(No Model.)

P. RYAN.

CAR COUPLING.

No. 303,054. Patented Aug. 5, 1884.

Fig. 1

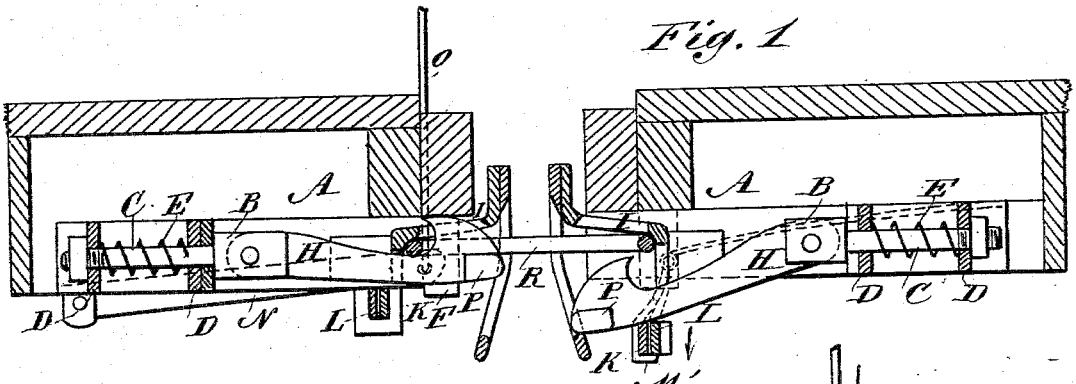


Fig. 2

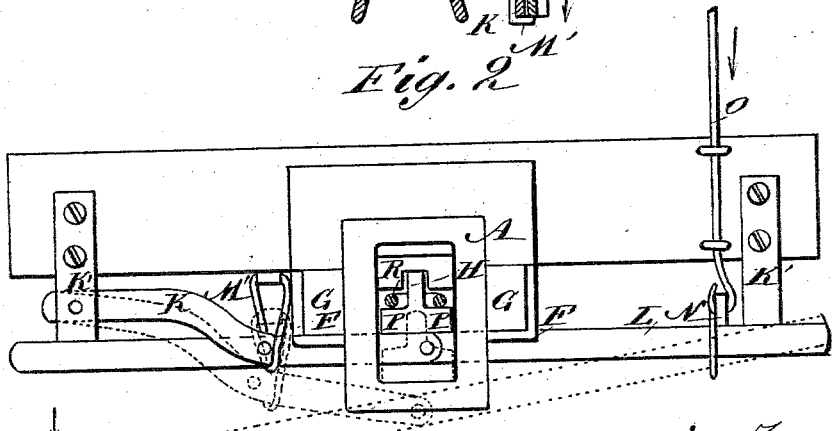
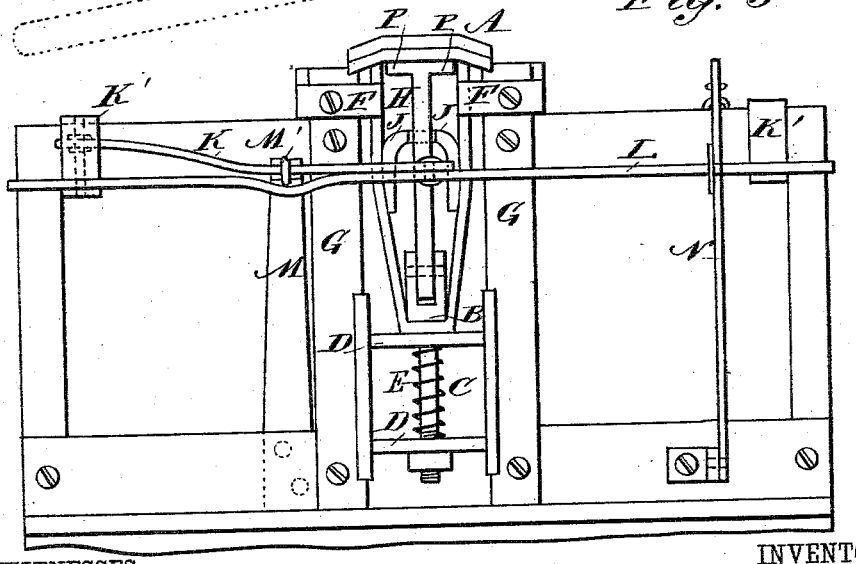


Fig. 3



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UNITED STATES PATENT OFFICE.

