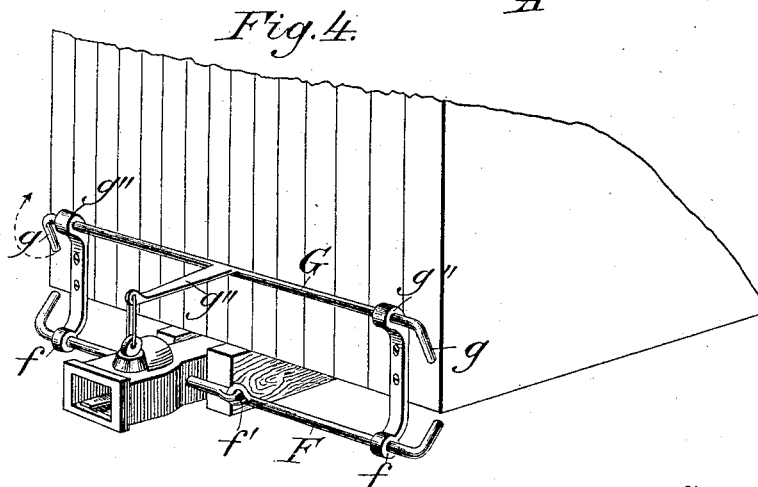
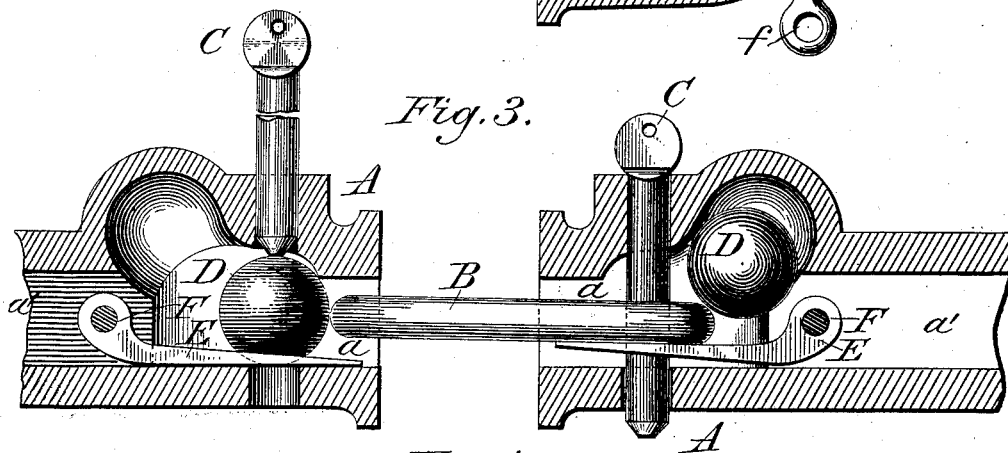
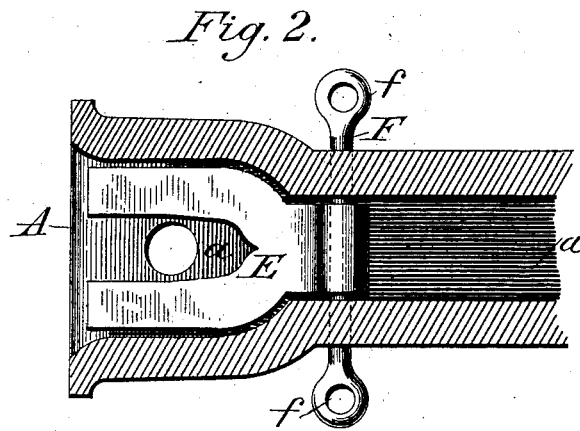
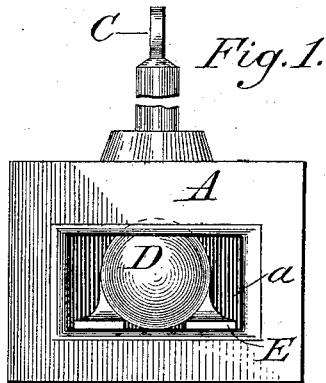


(No Model.)

R. JONES.
CAR COUPLING.

No. 342,517.

Patented May 25, 1886.



Witnesses
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UNITED STATES PATENT OFFICE.

REUBEN JONES, OF ATLANTA, GEORGIA, ASSIGNOR OF THREE-FOURTHS TO
CHARLES A. SINDALL, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 342,517, dated May 25, 1886.

Application filed February 6, 1886. Serial No. 191,068. (No model.)

To all whom it may concern:

Be it known that I, REUBEN JONES, a citizen of the United States of America, residing at Atlanta, in the county of Fulton and State of Georgia, 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of draw-gear in which the draw-heads of railway-cars are coupled by means of a pin in each draw-head and a link connecting the two pins; and the objects of my improvements are to facilitate the coupling of cars and lessen the danger to the person doing it. The objection to this form of draw-gear, as heretofore used, is that to couple cars a person must go between them, thus endangering his life and limbs; and for the same reason the process is slow and uncertain.

The object of my invention is, therefore, to so improve the details of construction as to form a patentable improvement on this class of draw-gear as heretofore constructed.

My invention therefore consists in the means by which I operate the link and pins without going between the cars, as hereinafter fully described, and then specifically stated in the claims.

