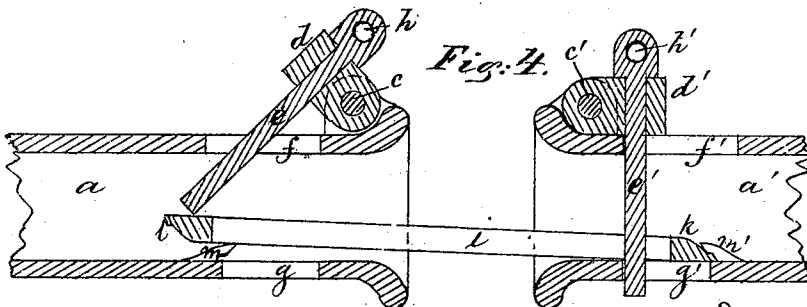
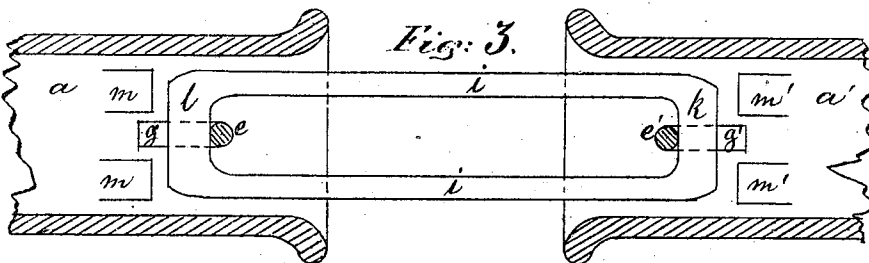
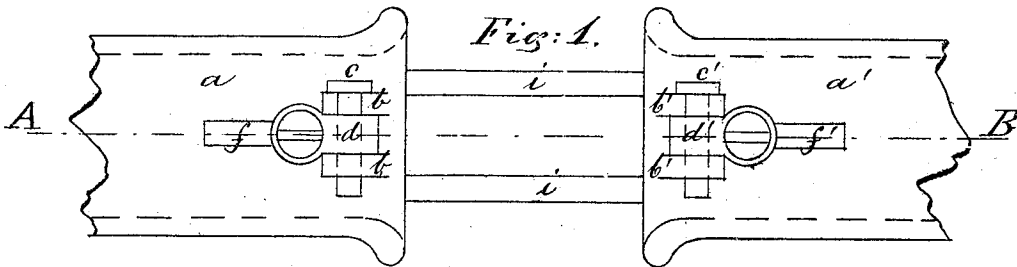
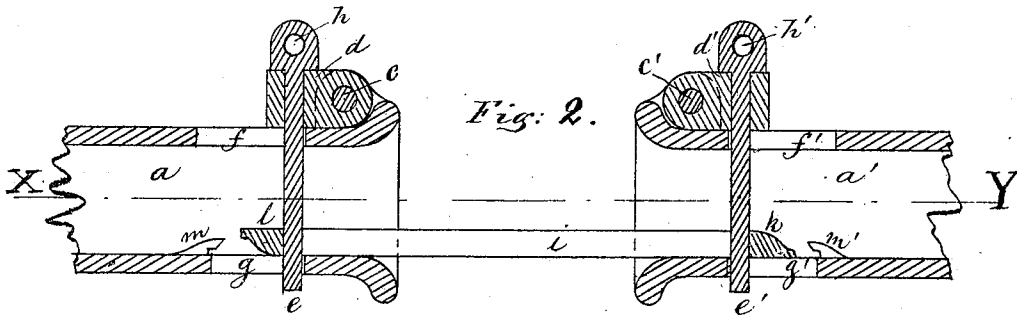


W. B. BARNES.
Car-Couplings.

No. 141,258.

Patented July 29, 1873.



Witnesses:

Helen S. Andren.

Myron A. Poole,

Inventor:

Winslow. B. Barnes.

by Alvar Andren his atty.

UNITED STATES PATENT OFFICE.

WINSLOW BRADFORD BARNES, OF PLYMOUTH, ASSIGNOR OF ONE-HALF
HIS RIGHT TO SAMUEL TALBOT, JR., OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **141,258**, dated July 29, 1873; application filed
September 14, 1871.

To all whom it may concern:

Be it known that I, WINSLOW BRADFORD BARNES, of Plymouth, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Railway-Car Couplings; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part hereof, is a clear and accurate description of a car-coupling constituting my invention.

