(No Model.)

W. H. CASTLE.

CAR COUPLING.

No. 512,242. Patented Jan. 2, 1894.

Fig. 1.

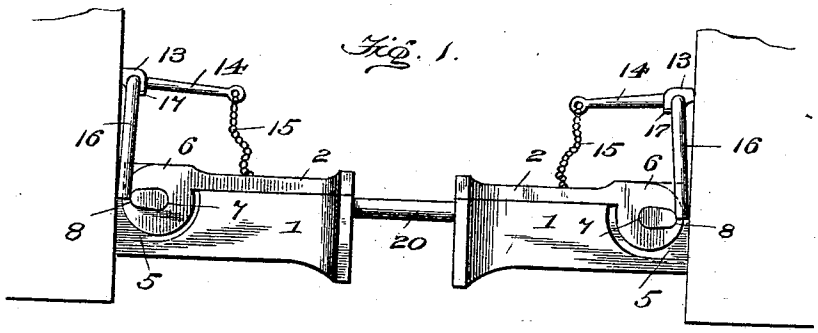

Fig. 2.

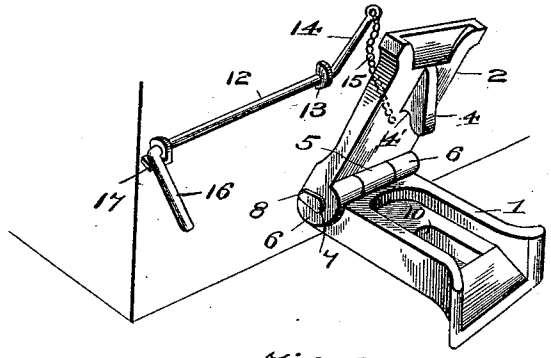

Fig. 3.

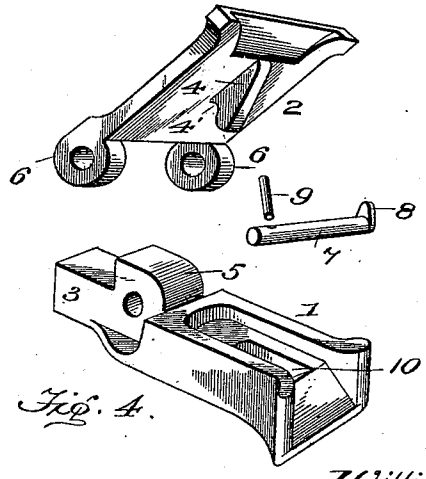

Fig. 4.

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WILLIAM H. CASTLE, OF NORTH EAST, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE W. COLE, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 512,242, dated January 2, 1894.

Application filed September 1, 1893. Serial No. 484,568. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CASTLE, a citizen of the United States, residing at North East, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to produce a car coupler of practically two pieces which are so constructed as to be used in connection with an ordinary link to effect the automatic coupling of two cars, and to combine with the coupling a means adapted to be adjusted by an operator standing outside of the line of the cars so as to effect the uncoupling thereof without requiring the person to pass between the cars.

In the preferred embodiment of my invention, I divide the draw head longitudinally on a horizontal line and thus provide upper and lower members, the lower member being rigid with the draw bar and the upper member being pivotally connected at its heel to the lower member of the draw bar so that its weight will normally tend to cause said upper member to gravitate toward and rest upon the lower member with which it aligns and thus provide a close draw head resembling the ordinary coupling now in use. The upper gravity member carries a hook or stud which is rigid or integral therewith, and this stud or hook lies in the path of the link on an approaching car so that when the link enters the draw head chamber its forward end strikes the stud or hook and forces the latter, and with it the upper pivoted member of the draw head, upward a sufficient distance for the link to pass beneath the stud and well into the drawhead chamber after which the weight of the upper drawhead member causes the latter, and the stud or hook, to fall back into their normal positions, and thus the hook or stud enters the link and engages therewith to automatically couple the cars. With this sectional drawhead I combine a horizontal rock shaft that extends upwardly to one side of the car, the inner end of said shaft having an arm connected by a chain, or other medium, with the pivoted gravity drawhead member, while the outer end of said shaft has a handle that is adapted to repose upon a stud on one of the rock shaft bearings when it is desired to maintain the pivoted drawhead member in an elevated position. It will be noted that the draw bar and the lower member of the drawhead can be cast in a single piece of metal, and that the upper member of the drawhead and its stud or hook can likewise be made of a single piece of metal, and that the two castings can be assembled and pivoted together to produce a drawhead and bar composed of only two pieces of metal, thus producing a coupling at a very low cost which can be used in connection with an ordinary link and a rock shaft to automatically couple two cars and enable them to be uncoupled from the side of the cars.

