(No Model.)

F. WALSH.

CAR COUPLING.

No. 458,649. Patented Sept. 1, 1891.

Fig. 1

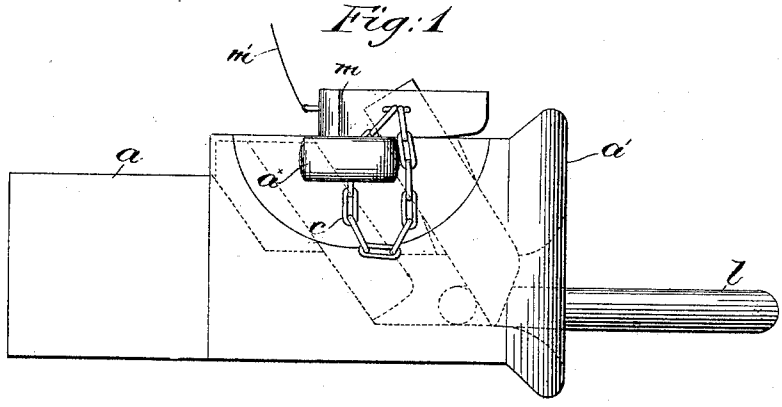


Fig. 2.

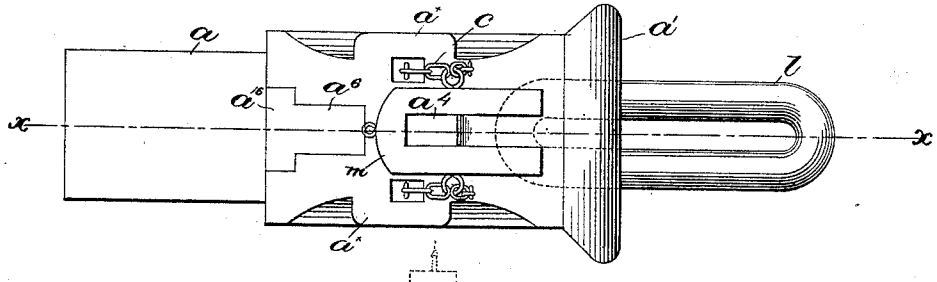
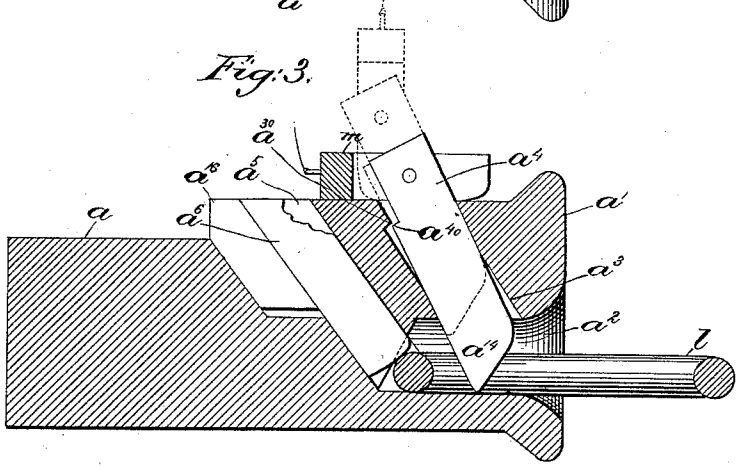


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANK WALSH, OF BOSTON, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 458,649, dated September 1, 1891.

Application filed December 9, 1890. Serial No. 374,062. (No model.)

To all whom it may concern:

Be it known that I, FRANK WALSH, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Car-Couplings, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide an improved automatic link-and-pin car-coupling; and it consists, essentially, in the combination, with the usual draw-bar and head containing the link-receiving chamber, of an oblique passage leading to said chamber and a coupling-pin in the said passage; also, in the combination, with the draw-head having a link-receiving chamber, of an oblique passage leading to said chamber near its rear end, and a supporting-bar therein.

Other features of my invention will be hereinafter described, and pointed out in the claims.

Figure 1 shows in side elevation a car-coupling embodying this invention; Fig. 2, a top view of the same; and Fig. 3, a vertical longitudinal section taken on the dotted line $x\,x$, Fig. 2.

