

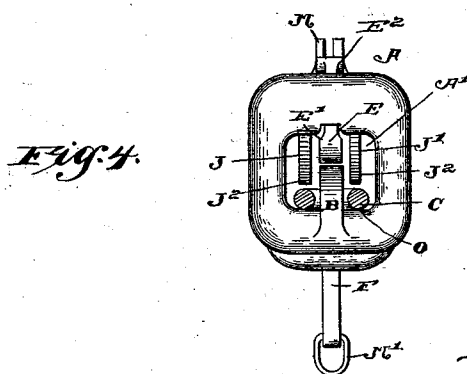
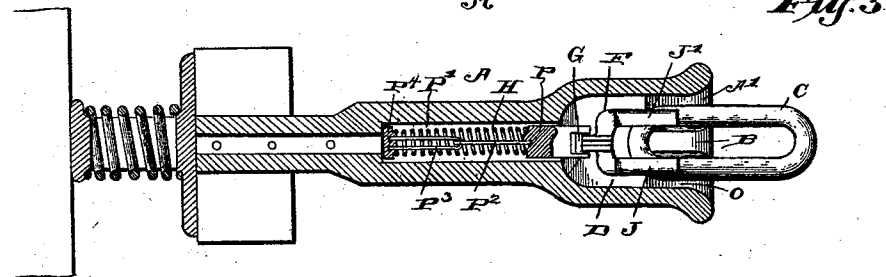
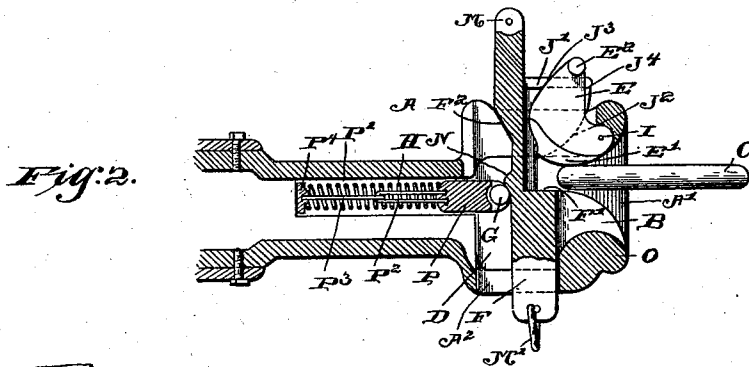
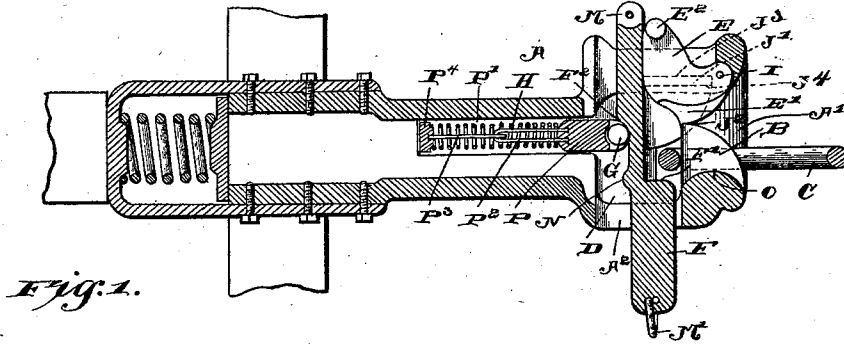
(No Model.)

2 Sheets—Sheet 1.

D. G. GROSS.
CAR COUPLING.

No. 531,375.

Patented Dec. 25, 1894.



Witnesses

W. H. Doyle.

J. R. Devereux.

Inventor

David G. Gross.

By *his* Attorneys.

