

W. F. GRASSLER.
Car Coupling.

No. 103,172.

Patented May 17, 1870.

Fig. 1.

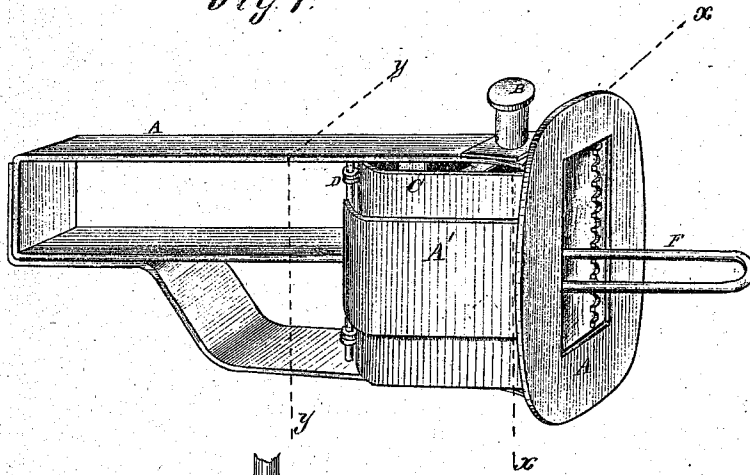


Fig. 2.

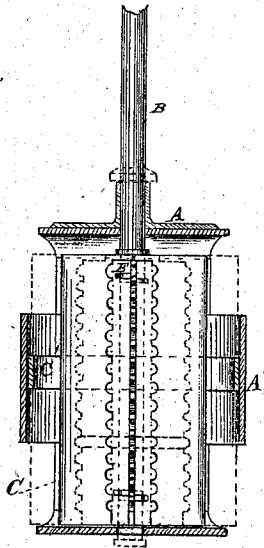


Fig. 3.

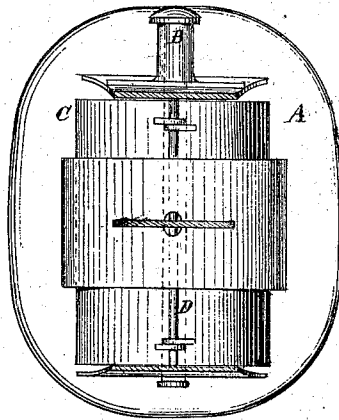
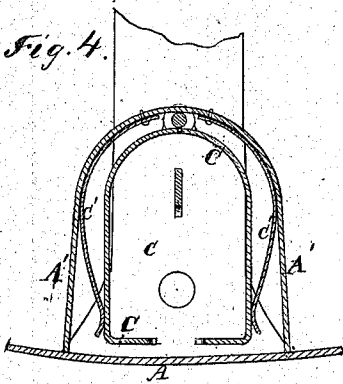


Fig. 4.



Witnesses
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WILLIAM F. GRASSLER, OF MUNCY, PENNSYLVANIA.

Letters Patent No. 103,172, dated May 17, 1870.

IMPROVEMENT IN RAILWAY CAR-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern.

Be it known that I, WILLIAM F. GRASSLER, of Muncy, in the county of Lycoming and State of Pennsylvania, have invented certain Improvements in Automatic Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings making part of this specification, in which—

Figure 1 is a perspective view of my improved coupling, showing the coupling link in position, the means for holding it in such position, and the general construction of the buffer-head, to which the parts are attached.

Figure 2 is a vertical sectional elevation, on line $x x$, of fig. 1, showing the position of the jaws which clasp and hold the coupling-link, when extended by such link in dotted lines, and their position when not thus distended in full lines, and also the support upon which the coupling-pin rests when raised to the top of the head.

Figure 3 is a sectional elevation, on line $y y$, of fig. 1.

Figure 4 is a horizontal section, on line $z z$, of fig. 1. Corresponding letters refer to corresponding parts in all the figures.

