

W. C. SCOLES.  
Car-Coupling.

No. 160,473.

Patented March 2, 1875.

Fig. 1.

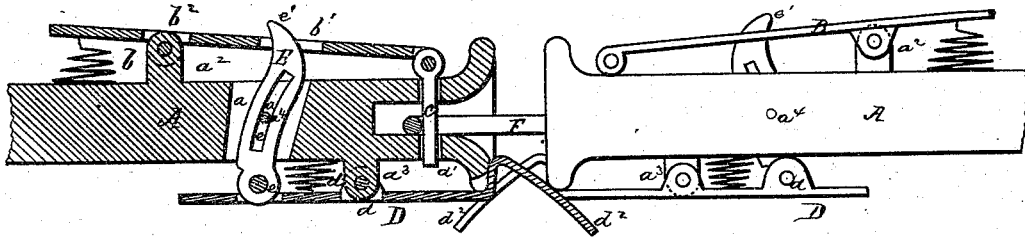


Fig. 2.

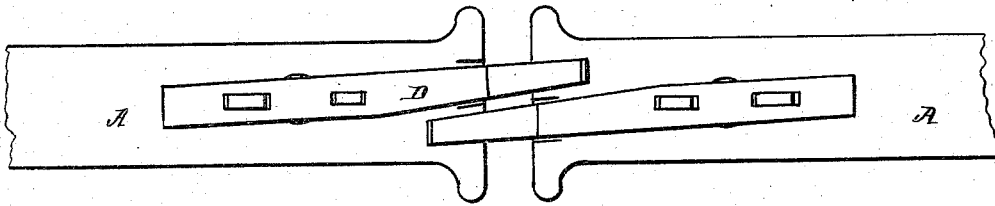
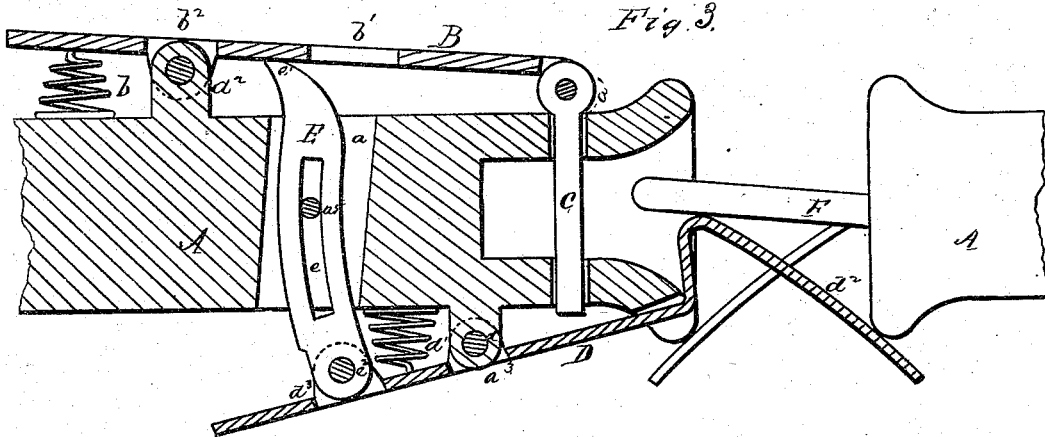


Fig. 3.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WELDON C. SCOLES, OF CIRCLEVILLE, OHIO.

## IMPROVEMENT IN CAR-COUPINGS.

Specification forming part of Letters Patent No. 160,473, dated March 2, 1875; application filed August 25, 1874.

*To all whom it may concern:*

Be it known that I, WELDON C. SCOLES, of Circleville, in the county of Pickaway and State of Ohio, have invented certain Improvements in Car-Couplings, of which the following is a specification:

The nature of my invention relates to a coupling for railroad-cars and the like; and the construction is such that the coupling of two cars together is accomplished automatically by the simple contact of the cars, and they may be uncoupled from any part of the cars or train without the danger of injury which attaches itself to all devices where the operator has to pass between the platforms of the cars.