Chas. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

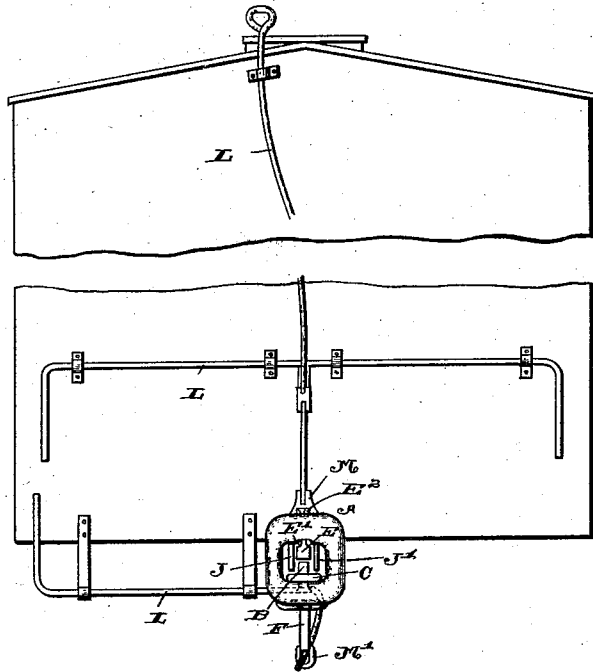


Fig. 7.

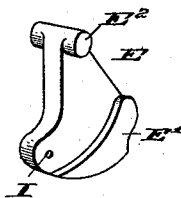


Fig. 6.

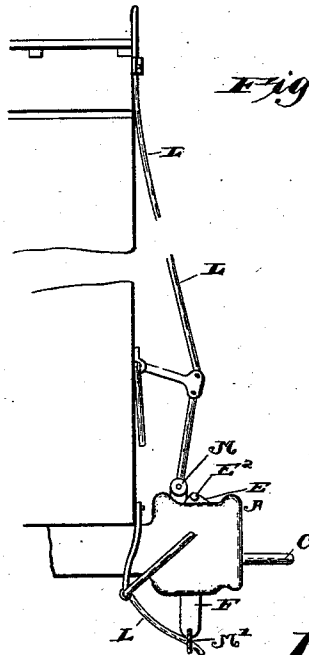
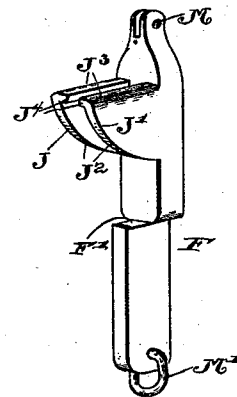


Fig. 8.



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UNITED STATES PATENT OFFICE.

DAVID G. GROSS, OF BERLIN, CANADA, ASSIGNOR OF ONE-HALF TO JOHN R. EDEN, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 531,375, dated December 25, 1894.

Application filed January 11, 1894. Serial No. 496,563. (No model.)

To all whom it may concern:

Be it known that I, DAVID GEORGE GROSS, machinist, of the town of Berlin, in the county of Waterloo and Province of Ontario, in the Dominion of Canada, have invented a new and useful Improvement in Automatic Coupling and Safety Uncoupling of Railway-Cars, to be known as "the automatic link car-coupler," of which the following is a specification.

This invention relates to an improvement in that class of car couplings wherein means are provided for automatically coupling the usual links, and it has for its object to produce a device wherein the link will be held with more security and whereby it may be released or disengaged with greater dispatch and ease.

To these ends the invention consists in certain novel features of construction and combination and arrangement of parts that will be more fully described hereinafter and finally embodied in the claims.

In the accompanying drawings:—Figure 1 represents a vertical longitudinal section of my invention; Fig. 2, a similar view with the parts shown in different positions; Fig. 3, a horizontal section; Fig. 4, a front elevation of the drawhead; Fig. 5, a front elevation of a car showing my improvements applied; Fig. 6, a side elevation of one end of a car having my improvements applied; Fig. 7, a detail perspective view of the link retaining block; Fig. 8, a similar view of the bar co-operating therewith.

The reference letter A, represents the drawhead which is formed of cast iron and provided with a flaring or bill shaped orifice A' and vertical passage A². Formed integral with the bottom of the draw-head and at the front end thereof is the spur B, which is formed with an inclined front face and with a truly vertical rear face, whereby the link is permitted to slide up the front face and to drop behind the rear face.