That it is desirable to have a safe and automatic car-coupling has long been acknowledged by all persons engaged in operating railroads, and the object of this invention is to provide such a device, which shall be free from the objections urged against previous ones, such an one as shall hold the link in position for entering the buffer-head of the car to which it may be desired to couple the one in which the link is fixed, and which shall also hold the coupling-pin in position, and permit it to drop into such link when the buffer-heads of the two cars are brought into contact with each other. And to this end this invention consists in the combination and arrangement of the parts of which the device is composed, as will be more fully described hereinafter.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, in the drawings, refers to the buffer-head, which may be of wrought or of cast metal, and of substantially the form shown in fig. 1, or so that the other parts may be conveniently attached thereto; the aperture in the rear end of the head being designed for the reception of the buffer-spring, and the brace upon its under side for strengthening and supporting the parts.

A' refers to a yoke or band of metal, the ends of which are firmly secured to the front plate of the head, its rear portion passing around the jaws, and receiving and supporting the lower bar of the buffer-head A.

B refers to a coupling-pin, which may be made of a bar or rod of iron, of any preferred form, round, oval, rectangular, or square, it being provided, upon its upper end, with a suitable handle for raising it, and upon its lower end with a collar or washer, which may be secured thereto by means of a screw, so that it can be removed at pleasure; such collar being for the purpose of preventing the pin from coming out of the buffer-head, after it has once been placed therein, until it is desirable to remove it for repairs.

C O refer to the jaws of steel, or other suitable material, which are bent into the form shown in the drawings, and placed in the space between the bars forming the head, they being held in their positions by means of ears upon their rear ends, through which passes the bolt or pin D, as shown in fig. 1.

Upon the front ends of these jaws flanges are turned upon the plates which constitute such jaws, or they may be bolted thereto, their inner edges or surfaces being serrated, so as to enable them to receive and hold the coupling-link at any desired height, and thus enable the attendant to couple together cars of varying heights.

To the rear portion of yoke A', suitably strong, springs C' are attached, the forward ends of which bear against the jaws C, so that when the pin B has been raised above the upper edge of the jaws, and the coupling-link is withdrawn, the forward ends of such jaws will be thrown or pushed toward each other by such springs.

To the upper edge of the jaws C, and so as to come directly under the aperture in the head, through which the coupling-pin passes, there are attached pieces of metal, which project inwardly, so as to meet each other when the jaws are in their closed position.

These plates form a support or rest for the coupling-pin, when it is in its raised position, as shown in fig. 2; they being so arranged as to hold the pin thus, and so as to permit it to drop when the front ends of the jaws are pressed apart by the coupling-link as it enters between them.

D refers to a rod or bolt which, passing through the ears of the jaws, extends from the upper bar of the head to the brace below, to both of which it is secured by riveting, or in any other convenient manner, its purpose being to strengthen these parts, and to hold in position the jaws C, for which purpose a collar is placed upon its lower end, upon which the lower ears of the jaws rest.

E refers to a bar of metal, the front surface of which is serrated, to correspond with the flanges of the jaws C, it being placed between the arms or sides of such jaws, and in rear of the point where the coupling-pin passes down through the same, its office being to receive and hold the rear end of the coupling-link, as it is thrust between the jaws, such jaws holding its outer

portion in position, or acting in conjunction with this bar for this purpose.

It is apparent that a curved piece of metal of any form, which can be placed in the rear portion of the jaws, it having upon its inner face corrugations, may be substituted for this bar.

F refers to the coupling-link, which may be made of round or square iron, and which should be of such length as to admit of the cars passing freely around curves, but not so long as to cause too much concussion in stopping or starting a train.

Having thus described my invention,

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

The combination of the serrated jaws C, springs C, and serrated bar E, substantially as and for the purpose set forth.

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

WM. F. GRASSLER.

Witnesses:

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EZRA CHAPPELL.