H. C. BUHOUP.

CAR COUPLING.

APPLICATION FILED JULY 21, 1915.

**1,175,232.** Patented Mar. 14, 1916.

Fig. 1.

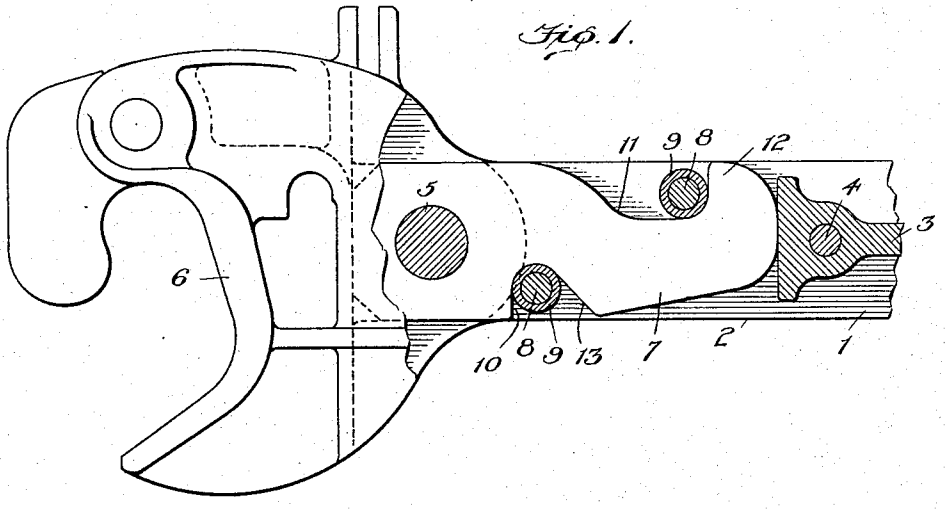
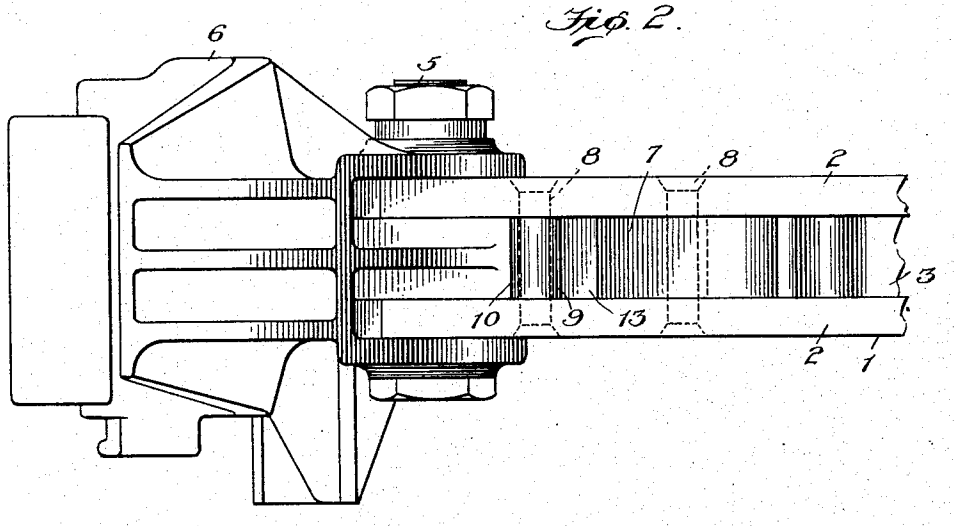



Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

1,175,232. Specification of Letters Patent. Patented Mar. 14, 1916.

Application filed July 21, 1915. Serial No. 41,061.

*To all whom it may concern:*

Be it known that I, HARRY C. BUHOUP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Couplings; 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.

My invention relates to the construction of car couplers and more especially to those couplers in which the coupler head is detachably secured to the coupler stem for the purpose of permitting the ready substitution of a new coupler head for a worn or broken one.

The primary object of the invention is to provide a construction in which the coupler head and stem are detachably connected in a simple and efficient manner affording great security against the parts becoming disconnected when the device is in service. Generally stated, this object is accomplished by constructing the car coupler with a coupler stem which is formed with a bifurcated forward end and by mounting thereon a coupler head having a rearwardly extending hooked portion that projects into said bifurcation, the coupler stem having upon it a plurality of spaced devices which engage the opposite faces of the rearwardly extending portion of the coupler head such rearwardly extending portion being insertible between the said spaced devices upon a turning movement of the head with respect to the stem, and such rearwardly extending portion of the head having hooked engagement with one of the said spaced devices to thereby prevent forward longitudinal movement of the coupler head with respect to the stem. A bolt or key passing vertically through the coupler head and stem serves as a means for preventing the head from turning with respect to the stem so as to become disengaged from said stem.

In the drawings illustrating the preferred embodiment of my invention, Figure 1 is a plan view of a car coupler constructed in accordance with my invention, portions of the head and stem being broken away; and Fig. 2 is a side elevation of the construction illustrated in Fig. 1.

As shown in the drawings, the stem 1 of the coupler is preferably bifurcated at its forward end, being for this purpose conveniently formed with upper and lower plates or branches 2, 2 which are separated by an interposed spacing member 3 that is secured between said plates by rivets 4. At their forward ends each of the plates 2 is provided with an appropriate opening to permit the passage of a pin or bolt 5 that also passes through corresponding openings in the upper and lower walls of the coupler head 6. Between the forward end of the spacing member 3 and the outer extremities of the plates 2, the coupler stem is provided with a plurality of locking means which are adapted to respectively engage opposite sides of a rearward extension 7 with which the coupler head 6 is provided. These means occupy a spaced relation to each other both longitudinally and transversely of the stem of the coupler, and preferably comprise vertically extending rivets 8 that connect the plates 2 of the stem, each rivet being surrounded by a cylindrical thimble 9 which bears at its ends against the said plates and thus serves to maintain them in proper spaced relation.

