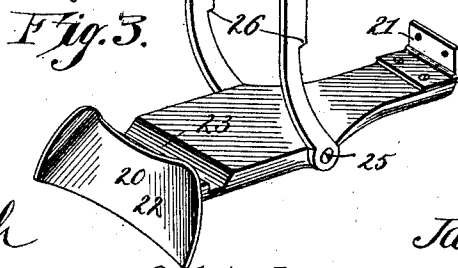
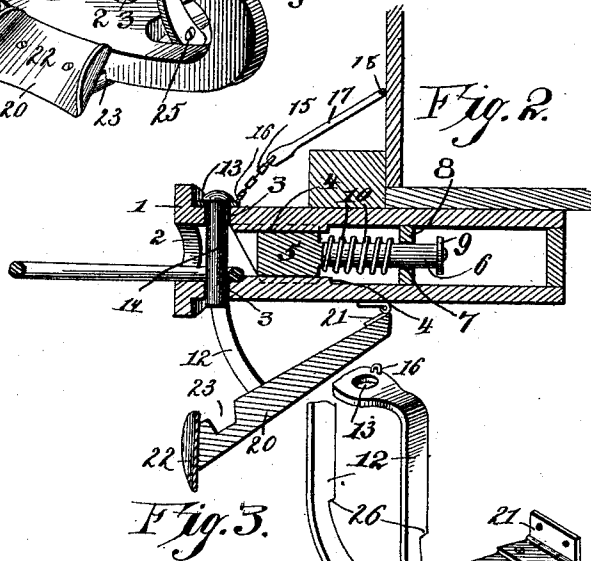
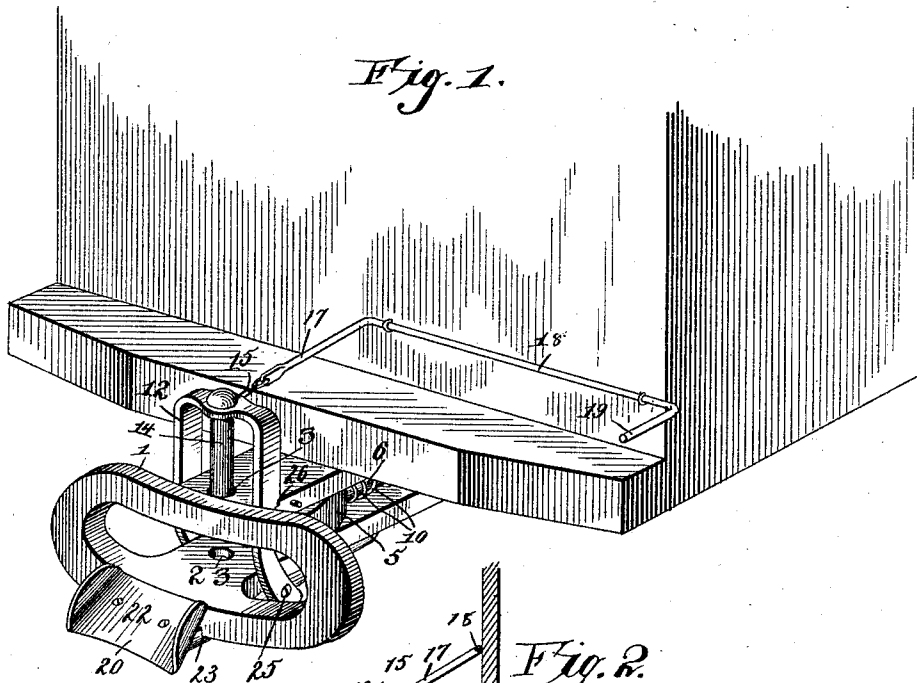


(No Model.)

J. ZILIUS.  
CAR COUPLING.

No. 448,704.

Patented Mar. 24, 1891.



Witnesses:

*H. G. Dutrich*

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*By his Attorneys,*

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# UNITED STATES PATENT OFFICE.

JACOB ZILIUS, OF HUNTINGDON, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 448,704, dated March 24, 1891.

