

P. N. RAMSEY.
Car-Couplings.

No. 148,756.

Patented March 17, 1874.

Fig. 1.

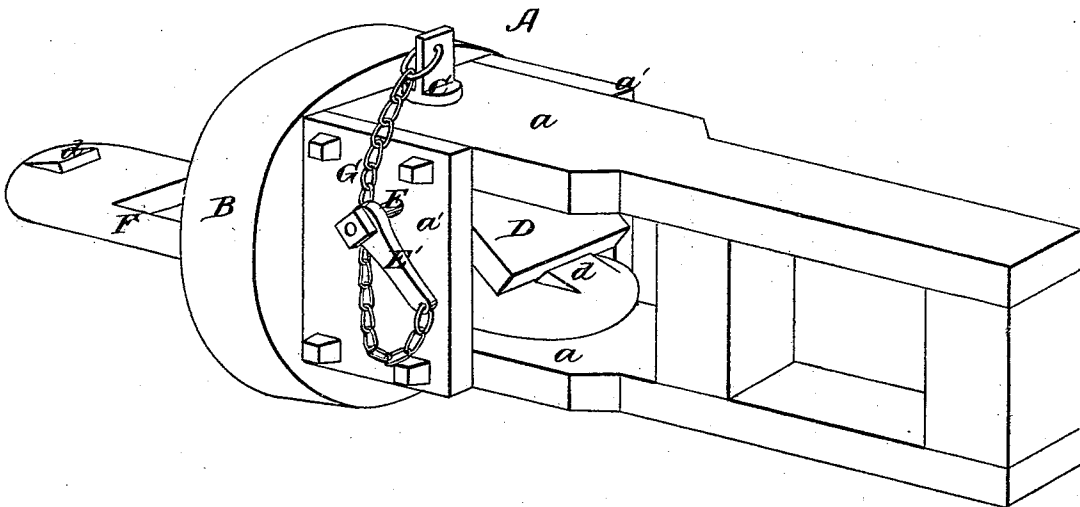


Fig. 2.

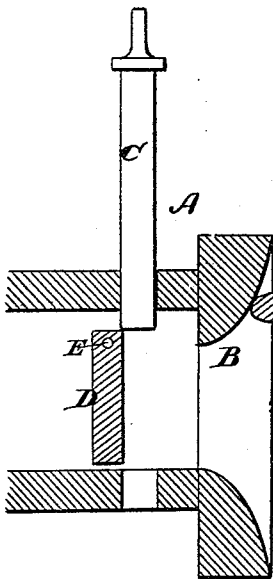
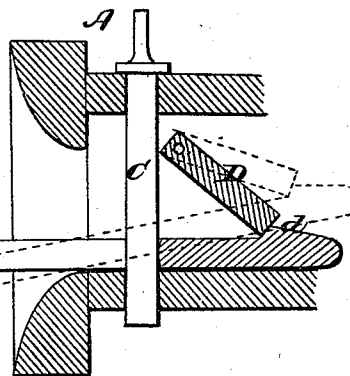


Fig. 3.



Witnesses.
C. F. Brown.
W. F. O'Brien.

Inventor
P. N. Ramsey.
by his Attys.
W. F. O'Brien.

UNITED STATES PATENT OFFICE.

PETER N. RAMSEY, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF
HIS RIGHT TO WILLIAM P. RAMSEY, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 148,756, dated March 17, 1874; application filed
January 28, 1874.

