

(No Model.)

I. HAMMOND.
CAR COUPLING.

No. 340,209.

Patented Apr. 20, 1886.

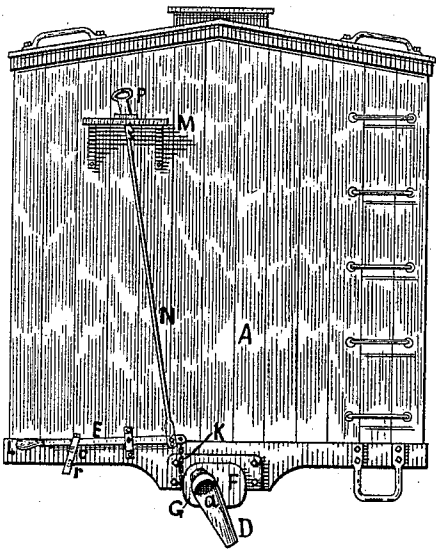


Fig. 1.

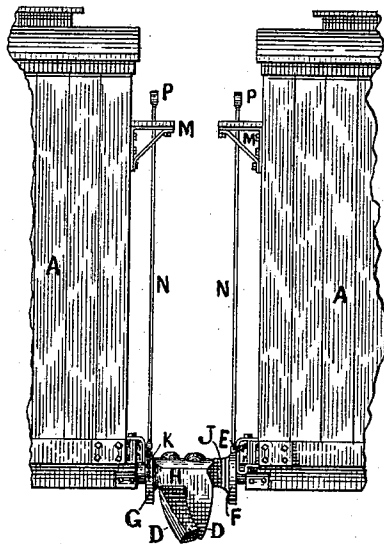


Fig. 2.

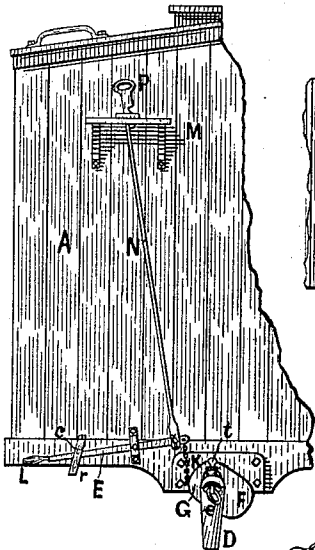


Fig. 3.

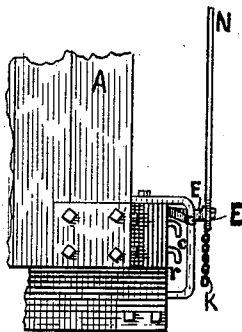


Fig. 5.

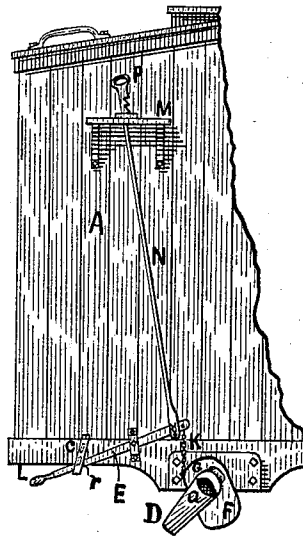


Fig. 4.

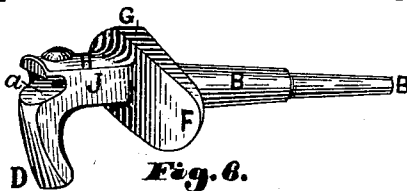


Fig. 6.

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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 340,209, dated April 20, 1886.

Application filed January 28, 1886. Serial No. 190,127. (No model.)

To all whom it may concern:

Be it known that I, IRA HAMMOND, of the city of Somerville, in the county of Middlesex and State of Massachusetts, have invented an
5 Improvement in Car-Couplings, of which the following is a specification.

The object of my invention is to provide a cheap, simple, convenient, and durable automatic coupling for cars, whereby two cars may
10 be coupled together without passing between the ends of the cars to guide the coupling-link into the mouth of the draw-bar of the opposite moving car, as now in general use for coupling freight-cars together by means of a link and
15 pin, as heretofore employed.

My invention relates to that class of couplings having a rotary oscillating shaft provided with a coupling-hook at its outward end, and held in position for coupling by the influence of a weight tending to rock the shaft in the action of coupling two such devices together, each being provided with a goose-neck hook, which projects quite a distance above the line of the rotary shaft or draw-bar, where-
20 by the said elevated hooks cannot be coupled readily with the old style of draw-bar by means of a link and pin. They are practically of little use, as their shape and construction render them unfitted for the rough usage they
25 are subjected to, especially when such very great strain is brought upon the hooks when applied to heavily-loaded freight-cars, thus rendering their construction very faulty.

My invention is designed to overcome these
35 and other objections existing in this class of couplings; and it consists in the construction, combination, and arrangement of the several parts of the car-coupling, as hereinafter more fully described, and set forth in the claims.

