(No Model.)

A. O. DIETZE.

CAR COUPLING.

No. 359,776. Patented Mar. 22, 1887.

Fig. 1.

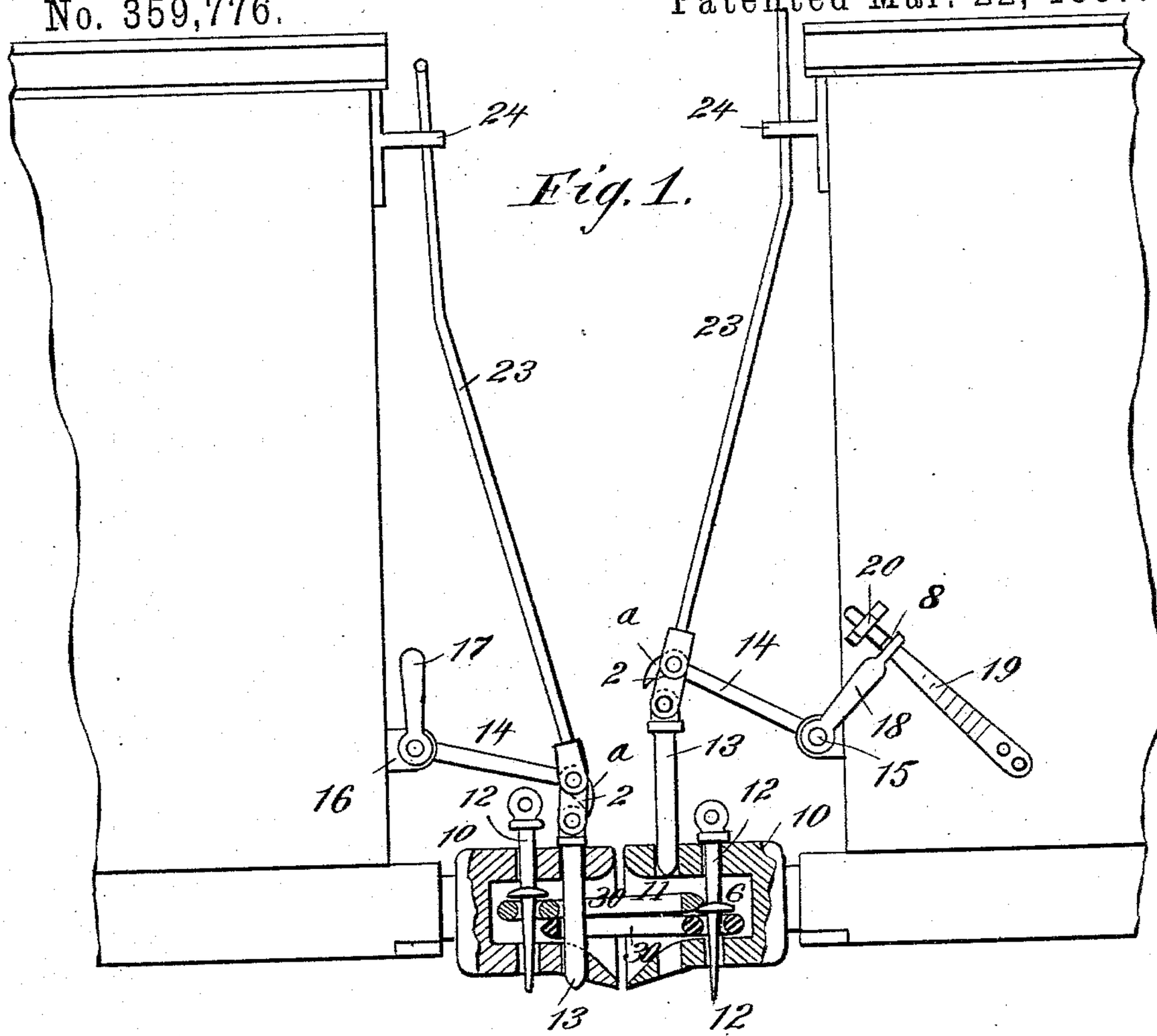


Fig. 2.

