

No. 759,331.

PATENTED MAY 10, 1904.

A. E. WAGGONER.
CAR COUPLING.

APPLICATION FILED JULY 8, 1903.

NO MODEL.

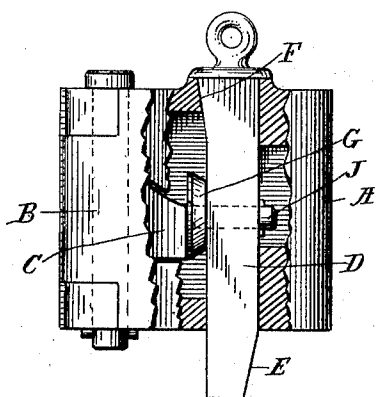


Fig. 1.

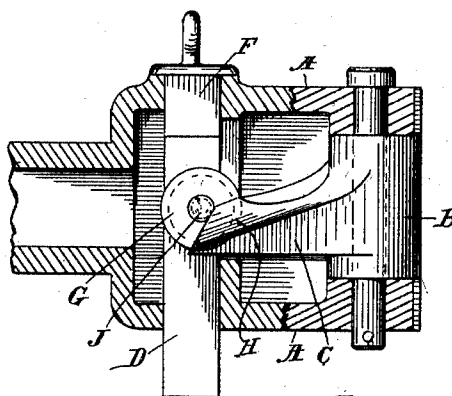


Fig. 2.

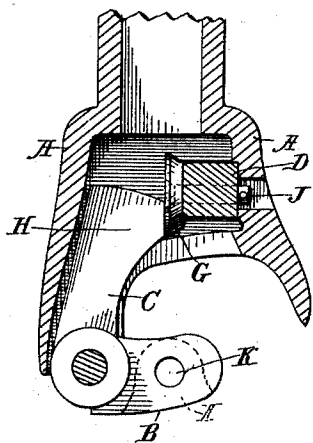


Fig. 3.

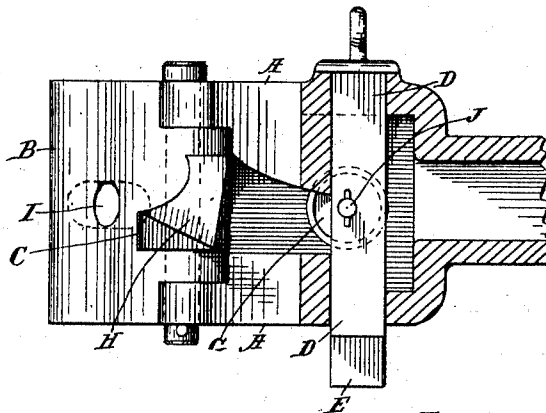


Fig. 4.

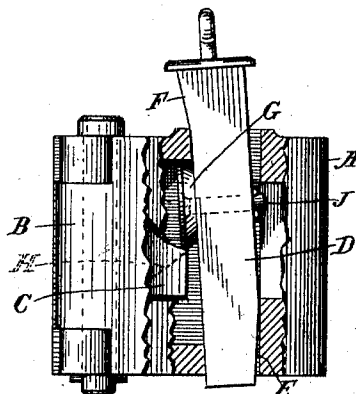


Fig. 5.

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ALBERT E. WAGGONER, OF GRAND RAPIDS, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 759,331, dated May 10, 1904.

Application filed July 8, 1903. Serial No. 164,745. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. WAGGONER, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in 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.

My invention relates to improvements in car-couplers, and more particularly to the style known as the "Janney" type; and its object is to provide the same with means for preventing accidental uncoupling, to provide improved means for automatically opening and closing the coupler, to provide a more durable device, and to provide the same with certain new and useful features hereinafter more fully described, and particularly pointed out in the claims.

My invention consists, essentially, in combining with a car-coupler of the Janney type having a movable stop, pin, or latch to hold the pivoted interlocking member or knuckle, a rotary member attached to the stop and at one side of its axis engaging the knuckle-arm, whereby the said member is rotated whenever there is a tendency to accidentally move the stop and release the knuckle, and also in providing for a lateral movement of the stop and an inclined surface to the knuckle, whereby when the stop is raised the rotary member will engage the incline and turn the knuckle outward to open the device, and when the device is automatically closed in coupling the incline on the arm will engage the said rotary member, and thus move the stop to automatically close the device, and in certain novel features of construction and arrangement, as will hereinafter more fully appear by reference to the accompanying drawings, in which—

Figure 1 is a front elevation of one form of car-coupler embodying my invention with portions broken away to show the construction and arranged in closed position; Fig. 2, a side elevation of the same with the draw-head broken away to show the internal parts in elevation; Fig. 3, a plan view of the same with the draw-head and stop in horizontal section;

Fig. 4, a side elevation of the device with a part of the draw-head broken away and with the knuckle in open position; and Fig. 5, a front elevation similar to Fig. 1, showing the stop in raised position and inclined laterally to engage the disk with the arm to open the knuckle.