Referring to the drawings, the draw-bar a and draw-head a' are and may be of usual construction. The draw-head a' has the usual link-receiving chamber a^2, the rear wall of which is made to incline forward at its top, as shown in Fig. 3, for a purpose to be hereinafter described. The draw-head a' at its upper side is provided with an oblique passage a^3, leading to said link-receiving chamber, as shown, in which is placed the coupling-pin a^4, the bottom or under side a^{14} of said pin preferably resting upon the bottom of the chamber and presenting to the entrance thereto an inclined face, as shown, against which the approaching link l of an approaching coupling may strike to lift the said pin and enter the chamber, the pin dropping by gravity behind the link, as shown by dotted lines, Fig. 1, completing the coupling. The oblique passage a^3, as represented, is beveled or made flaring top and bottom at opposite sides, as indicated in Fig. 3, the middle, however, remaining substantially the width of the pin a^4, and the rear wall of the said passage a^3 is shaped to present a shoulder a^{30}, to be referred to, and the coupling-pin a^4 has formed upon its back side, as shown, a shoulder a^{40}. The passage a^3 being enlarged at its ends permits the pin a^4 to rock or play, the narrow middle of the passage acting as a fulcrum, so that when coupled and a pull is exerted upon the link l the lower end of the pin will be drawn toward the front of the draw-head, throwing the upper end of the pin back, so that its shoulder a^{40} will drop under the shoulder a^{30} in the passage a^3, thus preventing the pin from being jerked out by a sudden pull, (see dotted lines, Fig. 1;) but when the cars are brought to a standstill and the pull is relieved from the link the pin may be tipped forward sufficiently to disengage the shoulder a^{40} on the pin a^4 from the shoulder a^{30}, when the said pin may be lifted out to uncouple the cars. The pin a^4 is shown as pivoted at its upper end in a yoke m, which when moved into its vertical position, as shown by dotted lines, Fig. 3, will hold the pin suspended in its elevated position and free from the link l, which may then be withdrawn; but when the yoke m is turned down the pin a^4 is free to drop to complete the coupling. The yoke m has secured to it a chain or cord m', which leads to any usual device, (not shown,) for lifting the pin from the top or sides of the car. Chains c are preferably employed, connecting the yoke m with ears $a^\times$, formed upon each side of the draw-head to restrain the pin from jumping out of its passage a^3. The draw-head a' at the back of the link-receiving chamber a^2 is provided with passage a^5, in which is placed a gravity-link-supporting bar a^6, herein shown as provided upon its rear side with a pin or rib a^{16}, which serves as a stop to prevent the said bar from dropping to the bottom of the chamber a^2, holding the bar normally slightly away from the bottom, that a link may be more easily pushed under, as shown best in Fig. 3. This gravity-bar a^6 serves to better hold the inner end of the link l against the bottom of the chamber to thus keep the outer end elevated, that it may properly enter the corresponding chamber of an approaching draw-head.

I do not desire to limit this invention to the particular shape and construction of the various parts herein shown, as the same may be

somewhat varied without departing from the scope of the invention.

It is evident that either the gravity-link-supporting bar a^6 or pin a^4 may be embodied in a coupling without the other.

I claim—

1. The draw-bar a and its draw-head provided with a link-receiving chamber, combined with an oblique passage a^3, leading to said chamber, and a coupling-pin a^4 in said passage, the bottom or under side a^{14} of the said pin presenting to the entrance of said chamber an inclined face, substantially as described.

2. The combination, with a draw-head having a link-receiving chamber, of an oblique passage leading to said chamber made flaring at its ends and provided at its rear side with a shoulder a^{30}, and a pin for said passage, provided on its rear side with a shoulder a^{40}, to operate substantially as described.

3. The draw-head a', having a link-receiving chamber and a passage leading to said chamber, combined with a pin-placed in said passage, and the yoke m, to operate substantially as described.

4. The draw-head a', having a link-receiving chamber and a passage leading to said chamber, combined with a pin placed in said passage, and the yoke m and chain m' attached thereto, substantially as described.

5. The combination, with the draw-head, of a link-receiving chamber a^2, a passage leading into the rear wall thereof, and a gravity-bar a^6, placed therein and normally held away from the bottom of said passage, substantially as described.

6. The combination, with the draw-head a', of a link-receiving chamber a^2, a passage leading thereto, and a gravity-bar a^6, placed therein, said gravity-bar having a rib a^{16}, to operate substantially as described.

7. The draw-head a', having ears $a^\times$ and a link-receiving chamber and a passage leading thereto, combined with a pin placed in said passage, the yoke m, and chains c, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK WALSH.

Witnesses:

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