Pivoted on the pin I, arranged in a recess in the draw-head, is the block E, which is provided at its lower edge with the outwardly projecting flanges E', one for each side while the upper end of the block is formed with the studs E², thereon. These studs E², pro-

ject out one on each side of the block. Located in the passage A² and movable vertically therein is the bar F, which is formed with a shoulder F' on its front face and at about its middle, while its rear side is formed with the shoulder F² and lug N. The upper end of the bar F, is formed with an eye M, and the lower end is provided with a ring M'.

Formed integral with the front side of the bar F, at a point just above the shoulder F', are the forwardly projecting lugs J and J', which are duplicates in construction and are formed with the downwardly and inwardly inclined lower faces J² and with the plain upper faces J³. The faces J³, are each provided with inwardly projecting ribs J⁴, which are placed in vertical alignment with the flanges E', so that they will be engaged by said flanges when the block E, attempts to rise. The studs E², are also in vertical alignment with the ribs J⁴, so that said ribs are arranged between the flanges E' and studs E², and so that the block E and bar F, will be capable of independent movement only within the limit of such devices.

Located in the longitudinally extending passage P', and movable longitudinally therein is the block P, which is provided with a roller G, adapted to engage with the rear of the bar F. Rigidly secured to the rear side of the block P, is the wire rod P², which is connected to the similarly shaped rod P³. These rods, P² and P³, are longitudinally aligned in the passage P' and the rod P³, is connected to the block P⁴, located in the rear end of the passage P'.

H, indicates a spiral spring which embraces the rods P² and P³, and which engages at its respective ends, with the blocks P and P⁴, whereby the block P, is pushed forwardly and its roller G, caused to engage the bar F. This operation is due to the expansive character of the spring H, as will be understood.

The drawhead is formed at the point O, with a convex portion on each side of the spur B, upon which portion the link, lettered C, is adapted to rest so that it may have an oscillatory movement on such portion to accommodate itself to the motion of the car to which it is attached.

In the use of my invention the cars having the couplers attached are moved toward each other, which will cause the link C, to move into the cavity in the draw head and engage the spur B, block E, and lugs J and J', whereupon the bar F and block E, will be raised to allow the link to enter the cavity and drop behind the spur B, after which the bar F, and block E, will drop down so that the block and lugs will prevent the link from becoming displaced. To remove the link bar F should be raised, whereupon block E, will be similarly moved and the link lifted by shoulder F', so that it may pass out. By means of lug N, the bar F may be held raised as shown in Fig. 2.

Figs. 5 and 6, illustrate devices for raising the bar F, in the uncoupling operation and these consist of the rods L, connected to the car so that they can be operated to raise the bar. Since these devices are common in the art no further description is thought to be necessary. I therefore do not claim them as new; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In a car coupling the combination of a drawhead having an upwardly projecting spur in its cavity, a block pivoted above the spur and adapted to engage the same, said block having two vertically aligned projections on each of its sides and a vertically reciprocating bar, having two lugs adapted to lie one on each side of the block and between

the projections thereof, substantially as described.

2. In a car coupling, the combination of a drawhead having an upwardly projecting spur in the cavity thereof, a block pivoted above the spur and adapted to bear upon the same, said block having on each of its sides two vertically aligned projections a vertically reciprocating bar having two lugs adapted to lie one on each side of the block and between the projections thereof, and a second block or detent having a spring tendency toward the back and adapted to hold the bar at various positions throughout its length substantially as described.

3. In a car coupling, the combination of a drawhead having an upwardly projecting spur in the cavity thereof, a block pivoted above the spur and adapted to bear thereon, said block having on each of its sides two vertically aligned projections, a bar movable vertically in the drawhead and having two lugs adapted respectively to lie between the projections of the block, the rear side of the bar being formed with a lug and a shoulder and a spring actuated block or detent adapted to bear against the rear side of the bar and operate with the lug and shoulder thereon, substantially as described.

DAVID G. GROSS.

Witnesses:

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