Figure 1 represents an end elevation of a freight-car having my invention applied thereto, showing the draw-bar hook in its normal position. Fig. 2 represents a side elevation of the end portion of two freight-cars coupled together with my invention. Fig. 3 represents an end elevation of a freight-car with the draw-bar hook secured in position to be coupled with a common draw-bar by means of a connecting-link and pin. Fig. 4 represents
45 a similar view with the draw-bar secured in position so as to prevent its coupling with the

draw-bar hook of an opposite car when its draw-bar is in position to couple. Fig. 5 represents a portion of the actuating mechanism drawn on an enlarged scale. Fig. 6 represents
50 a perspective view of the draw-bar removed, drawn on an enlarged scale.

A represents a portion of a freight-car of usual construction, and to which is applied the draw-bar at the center of the body or platform, beneath the bottom thereof, and in connection with a box containing a coiled spiral or common buffer spring, which is acted upon by the horizontal movements of the rear extension-bar, B, through the said buffer-spring in
60 either direction by pressure upon the coupling-hook D or buffer F, tending to force the bar B inward or rearward when two cars are brought together in coupling, or when the cars are pushed backward upon the track, and is likewise acted upon by the movement of the draw-bars in the opposite direction when drawing the cars forward by the said hooks D
65 when coupled together, as shown in Fig. 2, thereby relieving concussion thereof. These draw-bar extensions B are cylindrical, and the bearings thereof are such as to allow a free rotary adjustment of the said extension about its axis. The outward end portion of each draw-bar extension B is provided with a
70 buffer, F, projecting therefrom at right angles, and somewhat above and below the diameter of the said portion B, and extended to one side thereof quite a distance, forming the buffer-face F, and in the opposite direction
75 about the same distance and increased very much in thickness, and provided with a projecting hook, D, having its forward end or face beveled or rounded off on an increased
80 incline from the head to the point, extending downward on the contacting face of the hook, so that when two of these hooks come together in opposite directions in the position for coupling they will mutually deflect each other and turn the draw-bar extensions B on their longitudinal axes. These hooks when in their normal position for coupling occupy a position diagonal to the vertical and horizontal line, as shown in Fig. 1, and cross each other at about
85 a right angle when coupled together, as shown in Fig. 2. These hooks are held in this position by the influence of the weighted portion
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95
100

G of the buffer, from which the short extension-body H of the said draw-bar hook D projects, its inward contacting face, J, being formed on the axial line of the said extension B, so that the whole weight of the said hook D and its body H serves to retain the hook in its incline or diagonal position when at rest or in its normal position, thereby dispensing with or obviating the necessity of an extra weight and expense.

In coupling two cars the hooks occupy the diagonal position shown in Fig. 1, and when they strike the beveled or rounded faces thereof cause both hooks to gradually assume a vertical position, as shown in Fig. 3, until they are past each other, rotating partially the extension-bar B, when their own weight rocks them back again to the diagonal position, and they are coupled together. When the hooks pass each other, their heads strike against the connected buffers F, which forces the extension-bars B rearward and compresses their surrounding buffer-springs, thereby greatly relieving the concussion, as now in general use on common draw-bars, wherein a link and pin are used to form the coupling. Now, when it is desired to use or employ a car having my coupling attached and one having the common draw-bar to be coupled together by means of a link and pin, I actuate the said hook D into a vertical position, as shown in Fig. 3, by means of a hand-lever, E, pivoted to the end of the car, as shown, its inward end connected by a short chain, K, to the weighted side G of the said buffer portion, and its outward end extended near to the side of the car and provided with or terminating in a handle, L, which, being pressed downward, is forced inwardly or toward the end of the car and passed beneath the upper hook, c, which retains the coupling-hook D in position to receive within the mouth a thereof a coupling-link, e, through which may be inserted a coupling-pin, z, as usual, a suitable hole being provided through the head of the hook for the purpose.

If it is desired to run two cars together or back or push a car along the track so as to switch it off on a side track and leave the other car on the main track, one of the coupling-hooks is secured in the position shown in Fig. 4 by pressing the said actuating-lever down beneath the lower hook, r, so as to rotate the coupling-hook into the diagonal position or opposite angle to that when in its normal position.

To permit cars equipped with my invention to be coupled or uncoupled from the top of the car A, I provide a vertical rod, N, pivoted to the inward end of the horizontal operating-lever and extended upward nearly to the top of the car, and passing through a bracket, M, it is provided with notches, which are adapted to engage with one end of a slotted plate, so as to retain it at the height desired and permit the said coupling-hook D to be actuated as desired by grasping the handle-loop P to raise or lower the rod, as circumstances may require, and which movement will release the horizontal lever from the said retaining-hooks c or r, as the case may be, at the time the movement is about to be made.

Having thus described my invention, what I claim is—

1. The rotary adjustable draw-bar consisting of the extension B and projecting buffer F G, having the eccentric body H and hook D, projecting downwardly in diagonal position to the vertical and longitudinal lines, substantially as shown and described.
2. The combination, with the rotary draw-bar consisting of the extension B, having the projecting buffer F G and eccentric body H and hook D, of the hand-lever E, chain K, rod N, bracket M, and hooks c r, arranged, as shown and described, for operating the said coupling-hook, as set forth.

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