J. LIPS.

CAR-COUPLING.

No. 189,634. Patented April 17, 1877.

Fig. 1.

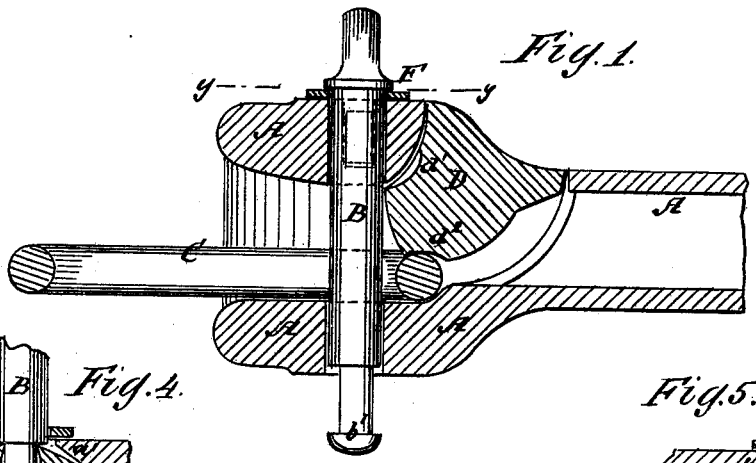


Fig. 4.

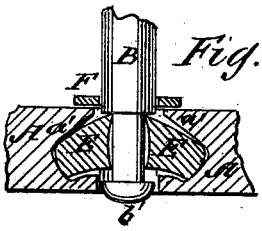


Fig. 5.

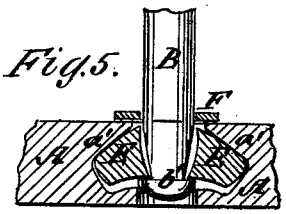


Fig. 2.

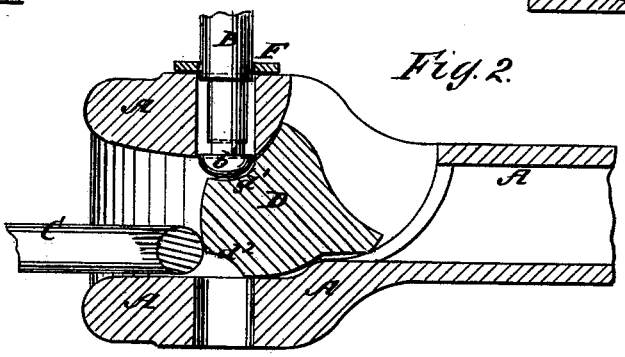
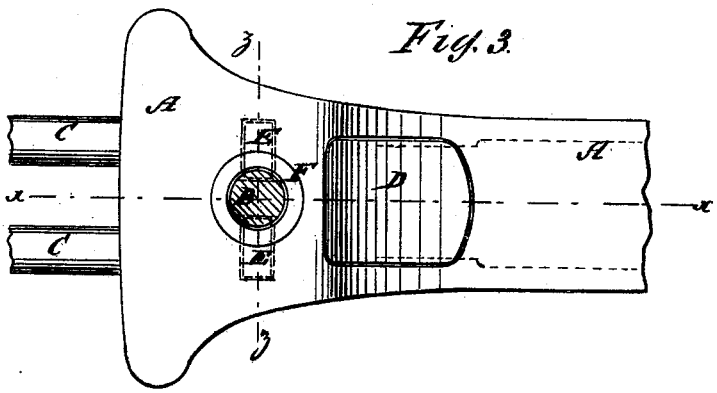


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB LIPS, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **189,634**, dated April 17, 1877; application filed February 26, 1877.

To all whom it may concern:

Be it known that I, JACOB LIPS, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Improvement in Automatic Car-Coupling and Pin-Arrester, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved device, shown as coupled, and taken through the line *x x*, Fig. 3. Fig. 2 is the same section as Fig. 1, but showing the position of parts as the link enters in coupling. Fig. 3 is a top view of the same, the pin being shown in cross-section through the line *y y*, Fig. 1. Fig. 4 is a detail cross-section, taken through the line *z z*, and showing the pin raised and locked. Fig. 5 is the same section as Fig. 4, but showing the pin raised and arrested.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved car-coupling, which shall be so constructed that it may be arranged to couple itself as the cars are run together, that will enable the cars to be uncoupled when the link cannot be withdrawn, and that will prevent the pin from being lost or stolen, and which shall be simple in construction and convenient and safe in use.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A is the draw-head, which is made of cast iron and with a hopper-shaped mouth to guide the entering-link into place. B is the pin, which passes down through a vertical hole in the bumper-head A. C is the link, which is made in the usual way. D is a solid cast-iron block, which is inserted in a hole in the upper part of the draw-head A and leading down into its throat.

With this construction, when the pin B is raised and the link C withdrawn, the block D will slide downward and forward, and the end of the said pin B will rest in a shallow cavity, *d'*, formed in the upper side of its forward end, as shown in Fig. 2. As the link C enters, it pushes the block D backward and upward, withdrawing it from beneath the pin B, and allowing the said pin to drop through the said link, coupling the cars.

Upon the lower side of the forward end of the block D is formed a shallow cavity, d^2, to rest upon the inner end of the link C, and hold said link C in a horizontal position, so that it will enter the bumper of an adjacent car when the cars are run together. In the upper part of the bumper-head A, upon the opposite sides of the pin-hole, are formed recesses *a'*, in which are placed small blocks E, which, when the pin B is raised, strike against a ring or collar, *b'*, formed around the lower end of the said pin B, and prevent the pin from being withdrawn, so that it cannot be lost or stolen. The lower end of the pin B, just above its collar *b'* is flattened upon its opposite sides, so that when the said pin B is raised and turned one-quarter around, the blocks E will enter the flattened parts of the said pin and support it, so that it cannot drop down.

This construction enables the cars to be uncoupled when the link C cannot be withdrawn, so that the cars will separate when one of them is moved, or when they acquire a different velocity.

Upon the pin B, upon the upper side of the bumper A, is placed a washer, F, to prevent dirt from entering the pin-hole.

The rear upper part of the block D is designed to enter beneath the dead-wood of the car to prevent the said block from being pushed out when the cars are run back swiftly.

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

The combination, in a car-coupling, of the bumper-head A, having recesses *a'*, the blocks E, and the collared pin B *b'*, flattened on its opposite sides, as and for the purpose specified.

JACOB LIPS.

Witnesses:

AUGUST SCHAEFFER,

JOHN HALL.