(No Model.)

H. T. BEAM.

CAR COUPLING.

No. 306,378. Patented Oct. 14, 1884.

Fig. 1.

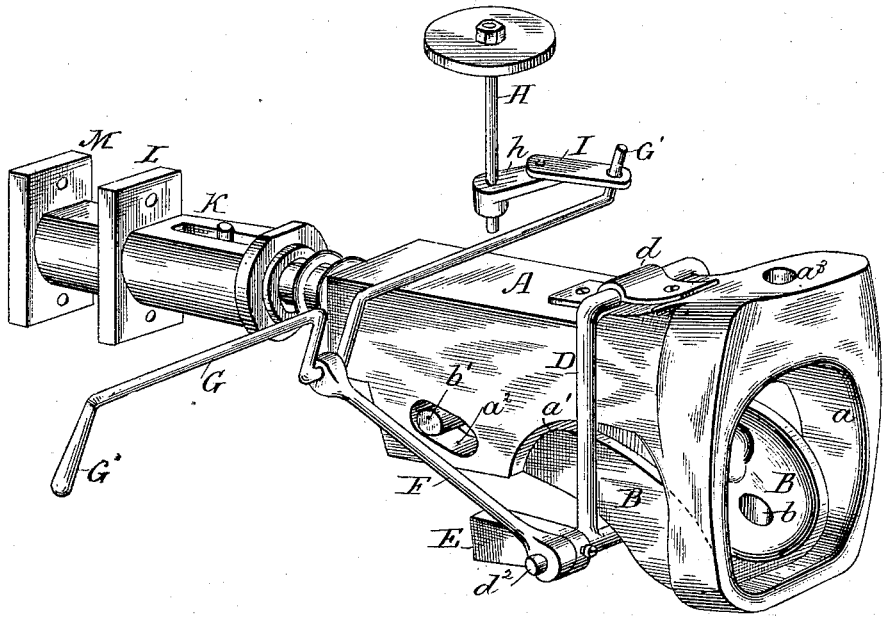

Fig. 2.

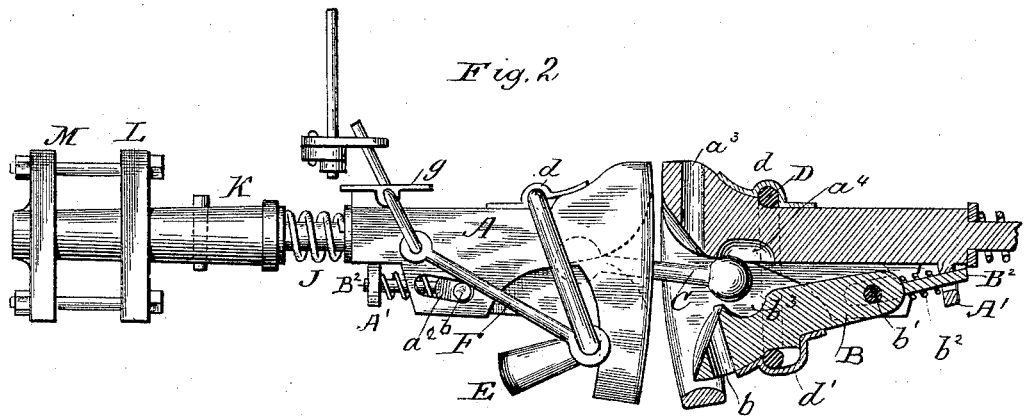

Fig. 3.

Fig. 4.

Fig. 5.

Witnesses:
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Inventor:
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by E. E. Masson
atty.

UNITED STATES PATENT OFFICE.

HENRY T. BEAM, OF ROBINSON, ILLINOIS, ASSIGNOR OF THREE-EIGHTHS TO WILLIAM C. JONES AND THOMAS ATEN, BOTH OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 306,378, dated October 14, 1884.

Application filed April 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY T. BEAM, a citizen of the United States, residing at Robinson, in the county of Crawford and State of Illinois, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a perspective of a car-coupler constructed in accordance with my invention. Fig. 2 is a side elevation of two couplers, one being in central vertical longitudinal section. Figs. 3, 4, and 5 are side views of links adapted to be used with my coupling-heads.

Like letters refer to like parts in all the figures.

A represents a draw-head, the face of which is provided with the usual beveled entrance to a compartment therein. In this case the compartment is formed by the beveled opening *a* in the head and depending flanges forming the side walls of the compartment, which flanges are cut away at *a'*, to allow the bottom wall to be formed of a separate piece from the head proper, which piece will be hereinafter described. The side flanges of the head are slotted, as at a^2, and said slots are elongated (to give the ordinary play-room for coupling freight-cars) and inclined so that their rear ends are elevated above their front ends, for a purpose hereinafter described.