My invention relates particularly to that class of car-couplings which are intended to operate automatically, and which embody, with a bumper and draw-head, catches or pins of various kinds, which are arranged to engage with the link when the end of the latter is forcibly introduced therein from another bumper in which the link is held, and by which it is presented in a position mainly horizontal. It consists in constructing the ends of the link with inclined faces on reverse angles, and in providing therefor, in the interior of the bumpers, recessed lugs or holders, fitted to receive either end of the link to maintain it in a horizontal position, and to present it to the bumper with which it is to engage.

Referring to the drawings, Figure 1 is a ground plan. Fig. 2 is a central longitudinal section over the line A B taken on Fig. 1. Fig. 3 is a longitudinal section over the line X Y taken on Fig. 2; and, finally, Fig. 4 represents a central longitudinal section of the coupling when in the act of coupling together, as will herein be fully shown and described.

Similar letters refer to similar parts wherever they occur on the drawings.

Although I am aware that my improvements may be practically combined with many of the great number of automatically-operating link pins or catches, and with draw-heads or bumpers of various forms, I have selected for illustration a bumper and draw-head of a form and general character approximating to the one in common use and provided with the well-known hinged link-pin.

a a' denote the bumpers, which are attached to the ends of railroad cars in the usual way.

On the upper side of each bumper are secured ears or hinges *b b b' b'*, through which the hinge-pins *c c'* are inserted, and around which the blocks *d d'* are made to turn easily, in a manner as shown in Figs. 2 and 4. Through each block *d d'* is made a vertical hole, in which the coupling-bolts *e e'* are held and supported. Said bolts *e e'* are provided with eyes *h h'* in their upper ends, as usual. The blocks *d d'* and pins *c c'* turn around the bolts *c c'*, as shown in Fig. 4, and for this reason I make slot-holes *f f'* in the upper part of the bumpers, and similar ones, *g g'*, in the lower part of the bumpers, by which arrangement the coupling-bolts *e e'* will be allowed to swing freely around the bolts *c c'*, as shown. The shackle or link *i* is made tapering downward in one end, *k*, and tapering upward in the opposite end *l*, as shown. The bumpers are provided with lugs *m m m' m'* on the lower inside behind the slot-holes *g g'*, as shown. The object of these lugs or projections is to provide an arrangement whereby the shackle *i* will be held automatically in position during the operation of coupling cars together without the need of an operator guiding the shackle.

The way in which the shackle *i* is kept in position during the operation is as follows: The end *k* that tapers downward is pushed close up to the lugs *m' m'* in the bumper *a'*, by which arrangement the shackle *i* is kept steadily in a horizontal position and prevented from going backward any further in the bumper *a'* than what is shown on right-hand side of Fig. 4. We will suppose that the car to which the bumper *a'* is attached is stationary, and that the shackle *i* is placed in a position as shown in Fig. 4. We will also suppose that the car to which the bumper *a* is attached is backing up to meet the bumper *a'*. The end *l* of the shackle *i* strikes the bolt *e*, thus turning said bolt around the fulcrum *c*, as shown on left-hand side of Fig. 4, and when the bumper *a* has backed up a little nearer to the bumper *a'* the bolt *e* will drop down from its own weight into the shackle *i*, thus effectually coupling both cars together without the need of an operator guiding the shackle and replacing the bolt. To uncouple

I simply lift up one of the bolts *e e'* in the usual way.

The link or shackle being provided with the reverse inclined faces *k* and *l*, it will be seen that if it be made to engage with the recess at the lug *m* of one bunter the opposite end of the link, on entering the mouth of another bunter, must necessarily rise and pass over the lug in that bumper, and that it cannot come in contact therewith; and also that, after the coupling has been effected and draft applied, either lug will be in contact with the link until on slacking and the bumpers strike, when one lug, engaging with one end, will, as before, force the opposite inclined end of the link over and beyond the adjacent lug.

My link and lugs are, obviously, applicable to ordinary link-bumpers, such as are in common use, and, therefore, my improvements, by this interchangeability, are well adapted for use on any road on a large or small scale, and in common with the ordinary link-couplings.

It will be readily seen that most of the well-known or modern automatically-operating link-pins or devices which perform analogous functions may be practically employed in combination with my improvements.

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

1. The link *i* having reverse inclined faces at the ends, in combination with the recessed lugs *k* and *l* within the bumpers, substantially as and for the purpose specified.

2. In combination with a link pin or catch, arranged for automatic coupling, the link *i* with its inclined reverse faces *k* and *l* at the end, substantially as and for the purpose specified.

WINSLOW B. BARNES.

Witnesses:

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