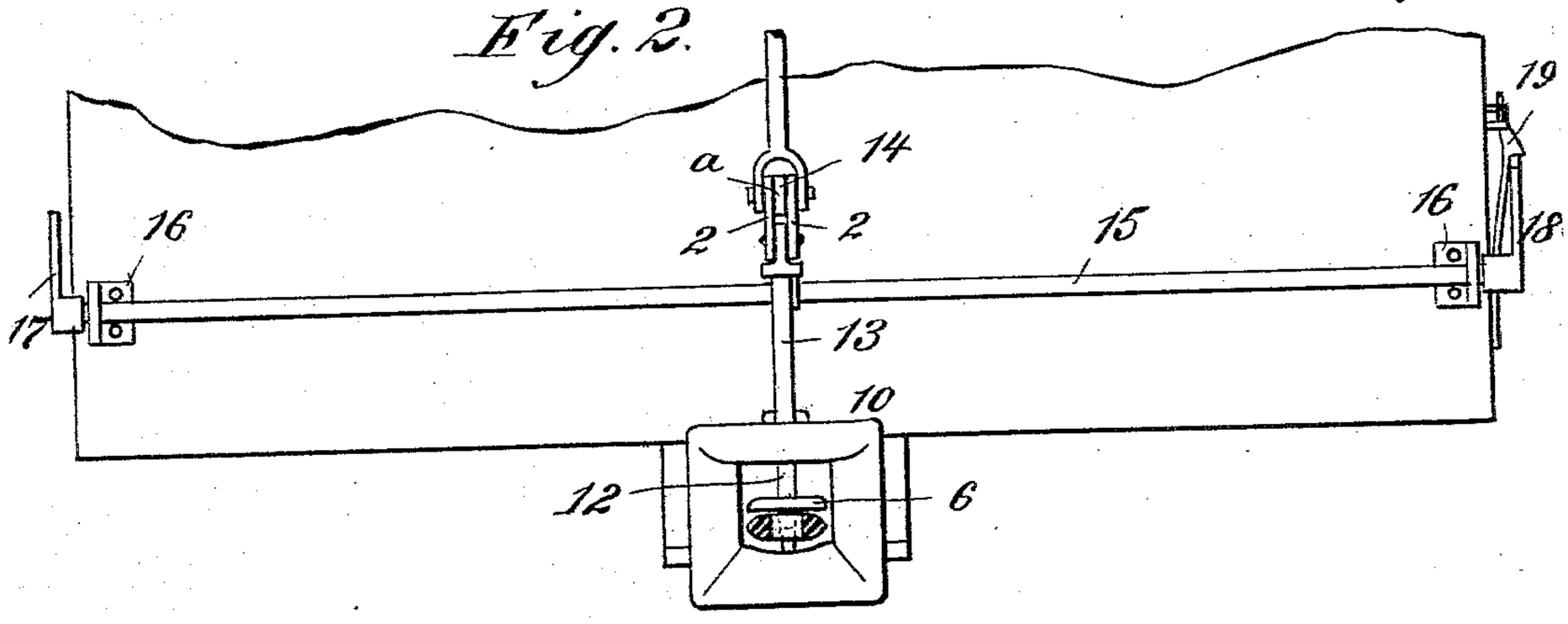
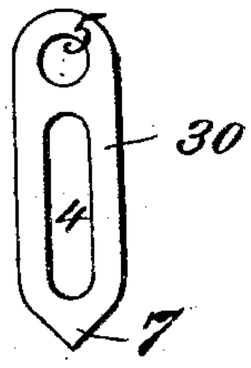


Fig. 3.



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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 359,776, dated March 22, 1887.

Application filed January 6, 1887. Serial No. 223,552. (No model.)

To all whom it may concern:

Be it known that I, AUGUST O. DIETZE, of Syracuse, in the county of Otoe and State of Nebraska, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

This invention relates to a novel form of automatic safety car-coupler, as will be hereinafter explained, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side view of the ends of two cars provided with my improved form of coupler, the draw-heads and the coupling-links being shown in central longitudinal section. Fig. 2 is an end view of a portion of one of the cars, the coupling-link carried thereby being shown in cross-section; and Fig. 3 is a plan view of one of the coupling-links.

