents a coupling-link, having hooked ends *j j*, and formed with a longitudinal slot, K, which may extend partially through the hooked end or ends *j*. J' represents a

similarly-formed link, only the slot does not extend the length of or into the hooked ends. It has a vertical pin-hole in one or both hooked ends. *J''* is a link having only one hooked end, and a slot extending to the other end.

The operation of our coupling device is as follows: The yoke *C*, with its beveled cross-bar *D*, is free to rise and fall, the slots in the sides of the draw-head being long enough to permit of sufficient motion. Being in position, as shown by Fig. 2 of the drawings, the hooked end of the entering-link will come in contact with the beveled face of the bar *D*, and push up the yoke and bar until the hook passes beyond the bar, when the yoke and bar will fall by their own gravity, and securely couple the cars automatically, sufficient play being given to the link.

When it is desired to uncouple the cars, the operator bears down on either of the bars *F*, or draws up the central rod *E*, thereby raising the yoke and bar clear above the hooked end of the link, and permitting the latter to draw out.

When it is desired to keep the yoke and bar in an elevated position, so that the cars will not couple when they come together, the lower end of the rod *E* rests on the plate *G*, and when it is desired that the cars shall couple when they come together, the operator presses or draws either of the rods *E* *F* toward the car, the plate *H* acting as a fulcrum for the

rod *E*, and the standards *f* as fulcrums for the rods *F*, the effect being to move the lower end of the rod *E* outward, clear of the supporting-plate *G*, when the yoke and bar will fall into position ready for coupling. The slots in the coupling-links permit of their being used as ordinary links with ordinary coupling-pins.

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

1. The rods *E* *E* and *F*, operating in combination with the supporting-plate *G*, substantially as and for the purpose specified.

2. The rods *E* *E* and *F*, operating in combination with the plate *G*, and the plate *H*, and standards *f*, said plate *H* and standards operating as fulcrums, substantially as and for the purpose specified.

In testimony that we claim the foregoing as our invention we have hereunto affixed our signatures.

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