I have illustrated the preferred embodiment of my invention in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side elevation showing two draw heads coupled by an ordinary link. Fig. 2 is a perspective view of one of the drawheads, showing the pivoted member raised. Figs. 3 and 4 are detail perspective views of the upper and lower members, respectively, of the drawhead.

Like numerals of reference denote corresponding parts in the several figures of the drawings.

My improved drawhead is divided longitudinally in a horizontal line to produce two members, 1, 2, the lower member 1, and the draw bar 3 being cast or otherwise wrought in a single piece of metal, while the upper member 2 and link-hook or stud 4 is likewise cast or wrought of another piece of metal. The members 1 and 2 are so shaped and formed with the side flanges and flaring ends that when the top member rests upon the bottom member a drawhead is produced which resembles the common type of drawhead familiar to those skilled in the art of car equipment and construction. At the rear end of the lower member 1 is provided a perforated integral lug 5, and at the heel of the upper member 2 are the spaced perforated lugs 6, 6, which are

adapted to fit on opposite sides of the lug 5, so that the openings in the lugs 5, 6, 6, will align to receive the pivoted bolt or arbor 7, one end of the latter having a radial lug 8 and the other end is perforated to receive the transverse key 9, said lug and key serving to prevent displacement of the bolt 7 and the separation of the members 1, 2. This construction affords a strong, secure pivotal connection between the two members of the draw head, but it is evident that the particular means adopted for pivotally connecting the members together can be varied within certain limits without departing from the spirit or sacrificing the advantages of my invention. The link-stud or hook 4 lies at a suitable distance from the solid free end of the upper member, and this link-hook has a curved or beveled front face or edge and a recess 4′ in its rear edge or face. In the lower stationary member of the drawhead is formed a vertical slot 10, which extends longitudinally a suitable distance and has the beveled or curved ends, and in this slot 10 normally fits the pendent link-hook 4 of the upper pivoted member 2. A rock shaft 12 is journaled in suitable bearings 13 on the platform or front of the car, and this shaft extends horizontally from the draw head or beyond the sides of the car. The inner end of this rock shaft carries an arm 14 which is connected by a chain 15 to the upper draw head member 2 at a point in advance of the pivot 7 thereof, and at the outer end of this shaft is a handle 16 which is easily accessible to an operator standing alongside of the track. One of the bearings 13 for the rock shaft has a lateral stud or rest 17 and the rock shaft is capable of a limited endwise movement in its bearings so that the handle 16 can be made to rest upon the stud 17 and maintain the pivoted member 2 and the link stud 4 in an elevated position as shown by Fig. 2. When a link 20 on an approaching car enters the draw head chamber, its front end strikes the curved or inclined face of the link stud 4, thus raising the stud and the pivoted member 2 sufficiently for the link to pass beneath the stud, after which the weight of the section 2 causes it to drop with the stud 4 so that the latter enters the link 20, thus coupling the cars automatically. The end bar of the link fits in the recess of the pendent link-hook 4 and it remains engaged therewith throughout all vertical and lateral movements of the cars when they are in motion.

To uncouple the cars, it is only necessary for the attendant to raise the handle 16 which turns the shaft and arm 14 to pull the section 2 and stud 4 upward and cause the latter to free itself from the link.

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

A car coupling consisting of a lower member provided with a drawhead and the lug 5 in rear of said drawhead, the upper member provided with lugs 6 at its rear end which fit on opposite sides of the lug 5, a pivotal bolt passing through said lugs 5, 6, to pivotally connect said upper and lower members and having a key, the pendent integral lug 4 on the upper member having the recessed rear face to receive the end bar of the coupling link, and means for lifting the upper member, substantially as described.

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

WILLIAM H. CASTLE.

Witnesses:
FRED W. FRENCH,
C. J. WHEELER.