In the accompanying drawings, Figure 1 is a front view of one draw-head with its mechanism in the position shown in the left-hand draw-head in Fig. 3. Fig. 2 is a horizontal section, Y to Z, Fig. 1, but not showing the pin or ball. Fig. 3 is a longitudinal vertical section of the proximate ends of two draw-heads and their internal mechanism. Fig. 4 is a perspective of a portion of a car, showing the draw-head and the external mechanism.

Similar letters refer to similar parts in the several views.

In these figures, A represents a draw-head, B the link, and C the pin. In the rear of the

opening *a* is a smaller opening, *a'*, which will admit neither the link nor the ball D. In this opening is hinged the link-lifter E by being securely fastened to the rocking shaft F, which passes through the neck of the draw-head in the rear of the opening for the link. The link-lifter is forked, as shown in Fig. 2, to allow it to pass the pin and extend to a point near the mouth of the draw-head.

In the interior of the draw-head is a ball, D, which is somewhat larger than the smaller dimension of the opening of the draw-head at its mouth. To accommodate this ball, the interior of the draw-head is enlarged at the top sufficiently to allow the ball to pass entirely out of the way of the link after it has entered the draw-head, and to roll by gravitation when the link is withdrawn to a position directly under the pin. This movement of the ball is facilitated by the link-lifter E being made thinner at its outer end and the inner edges of the forked arms being made to diverge, thus forming an inclined plane, on which the ball will roll to the position in which it will support the pin.

The rocking shaft F is sufficiently long to extend nearly or quite to one or both sides of the car, preferably to both sides, and having within easy and safe reaching distance of the side of the car a bent end or other handle, by which the link-lifter may be raised from its position in the bottom of the draw-head. This rocking shaft is provided with supporting-bearings *f f* near its outer ends, and joints *f' f'* on either side of and near the draw-head to allow the longitudinal movement of the draw-head without bending or springing the rocking shaft. Above and parallel with the rocking shaft F is another rocking shaft, G, which is shown in Fig. 4, and which is provided at its ends with handles *g g*, by which it may be actuated. At a point on this shaft directly over the draw-head is an arm, *g'*, extending to a point over the pin D, to which it is connected by a chain or rod, but preferably by a chain. This shaft is supported and attached to the end of the car by bearings *g'' g''*.

The operation of this device will be readily understood by reference to Figs. 3 and 4.

The pin, after having been partially withdrawn by turning the handle *g* in the direction indicated by the arrow, is supported by the ball, as shown, in the left-hand draw-head, Fig. 3, the ball coming to that position by the means before described. In the other draw-head is the link, on the inner end of which rests the ball, thus keeping it in contact with the link-lifter. As the draw-heads approach each other the operator, standing at the side of the car, lifts the link by means of the link-lifter and its connections until its outer end will enter the opposite draw-head, as shown in Fig. 3. One ball resting on the rear end of the link, the point of contact being an inclined plane, will assist the link in keeping its position in forcing back the ball that supports the pin in the opposite draw-head, thus allowing the pin to drop, which completes the process of coupling the cars. To uncouple them again, it is only necessary to turn, as described, the handle *g* on the car from which it is desired to release the link.

The rocking shaft *G* and its connections for raising the link are not essential to the operation of the other devices herein described, as the pin may be previously withdrawn by hand; or the ball *B* might be dispensed with and the pin be controlled entirely by the rocking shaft *G* and its connections; or both the rocking shaft and ball may be dispensed with and the pin be set in an inclined position in the hole, so that the friction caused by its weight and leverage would sustain it in the desired position until the concussion of the draw-heads should relieve it of that friction and allow it to drop; but the preferred way is to use both, the ball especially being of very great advantage to the proper operation of other elements of the invention.

I do not claim, broadly, a device consisting of a link-lifter, rocking shaft, and handle or lever at the side of the car, as I am aware that various devices have been employed to raise the link in coupling cars, some of them being placed in the interior of the draw-head, but in

front of the pin, and operated by a shaft extending to the side of the car. My device is different from any of these, is less likely to get out of order by use, and more effectual in its operation, inasmuch as it is hinged in the neck of the draw-head, by reason of which that portion is not liable to injury by contact with the link, and as it extends thence nearly to the balancing-point of the link, the rear end of which being held firmly on the lifter, the link is lifted bodily and the ball assists it in resisting the effect of any accidental contact with the draw-head or other obstruction.

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

1. In the draw-gear of a railway-car, the combination of the draw-head, pin, and link with the link-lifter formed of a single piece pivoted in the neck of the draw-head and forked at its outer end to permit its extension beyond the pin, and the rocking shaft by which it is operated, substantially as described.

2. In the draw-gear of a railway-car, the combination of a link-lifter recessed and hinged in the neck of the draw-head and forked to allow its extension to a point beyond the pin, and having its upper surface inclined toward the mouth of the draw-head, and a ball arranged to hold down the rear end of the link, and on the withdrawal of the link to roll to a point directly under and supporting the pin, substantially as shown.

3. In the draw-gear of a railway-car, the combination of a draw-head and pin with the rocking shaft *G*, having arm *g'*, connected by chain or rod with the pin, and at its ends handles or levers to actuate it, a link-lifter, and a ball arranged to roll under and support the pin, substantially as set forth.

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

REUBEN JONES.

Witnesses:

L. B. V. WOOLLEY,
GEO. S. LOWNDES.