The rearwardly extending portion 7 of the coupler head is preferably equal in height to the distance between the opposed faces of the plates or branches 2 of the coupler stem. It also preferably extends rearwardly for a distance sufficient to bring its end in contact with the forward faces of the spacer member 3 when the parts are in assembled relation, being thus availed of to transmit a portion of the buffing strains to the coupler stem through the spacer member thereof. The opposite lateral faces of the rearwardly extending portion 7 of the coupler head are formed with recesses 10 and 11, respectively, for the reception of the corresponding rivets 8 and spacing sleeves 9, the rear end of the extension 7 being formed with a hooked portion 12 which is adapted to extend behind and have overlapping engagement with the parts 8 and 9 which project through the recess 11. The forward wall of the recess 10 and the rear wall of the recess 11 preferably extend in a transverse direction in order to most effectively resist any force tending to cause the coupler stem 1 and coupler head 6 to

move longitudinally with respect to each other; but the rear wall of the recess 10 is inclined rearwardly, as at 13, in order to permit the coupler head 6 to be assembled upon and disconnected from the coupler stem 3 by a turning movement of the head with respect to the stem. In assembling the structure the coupler head 6 is turned with respect to the coupler stem and the rearwardly extending portion 7 of said head is inserted between the rivets and spacing sleeves, 8 and 9, respectively, the coupler head being then rotated until the rear end 12 of the coupler extension 7 comes into hooked relation with the adjacent rivet 8 and the spacing sleeves 9 and rivets 8 have entered the corresponding recesses 10, or 11, as the case may be, of the member 7. The bolt 5 is then passed through the corresponding apertures in the coupler head 6 and the apertures at the forward ends of the plates or branches 2 of the coupler stem 1. As thus assembled the coupler head and coupler stem are rigidly connected. To remove the coupler head it is only necessary to withdraw the pin 5 and then rotate the head 6 until its rearwardly extending portion 7 may be withdrawn from between the members 8 and 9. As, after the removal of the bolt 5, the coupler head 6 cannot be disconnected from the stem 1 by a movement in the direction of length of the coupler stem, it will be perceived that, even should the bolt 5 be broken while the coupler is in service, the coupler head 6 would still remain operatively connected to the stem 1 of the coupler.

I claim:

1. In a car coupler, a coupler stem, a coupler head detachably mounted on said stem and having a rearwardly extending portion, and means carried by the stem for engaging said rearwardly extending portion of the head to prevent said head from being detached from the stem by a rectilinear movement, said means having engagement with the opposite exterior lateral faces of the said rearwardly extending portion of the head.

2. In a car coupler, a coupler stem, a coupler head having a rearwardly extending portion, and means carried by said stem and engaging the exterior lateral faces of said rearwardly extending portion of the head for preventing longitudinal movement of said head with respect to said stem, said rearwardly extending portion of the head being adapted to be disengaged from said means by a turning movement of said head with respect to said stem about an axis extending at an angle to the longitudinal axis of said stem.

3. In a car coupler, a coupler stem, a coupler head, and means for detachably connecting said stem and head, said means being adapted to prevent relative longitudinal movement of said head and stem and involving interfitting parts respectively carried by said stem and head, said interfitting parts being adapted to prevent lateral rotation of said head with respect to said stem in one direction and being disengaged from each other by a lateral turning movement of said head with respect to said stem in the opposite direction, said turning movement being executed about an axis extending at an angle to the longitudinal axis of said stem.

4. In a car coupler, a coupler stem having a bifurcated end, a coupler head having a rearwardly extending hooked portion that projects into said bifurcation, and locking means involving a plurality of spaced devices which engage the opposite faces of said rearwardly extending portion of the coupler head, said rearwardly extending portion of the coupler head being adapted to pass between said spaced devices to thereby permit the head and stem to be assembled or disassembled by a turning movement of said head with respect to said stem, and said rearwardly extending portion of the head having hooked engagement with one of said spaced devices to thereby prevent longitudinal movement of said head with respect to said stem.

5. In a car coupler, a bifurcated coupler stem having upper and lower branches, a plurality of vertically extending devices connecting said branches, said connecting devices being in spaced relation, a coupler head having a rearwardly extending portion which projects between and engages a plurality of said connecting devices to thereby constitute means for preventing longitudinal movement of said head with respect to said stem, and means for preventing the disengagement of said rearwardly projecting portion of the head from said connecting devices.

6. In a car coupler, a coupler stem, a coupler head having a rearwardly extending hooked portion, a bolt connecting said head and stem, and a plurality of devices carried by the said stem for engaging the rearwardly extending portion of said head, said devices being spaced from each other both laterally and longitudinally and serving to prevent longitudinal movement of said head with respect to the stem, and said hooked portion extending between said spaced devices carried by said stem.

7. In a car coupler, a coupler stem, a coupler head, and means for detachably connecting said stem and head, said means involving a bolt passing through said head and stem, a rearwardly extending hooked member rigidly mounted on said head, and a plurality of devices carried by said stem rearwardly of said bolt and arranged in spaced relation both longitudinally and lat-

erally and engaging the corresponding opposite exterior lateral faces of said hooked member.

8. In a car coupler, a bifurcated coupler stem having upper and lower branches, a spacer member interposed between said branches, rivets connecting said branches in advance of said spacer member, a coupler head having a rearwardly extending portion formed with laterally open recesses for respectively receiving said rivets, and a bolt passing through said head and stem in advance of said rivets.

In testimony whereof I affix my signature.

HARRY C. BUHOUP.