B represents the separate piece employed to complete the compartment, and it constitutes the movable jaw employed in my present invention. The head and the jaw are perforated vertically, as at a^3 and *b*, respectively, in order that an ordinary coupling pin and link may be used, instead of certain devices described as forming a part of my invention. The separate piece or jaw B is provided with a transverse pin or trunnion, *b'*, adapted to project laterally into and through the slots a^2, and at its rear end the jaw is provided with a spindle or arm, B^2, which passes through a perforation in the lug A', projecting from the lower surface of the head. Between the lug and the rear end of the jaw a coiled spring, b^2, is placed upon the spindle, so as to act upon the jaw as a cushion for the same. The upper surface of the compartment in the head A is provided with an elongated recess, a^4, adapted to receive substantially one-half of a pear-shaped projection or a ball, C', formed on each end of the connecting-link C. A similar recess, though not necessarily so elongated, is formed at b^3 in the upper surface of the jaw B.

D represents a swinging link pivoted to the top of the draw-head and held in place by a strap, *d*. Said link is constructed to embrace the draw-head and to pass beneath the jaw B, where it is held in place thereon by a strap, *d'*, said strap being so bent as to form, with the bottom of the jaw, a slot to give some play to the link. At the lower end of the link D its cross-arm is extended laterally, as at d^2, and has fixed upon it a weight, E, and pivotally secured to it a rod, F, the opposite end of which is pivotally connected with a rock-shaft, G, which may be mounted either upon the head or upon any suitable frame-work of the car, or, if desired, in case of freight-cars, mounted upon the end wall of the same and retained in a metal strap or bearing, *g*. The outer end of the lever is provided with a handle, G', and the opposite end with a similar handle or arm, to which, in this instance, is pivotally connected an upright shaft, H, having a rock-arm, *h*, by means of a link, I, so that the link F may be operated from the ground, at either side of the car, by means of the arms or handles G, or from the platform, or from the top of the car, by means of the shaft H.

A suitable buffer-spring, J, and draw-head socket, K, and devices, L M, are shown for attaching the draw-head to the car; but these devices are not herein claimed, as some of the details of their construction are made the subject-matter of a separate application filed herewith.

This being the construction, the operation is as follows: When the link is drawn to the rear through the medium of the devices hereinbefore described, the front portion of the jaw B becomes drawn downwardly, or opened so as to permit the withdrawal of the link and its head from the coupler. When the withdrawing force is removed from the link, the gravity of the weight and the action of the spring b^2 upon the jaw-stem cause the link D to swing to the front, carrying with it the

jaw, in such manner as to close the same. Therefore the natural or normal position of the jaw would be closed, as shown at the left of Fig. 2, the gravity of the weight E would cause it to hang directly under its point of suspension, tilt the link D forward and close the jaw, causing the ball C′ to be grasped by the same between it and the recess a^4, formed in the under surface of the head. This latter recess being elongated, and the jaw B being cushioned by the spring b^2, longitudinal play of the link C is permitted. The projections at the ends of the links shown in Figs. 3 and 5, being pear-shaped, with the point outward, readily force the jaws apart while entering the draw-head. The link shown in Fig. 4 has an eye at one end to receive the coupling-pin of an ordinary draw-head. The link shown in Fig. 5 is formed of two parts hinged together at *c*, and is suitable for coupling draw-heads of different height.

Having described my invention and its operation, what I claim as new, and desire to secure by Letters Patent, is—

1. The head provided with the beveled entrance *a* and the cut-away flanges *a′*, slotted at a^2, as described, in combination with a jaw pivotally connected with the head, and provided with trunnions adapted to ride in the slots, said jaw forming the lower wall of the link-receiving compartment, substantially as shown and described.

2. The combination of the head A, the jaw B, and the link D, pivotally secured to the head and to the jaw, substantially as shown and described.

3. The combination of the head A, the jaw B, the link D, and the weight E, secured to the lower end of the link, substantially as shown and described.

4. The combination of the head A, the jaw B, provided with the trunnions *b′*, and with the spindle B^2, the lug A′, to receive said spindle, and the spring b^2, substantially as shown and described.

5. The combination of the head A, provided with elongated recess a^4, with the jaw B, provided with the recess b^3, cushioning-spring b^2, and the link D, embracing the head and the jaw, and pivoted to each, and with means for operating the link, substantially as shown and described.

6. The combination of the rock-shaft G, provided with the arms or handles G′ and shaft H, connected therewith, as described, the rod F and the link D, the head A, and jaw B, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY T. BEAM.

Witnesses:
E. E. MASSON,
L. C. HILLS.