Like letters refer to like parts in all of the figures.

A represents the draw-head of a Janney type of coupler; B, the pivoted interlocking member or knuckle of the same; C, the rearwardly-projecting integral arm of the knuckle, which arm is provided with a vertical forward side to engage the rotary member on the stop and to be held thereby and also provided on its upper side with a laterally-inclined surface H, whereby the end of the arm operates as a wedge to run under the rotary member of the stop, which member is preferably a wheel or disk G, journaled on a suitable bearing J on the vertically-movable stop D, which stop is in the form of a square pin having its lower end cut away at an incline, as at E, on the side opposite the disk G and its upper end laterally enlarged above said disk, as at F, and inserted in a suitable vertical opening or recess in the draw-head, in which opening it is closely fitted when in lowered position, and by virtue of the clearance due to the described features E and F said stop when raised can be moved laterally, as shown in Fig. 5. Said clearance also tends to prevent the stop from sticking or binding in said opening. When the stop is thus raised and moved laterally, the disk G will engage the upper and rearwardly-inclined surface H of the arm C, whereupon the weight of the stop F will operate to traverse the wheel upon said incline and throw the arm forward and outward, and thus automatically open the device in position for coupling.

When the device is closed, as shown in Figs. 1, 2, and 3, the vertical side of the end of the arm H engages the side of the disk G at one side of the axis, and any tendency to lift the stop D will rotate this disk upon its axis instead of lifting the stop, and thus prevent accidental release of the coupling. Furthermore, by this construction the disk G by ro-

tation upon its axis presents the various portions of its surface in succession to the end of the arm, and thus the wear upon the device is distributed, the formation of a cavity in the stop prevented, and the device rendered more durable. When the stop F is lifted by any suitable means (not shown) whereby it is lifted diagonally upward and toward the knuckle-arm, it tends to assume the position shown in Fig. 5. The wheel G engages the inner surface of the head to limit the upward movement of the stop, and as the wheel traverses the incline H and opens the knuckle the stop D again assumes its lower position. As the knuckle is closed, as in coupling cars, the incline H on the arm C will engage the under side of and rotate the disk G and raise the stop D, and passing under the disk the stop and disk will drop to place and hold the arm C and knuckle B securely in closed position.

It will be observed that the stop D is clear of the path of the arm C and that the disk projects over the edge of the stop and within said path to engage the arm and also that a portion of the head A extends down alongside the stop D, forming a vertical abutment engaged and traversed by the disk, whereby the disk is partially supported against the pressure of the arm.

I is a recess wholly within the forward side of the knuckle and adapted to receive a link, and K is a vertical opening to receive a pin to hold the link.

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

1. In a car-coupler, in combination with a pivoted interlocking member and a stop to hold said member from turning, a rotative member on the stop and engaging and holding the interlocking member.

2. In a car-coupler, in combination with a pivoted interlocking member having a rigid arm, said arm having an upper inclined surface, a vertically and laterally movable stop, and a rotative member attached to the stop and adapted to engage the inclined upper surface of the arm and open the knuckle.

3. In a car-coupler, the combination of a pivoted arm integral with the interlocking member, a vertically-movable stop outside the path of the arm, and a disk journaled on the stop, and projecting within the path of the arm.

4. In a car-coupler, the combination of a pivoted interlocking member, a rotative disk to engage and hold said member, and a vertically-movable bearing for the disk.

5. In a car-coupler, the combination of a pivoted arm integral with the interlocking member, and having an inclined surface to engage the disk, and a rotative disk, mounted on a movable bearing and adapted to traverse the incline, and to be interposed in the path of the arm.

6. In a car-coupler, the combination of a pivoted interlocking member having a rigid arm, a vertically-movable stop, and a disk journaled on the stop and adapted to engage and hold the arm.

7. In a car-coupler, the combination of a pivoted interlocking member, a rigid arm integral with said member and having a vertical side, a vertically-movable stop and a rotative disk journaled on the stop and engaging the vertical side of the arm to hold the same.

8. In a car-coupler, the combination of a pivoted interlocking member, a rigid arm on said member, and having a vertical forward side and an inclined upper surface, a vertically and laterally movable stop, and a disk journaled on the stop and alternately engaging the forward side and upper surface of the arm.

9. In a car-coupler, the combination of a pivoted interlocking member, a rigid arm integral with said member, and having a vertically-forward side and an inclined upper side, a vertically-movable stop having a reduced and inclined lower end and an enlarged and inclined upper end, a draw-head having a recess to receive the stop, and a rotative disk mounted on the stop and adapted to engage and hold the arm when the stop is lowered and to engage and traverse the incline when the stop is raised.

10. In a car-coupler, a pivoted arm integral with the interlocking member, a vertically-movable stop adjacent to the path of the arm, a rotary disk journaled on the stop and projecting within the path of the arm, and a draw-head having a recess to receive the stop, and a vertical abutment engaged by the disk.

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

ALBERT E. WAGGONER.

Witnesses:

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GEORGIANA CHACE.