To all whom it may concern:

Be it known that I, PETER N. RAMSEY, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Car-Couplings; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a perspective view of my invention, and Figs. 2 and 3 longitudinal vertical sections, showing the operation of coupling out of level.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention has for its object to provide for public use an automatic link and pin coupling for cars, which shall couple when the cars are out of level or on a curve as well as when in line. It also has for its object to provide means for holding the link and preventing the uncoupling of the cars in case the coupling-pin is lost or broken. To these ends, it consists in providing the chamber of the draw-head of a link and pin coupling with a pivoted flap or latch hanging vertically in said chamber, and adapted to perform the following functions, viz: First, to hold the pin in an elevated position until the link enters from the opposite draw-head, then allowing it to fall within the link, the latter swinging the flap backward as it enters and disengaging it from the pin; second, to engage with a projection on the end of the link and hold it, so that if the pin is lost or broken the link cannot be withdrawn from the draw-head; and, third, to bear downward on the inner end of the link when engaged with it, as last stated, and by its weight hold the link balanced horizontally, so that its outer end is free to swing upward, downward, or laterally, and thereby enter the opposite draw-head, and effect the coupling when the draw-heads are at different heights or when the cars are on a curve, the mouths of the draw-heads being properly tapered or curved to guide the link as it enters. The pivoted flap or latch is provided with a horizontal arm projecting outside of the draw-head, said arm having a lever attached to it at right angles, the latter being connected by a chain or other

means with the coupling-pin, so that when the pin is raised and withdrawn from the draw-head the flap or latch is also raised by the same operation and the link entirely disengaged, all of which I will now proceed to describe.

In the drawings, A represents the draw-head, composed, preferably, of the top and bottom wrought-iron plates *a a*, united by the side plates *a' a'*, and having the transverse end or face plate B, of suitable thickness, all securely bolted together. The end plate B has an orifice in its center for the entrance of the link, said orifice being beveled or curved outward, as shown, so as to guide the end of a link striking it toward the center. C is the pin, which is applied in the usual manner; and D is a metallic flap or latch pivoted in the draw-head on a transverse bolt, E, which has its bearings in the side plates *a'* immediately in the rear of the pin C and near the upper plate *a*. On the outer end of the bolt E is an arm or elbow, *E'*, which is connected, by a chain, G, with the upper end of the pin, as shown in Fig. 1. The flap or latch D is of such size and shape as to extend across the draw-head when it hangs vertically, in which position its upper outer corner projects under the pin and holds it in an elevated position, as shown in Fig. 2, until the link enters and swings the flap backward, allowing the pin to drop. F represents the link, the ends of which are made solid for a length corresponding to the distance between the pin and the free end of the flap D, when the latter is swung back. On the ends of the link are hooks or projections, *d*, which engage with the free end of the flap, as shown. The width of the link is somewhat less than that of the chamber to give it some lateral play.

It will be seen from the foregoing, first, that when the pivoted flap hangs freely it supports the pin out of the chamber; secondly, that when the flap is struck by the end of an entering-link it is swung backward, disengaging the pin, which drops into the link and engaging at its free end with the hook on the end of the link, thereby preventing its withdrawal, the pin and flap coming to their bearings on the link at the same moment; thirdly, that the weight of the flap resting on the inner end of

the link is sufficient to hold the latter balanced horizontally, so that its opposite end is free to rise and fall or swing laterally and accommodate itself to the position of the adjacent draw-head in coupling, whether said draw-head be out of line longitudinally or vertically, the beveled or curved mouth of the draw-head guiding the end of the link into the chamber when it strikes below, above, or on one side.

By raising the pin from the draw-head the flap is swung upward by means of the chain G and elbow E', thereby disengaging the pin and flap from the link. The flap is not raised, however, until the pin is elevated sufficiently to take up the slack of the chain G. After the withdrawal of the link the flap is first allowed to fall and the pin is again inserted, resting upon the corner of the flap, as before.

I claim as my invention—

1. In a car-coupling, a latch pivoted within the chamber of the draw-bar, and adapted to hold the pin in an elevated position until the entrance of the link, and subsequently to engage with the link in such manner as to prevent its withdrawal from the draw-head and hold it balanced horizontally, so as to couple out of line, substantially as described, for the purpose specified.

2. The latch D, having the arm E and elbow E', in combination with the pin C and link F, all combined to operate substantially as set forth.

PETER NEWTON RAMSEY.

Witnesses:

JOHN H. MEEKER,
SAM'L. MEEKER.