PATRICK RYAN, OF GUELPH, ONTARIO, CANADA, ASSIGNOR OF ONE-THIRD TO ROBERT COULSON, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 303,054, dated August 5, 1884.

Application filed May 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, PATRICK RYAN, of Guelph, Province of Ontario, Canada, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

This invention consists in the combination, with a draw-head, of a coupling-hook pivoted in the same, and a transverse bar held under the draw-head and connected with a bar having the outer end pivoted to the car and the inner end pivoted to the transverse bar, the inner end of the pivoted bar being connected with a spring for pulling or pressing it upward, and pressing the coupling-hook up into the draw-head.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of my improved car-coupling, two cars being shown coupled. Fig. 2 is an end view of the same, and Fig. 3 is a plan view of the under side of the same.

In the inner end of the draw-head A the forked front end, B, of the spindle C is held, which passes through the inner end cross-piece of the draw-head and through two plates, D, on the under side of the car, and which spindle is surrounded by a spiral spring, E, between the plates D. The draw-head A is held in place by supporting-clips F, secured to the bottom edges of beams G, between which the draw-head is located. In the fork B of the spindle C the inner end of a vertically-swinging coupling-link H is pivoted, and on the inner surfaces of the sides of the draw-head guide-lugs J are formed, between the inner edges of which the coupling-hook passes. The draw-head is provided in its top with a slot, I, for the prong of the hook H. A bar, K, has one end pivoted to a shackle or clip, K', on one side of the end of the car, and its free inner end is pivoted to a transverse bar, L, under the draw-head. A spring, M, secured to the bottom of the car, projects toward the end of the same, and its free end is connected by a link, M', with the middle of the bar K. The ends of the bar L rest against the shoulders or clips K' on the end of the car. On that end of the bar L opposite the one at which the bar K is located the free end of a lever, N, is held, which is pivoted to the bottom of the car, and extends toward the end of the same, and from the free end of the lever N a rod, O, extends upward, which is guided on the end of the car. The coupling-hook H is provided at its free end with a lug, P, on each side for supporting the link R.

The operation is as follows: If a link is held in one draw-head and the draw-heads come together, the entering link forces down the prong of the coupling-hook in the draw-head, which it enters, and then passes over the prong and catches on the same, whereby the cars are coupled automatically. As the coupling-hook is pressed down, it presses down the bar L, and when the link has passed the hook the spring M forces the bar L upward. If the cars are to be uncoupled, either end of the bar L is pressed downward, thus permitting the coupling-hook to drop, whereby the link is released. If one end of the bar L is pressed down the other end rests against the opposite shackle, K', and as soon as the bar L is released it is thrown up by the spring M. The bar L can be moved downward from the car-platform by means of the rod O. The draw-head must be open on the bottom, or provided with a longitudinal slot, to permit the coupling-hook to swing down.

The above-described car-coupling can be used on freight or passenger cars. The draw-heads are in no way fastened to the levers for uncoupling, and thus if the draw-heads come in contact or strike together they cannot break or bend the levers or like parts.

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

1. In a car-coupling, the combination, with a draw-head, of a coupling-hook pivoted in the same, a transverse bar held under the draw-head, a bar pivoted to the middle of said bar, and of a spring for pressing the bars upward, substantially as herein shown and described.

2. In a car-coupling, the combination, with the draw-head A, of the pivoted coupling-hook H in the same, the bar K, pivoted to the car, the transverse bar L, pivoted to the inner end of the bar K, the spring M on the bottom of the car, and of the link M', connecting the

free end of the lever K with the spring M, substantially as herein shown and described.

3. In a car-coupling, the combination, with the draw-head A, of the pivoted coupling-hook H in the same, the transverse bar L under the draw-head, a spring, M, for pressing it against the under side of the draw-head, the lever N, pivoted to the under side of the car, and connected with the bar L, and of the rod O, extending upward from the free end of the lever N, substantially as herein shown and described.

4. The combination, with the draw-head A, of the spindle C, having a forked end, B, within the draw-head, the coupling-hook H, pivoted in the fork B, and the spring E, surrounding the spindle C, substantially as herein shown and described.

PATRICK RYAN.

Witnesses:
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