W. H. ADAMS.

Car-Coupling.

No. 163,718. Patented May 25, 1875.

Fig. 1.

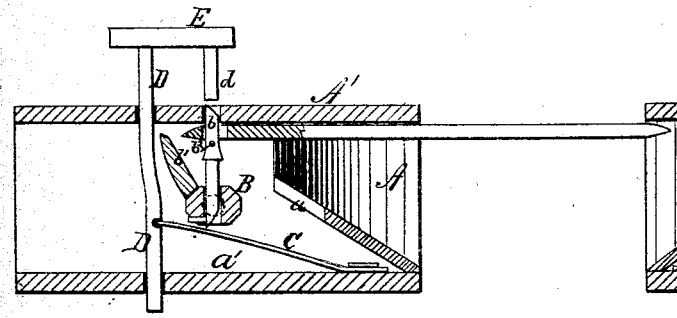


Fig. 2.

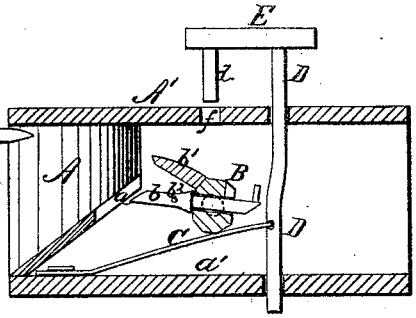
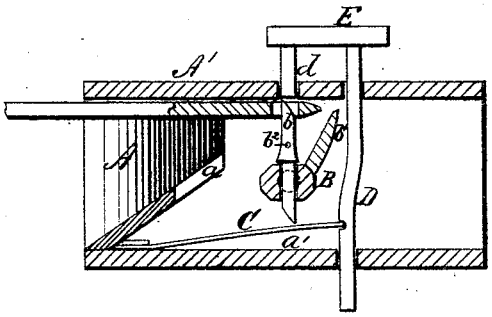


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM H. ADAMS, OF MOUNT GILEAD, VIRGINIA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **163,718**, dated May 25, 1875; application filed April 23, 1875.

To all whom it may concern:

Be it known that I, WILLIAM H. ADAMS, of Mount Gilead, in the county of Loudoun and State of Virginia, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a vertical longitudinal section, showing the link coupled; Fig. 2, a section showing it uncoupled; Fig. 3, a section in the act of uncoupling.

The invention relates to automatic couplers where a spring-catch is pushed aside by the link, hook, or arrow-head, and then closes behind its shoulders.

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

A represents a draw-head, arranged in a top-holed case, A′ *a′*, open at the rear, having a flaring mouth, and bottom slotted at *a*. B is a rock-shaft, having the pin *b* and wing b^1 at an acute angle to each other, the former heavier than the latter, and producing a constant tendency to hang below the working bottom face of draw-head. The pin or arm *b* passes loosely and diametrically through the rock-shaft B, resting with its lower end upon a plate-spring, C. The latter is fastened to the bottom of case A′ at one end, and to a vertical rod, D, at the other. This rod D has on top a treadle, E, with a subjacent stud, *d*, near the upper end of coupling-pin. *b* is a cross-pin, on which the link-rod rests.

The operation is as follows: The link-rod F advances up bottom incline in the flaring mouth of draw-head, passes over pin *b*, and strikes the wing b^1. The latter then yields, turning the rock-shaft, and bringing the pin *b* under the eye of link-rod. At the same time the spring C, obtaining a vertical pressure on the pin, drives it up through the shaft-eye of link-rod and top of case, holding it firmly, and without chance of escape. In order to uncouple two cars, the treadle is made simultaneously to act downwardly upon the spring with vertical rod D, and upon the pin *b* with stud *d*, thus causing the pin to drop out of case-hole *a′* and eye of link-rod. The stud *d* is not, however, absolutely necessary in a coupling. If one car runs off the track the pressure of the link upon the cross-pin b^2 throws the pin out of the case-hole, allowing the rock-shaft to be turned, and the car to be separated from the train.

By practical experiment this car-coupling will be seen to exhibit great adaptation to its purpose, while it is provided with no complicated or expensive mechanism.

Having thus described my invention, what I claim as new is—

1. In an automatic coupling, the combination of draw-head A, having slot *a*, top-holed case A′ *a′*, rock-shaft having loose pin *b* and rigid wing b^1, spring C, and a link-rod, substantially as set forth.

2. The combination of spring C, rod D, treadle E, and loose pin *b*, to drop the latter, all substantially as set forth.

3. The combination, with loose pin *b*, of a treadle, E, having the subjacent stud *d*, substantially as and for the purpose set forth.

4. The combination with a loose pin, *b*, of rock-shaft, spring, and cross-pin b^2, to allow a car to detach itself when it runs off the track, all substantially as set forth.

WM. H. ADAMS.

Witnesses:

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