My invention consists in the construction, arrangement, and adaptation of two levers on each coupling, which act in connection with each other, the action of each being modified by the action of the other, and each being actuated and governed by springs or other equivalent devices, as will be more fully hereinafter set forth.

The construction of one of these levers is such that it presents an inclined surface to the approaching car-bumper. As soon as the approaching car is sufficiently near, so that the link or the bumper bears upon this inclined surface, it depresses that end of the lever, and being pivoted near its center it elevates the opposite end, by means which will be hereinafter described, elevates the coupling-pin until the coupling-link has passed beneath the same, when, actuated by a spring, the pin is forced down through the link, and the coupling is completed, the whole having been accomplished by the simple contact of the cars.

In the accompanying drawings, which form a part of this specification, Figure 1 is a longitudinal section of one of the draw-heads, the other being shown in elevation, showing the invention after the coupling has been effected. Fig. 2 is a bottom view, showing the relative positions of the inclined levers; and Fig. 3, an enlarged sectional elevation, showing the manner in which the coupling is effected and the means.

Referring to the drawings, A represents the bumper, of ordinary construction, except that

it is provided with a vertical slot,  $a$ .  $a^1$  is the aperture through which the coupling-pin operates, and  $a^2 a^3$  are the bearings for the levers, which will be hereinafter described. B is a lever, pivoted at  $b^2$  in the bearing  $a^2$ , and it is operated by a spiral spring,  $b$ , or other equivalent device. It is provided with a slot,  $b^1$ , the purposes of which will be presently set forth, and to one extremity thereof is loosely attached the coupling-pin C. C is the coupling-pin, working in the slot  $a^1$  in the bumper. D is the coupling-lever, pivoted in the bearing  $a^3$  at  $d$ , and it is operated by the spiral spring  $d^1$ , or other equivalent device having a constant pressure. This lever is provided at one extremity with an inclined surface,  $d^2$ , against which the car to be coupled operates, and at the other with bearing  $d^3$  for the sliding link E. E is a sliding post, pivoted at  $e^2$  to the lever D, and it operates through the slot  $a$  in the bumper, and also through the slot  $b^1$  in the lever B, as shown in Fig. 1 of the drawings. This post E is provided with a longitudinal slot,  $e$ , which, operating in connection with the lateral pin  $a^4$  in the bumper, serves to guide the post as desired, and it is also provided with a projecting point,  $e^1$ , which rests under the lever B until the coupling is effected, when it passes through the slot  $b^1$ , and presses against the side thereof, thereby preventing the jarring, &c., from elevating the coupling-pin and uncoupling the cars. F is the coupling-link. Suitable attachments to the lever B may be carried to any portion of the car, allowing the uncoupling to be performed as well from one place as another.

It is asserted that no ordinary jarring will uncouple the cars; that the springs acting antagonistically to each other will prevent rattling, &c.; that the device is an efficient self-coupler; that the uncoupling can be effected without danger of injury to the operator.

The operation is as follows: As shown in Fig. 3, my invention is set for coupling two cars together—*i. e.*, the incline  $d^2$  is elevated, and the projection  $e^1$  resting under the lever B. The approaching bumper operating on this incline depresses the same, and elevates the post E. This action raises the pin C until the link F has passed sufficiently far, when

the post E disengages with the lever B, and passes through the slot  $b^1$ . The lever, actuated by the spring  $b$ , immediately forces the pin C into place, and the projection  $e^1$  serves to secure the pin from displacement. To uncouple the cars, it is only necessary to depress the portion of the lever B, which will elevate the pin C. The lever D, actuated by the spring  $d^1$ , will again elevate the incline, the post E passing under the lever B, and the whole device is ready for another operation.

I claim—

1. The combination of the lever D, having

incline  $d^2$ , and the post E, with the lever B and the pin C, as shown and specified.

2. The levers B D, post E, and pin C, in combination with springs  $b$  and  $d^1$ , substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I herewith affix my signature in presence of two witnesses.

WELDON C. SCOLES.

Witnesses:

C. F. KRIMMEL,  
J. P. NORMAN.