

W. A. CUMMINGS.
Car-Couplings.

No. 149,376.

Patented April 7, 1874.

Fig. 1.

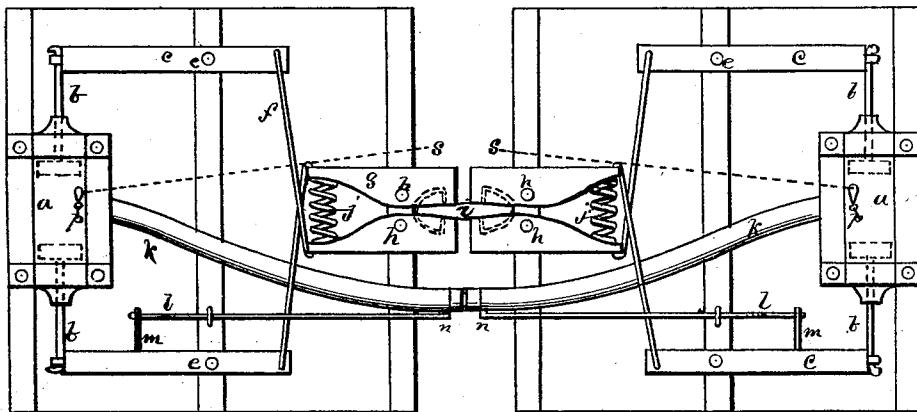
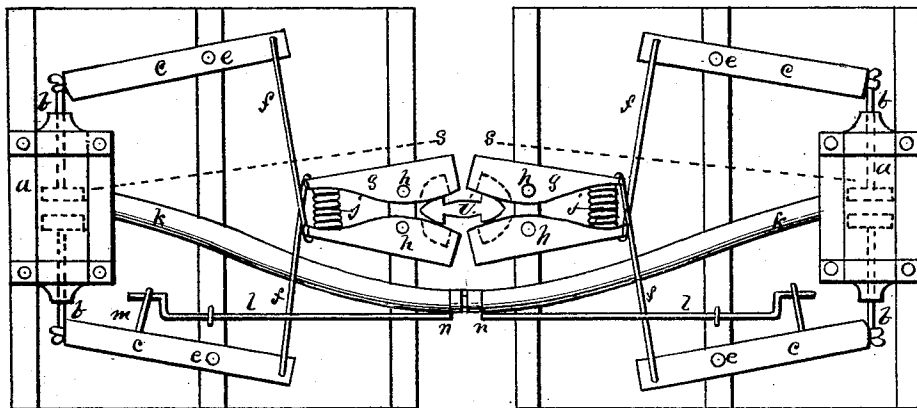


Fig. 2.



Witnesses.

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IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **149,376**, dated April 7, 1874; application filed December 6, 1873.

To all whom it may concern:

Be it known that I, WILLIAM A. CUMMINGS, of the city of Brooklyn, county of Kings and State of New York, have invented a new and useful Improvement in Car-Couplers operated by pneumatic or steam power, of which the following is a specification:

The object of my invention is to provide a safe, simple, and efficient device for coupling cars, whereby the risk of life is obviated; and it consists in the combination of a cylinder for the reception of air or steam with the coupling-jaws by means of levers and rods, in such manner that when air or steam is forced into the cylinder, by pumping or otherwise, it will press outwardly pistons, which, in their turn, operate levers, and thereby cause the closing of the jaws and the complete coupling of the cars. It also consists, in combination therewith, of an automatic arrangement of devices whereby the air-conductors to the cylinders are disconnected or connected simultaneously with coupling devices.

To uncouple or disengage the coupler, it is necessary to open a valve or faucet, thereby exhausting the air or steam from the cylinder. Springs connected with the coupling-jaws cause the same to open as soon as the power of the steam or air is gone. The operation may be reversed, so that the jaws will be opened by the air or steam.

In the accompanying drawings, Figure 1 is the under side of the two platforms of a car, showing the coupler, cylinder, and connections—the coupling-jaws closed, link in place, cars coupled. Fig. 2 is a similar view, showing the position of the several parts when the coupling-jaws are open and cars uncoupled.

a represents the cylinder; *b b*, pistons connecting with levers *c c*, said levers pivoted at *e e*. At *f f* are connecting-rods attached to the rear ends of the coupling-jaws *g g*, said jaws being pivoted at *h h*. At *i* is the link. *j* is a spring to regulate the tension of rear end of jaws *g g*. The tendency of the spring *j* is to draw rear ends of the jaws together and the outer ends open or apart. *k* represents the tube through which air or steam is passed to the cylinders to operate the coupler. Air or steam may be forced from any suitable point or by any suitable means. *l* is a rod, connected at one end with the lever *c*, by means of an arm, at *m*, in such manner that as the arm is moved by the lever *c*, the rod *l* is revolved, and its other end, at *n*, being connected with a suitable device, the tube may be opened or closed or the ends disengaged automatically. At *p* is a valve or faucet, so arranged that, by means of a rod or cord, as shown at *s*, the same may be operated so as to exhaust the air or steam from the cylinder, removing the pressure, and thereby opening the coupler.

What I claim, and desire by Letters Patent, is—

1. The combination of cylinder *a*, pistons *b b*, levers *c c*, rods *f f*, jaws *g g*, and springs *j j*, substantially as and for the purpose described and set forth.

2. The combination of levers *c c*, arm *m*, rod *l*, pipe *k*, and jaws *g g*, substantially as and for the purpose set forth.

WILLIAM A. CUMMINGS.

Witnesses:

ARTHUR NEILL,
RICHARD A. REILLE.