Application filed December 30, 1890. Serial No. 376,277. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB ZILIUS, a citizen of the United States, residing at Huntingdon, in the county of Huntingdon and State of Pennsylvania, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention has relation to improvements in car-couplers of that class known as "gravity-pin;" and the objects in view are to provide an extremely cheap and simple coupler that may be set for coupling upon the top or side of the car, and which will automatically couple when struck by the link of an approaching coupler.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a coupler constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section. Fig. 3 is a detail in perspective of the gravity-bail.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the ordinary draw-head supported by the usual draw-bar, said head terminating at its front end in the flared flanged mouth 2 and in rear of the same provided with the vertical pin-holes 3. The inner sides of the roof and bottom of the draw-head are provided with guide-ribs 4, extending longitudinally of the same, and mounted for reciprocation upon the ribs is a block 5, the front end of which is concaved, and the rear end of which is provided with a rearwardly-disposed stem or rod 6, which latter extends through a perforation 7, formed in the transverse partition 8, and is prevented from withdrawal through the opening by means of a head 9, in which the rod terminates. The rod is encircled by a coiled spring 10, interposed between the rear side of the block 5 and the partition 8, said spring serving to normally press the block to the front.

12 designates an inverted-U-shaped bail, the terminals of which embrace the opposite sides of the draw-head directly in front of the block 5, which block, as shown, extends laterally a slight distance beyond the sides of the head, which are left open, as shown. At

its center above the pin-hole 3 the stirrup is widened and provided with a pin-hole 13, adapted to receive the pin 14, which depends through the three openings when the pin is in a locked position. In rear of the pin-hole 13 an eye 16 is formed upon the bail, and the same is connected by a chain 15 to the crank 17, formed upon the end of the operating rock-shaft 18, which terminates at one end at the side of the car in a handle 19. If desired, a chain may pass from the eye to the roof of the car when the coupler is used upon freight-cars, or any other device may be substituted for operating or elevating the bail without the necessity of stepping between the cars.

The link-guiding apron 20, located upon the under side of the draw-head and hinged thereto, as at 21, is provided at its front end with an inclined plate 22, and in rear of the same said apron is recessed, so that it may close snugly up against the under side of the draw-head, in which position the flanged mouth of the latter rests in the recess, as indicated at 23. The lower ends of the terminals of the bail 12 are secured to the opposite sides of the apron by pivot-bolts 25, and above said bolts said terminals are provided with shoulders 26.

In operation the bail is elevated by the means described, or other convenient means that will readily suggest themselves, until the shoulders of the same are above the block 5, when the latter is forced by its spring under said shoulders, and thus the pin is supported in position, as is also the guide-apron. An approaching draw-head having a link projecting therefrom as it arrives in contact with the draw-head that is set to receive the same forces its link against the concaved block 5 and forces said block back against the tension of its spring and withdraws its support from the pin-supporting bail 12, which latter, together with the link and apron, fall by gravity, and thus the link is automatically locked or coupled.

Having described my invention, what I claim is—

1. In a car-coupling, the combination, with the draw-head, a block mounted therein and extending beyond the side of the same, and a spring for pressing the block to the front, of an inverted-U-shaped bail loosely embrac-

ing the head in front of the block, provided with shoulders adapted to be engaged by the block and with a pin-opening, a pin mounted in the opening, and means for elevating said  
5 bail, substantially as specified.

2. In a car-coupling, the combination, with the draw-head provided upon the inner side of its roof and bottom with longitudinal guide-  
10 ribs, a block mounted for movement between the ribs, provided with a concaved front face laterally extended beyond the head and terminating at its rear end in a stem passing through a perforation formed in a transverse  
15 partition of the head, and a coiled spring interposed between the head and partition, of a guide-apron hinged to the under side of the head and terminating at its front end in a guide-plate for the link, an inverted-U-shaped

gravity-bail embracing the head, having its arms shouldered at their rear sides to engage  
20 with the block, pivoted at their lower ends to the sides of the apron, and at its center having a pin-hole, a pin mounted in the hole and having its head resting upon the plate, a rock-  
25 shaft terminating at its outer end in a handle and at its inner end in an arm or crank, and a chain connecting said crank with the bail, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature  
30 in presence of two witnesses.

JACOB ZILIUS.

Witnesses:

ALECK PORT,  
JOHN ZILIUS.