In the drawings above referred to, 10 represents a draw-head, that is connected to the car in any of the ordinary ways. The draw-head 10 is, as usual, provided with a link-recess, 11; but instead of being provided with a single set of coupling-pin apertures, my improved form of draw-head is provided with two sets of coupling-pin apertures, the one set being arranged to receive a retaining-pin, 12, formed with a tapering point, while the other is arranged to receive a removable coupling-pin, 13.

The coupling-pin 13 is connected to an arm, 14, by means of side links, 2, and this arm 14 is carried by a horizontal cross-shaft, 15, that is mounted in brackets 16, that are secured to the end of the car-body. Lever-arms 17 and 18 are secured to the ends of the cross shaft 15, the arm 18 being arranged to engage with a notched spring, 19, that is connected to the side of the car, the throw of the spring being limited by a loop, 20.

It will be noticed that the arm 14 is formed with a downwardly-curved toe, *a*, to the sides of which the links 2 are connected.

In connection with the parts described I employ a coupling-link, 30, that is formed with an elongated slot or aperture, 4, and a circular aperture, 5, the retaining-pin 12 passing through said circular aperture 5, while the slotted end of the link extends outward beyond the draw-head. This extending end of the link 30 is pointed, as shown at 7 in Fig. 3, and the forward edges of the link are rounded off, as shown.

In order that the extending ends of the coupling-links 30 may be held so that they will extend outward from the draw-head in substantially horizontal planes, I provide each of the retaining-pins 12 with flanges 6, which bear upon the upper faces of the links, so that the inner ends of the links must support the weight of the said pins 12, and this weight will act to hold the links in the required position. By forming the pins 12 with tapering points they may be firmly seated within or disconnected from the flanges 6.

Such being the general construction of my improved form of coupling, the operation is as follows: When two cars provided with my coupling are to be coupled the one to the other, the coupling-pins 13, that are arranged in connection with the draw-heads of their approaching ends, are raised to the position in which the parts are represented upon the right in Fig. 1, in which position the coupling-pins will be held, owing to the engagement of the levers 18 with the notches 8 of the springs 19. As the cars approach, the extending ends of the links 30 will enter the link-recesses of the approaching draw-heads, one link riding above the other, and when the links have been moved to the position in which they are shown in Fig. 1 the levers 18 may be released, to permit the coupling-pins 13 to fall to the position in which the pin is shown upon the left in Fig. 1, and thus couple the cars together, and it will be seen that when the cars have been so coupled they will be connected by two instead of by one coupling-link, thus materially increasing the safety of the coupling.

The construction described renders it unnecessary to enter the space between the cars to couple them, and in order that the parts may be manipulated from the top of the cars I connect manipulating-rods 23 to the arms 14, said rods extending upward to a point within reach of the top of the car, the upper ends of the rods being arranged to slide within brackets 24.

Should it at any time become necessary to

couple cars provided with my improved form of coupler with cars provided with the ordinary form of pin-and-link coupling, such coupling may be easily brought about.

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

1. In a car-coupling, the combination, with a link, of a permanent retaining-pin provided with flanges, substantially as described, whereby provision is made for holding the link in position for coupling, substantially as set forth.

2. In a car-coupling, the combination, with a draw-head, of the doubly-apertured link 30, the retaining-pin 12, provided with flanges 6, the coupling-pin 13, and means, substantially as described, for operating the coupling-pin, as set forth.

3. The combination, with a draw-head formed with two sets of coupling-pin apertures, of a coupling-link, 30, a retaining-pin, 12, a coupling-pin, 13, connected to an arm, 14, a cross-shaft, 15, to which the arm 14 is rigidly connected, a lever-arm, 18, connected to the shaft 15, and a recessed spring, 19, arranged in connection with the said lever-arm, substantially as described.

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