

(No Model.)

G. K. RUSSELL.
CAR COUPLING.

No. 570,684.

Patented Nov. 3, 1896.

Fig. 1

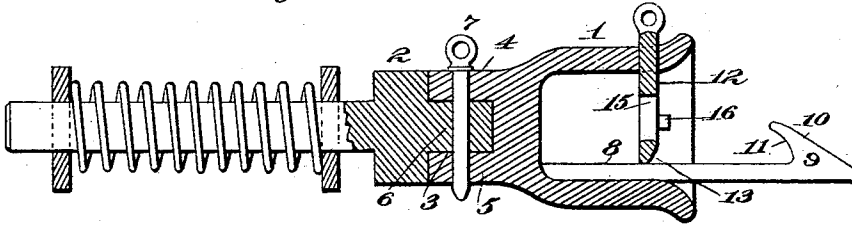


Fig. 2

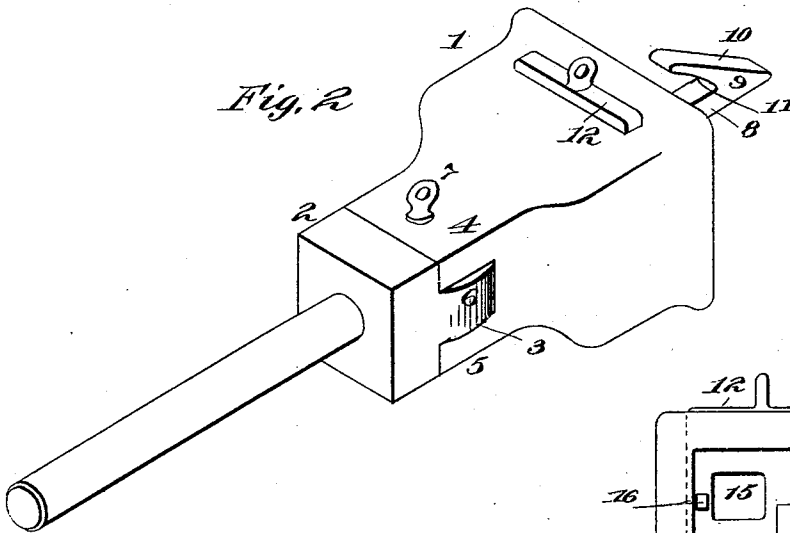


Fig. 3

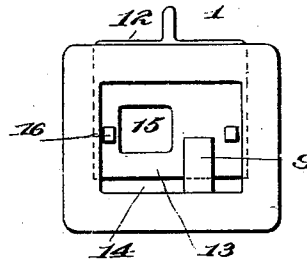
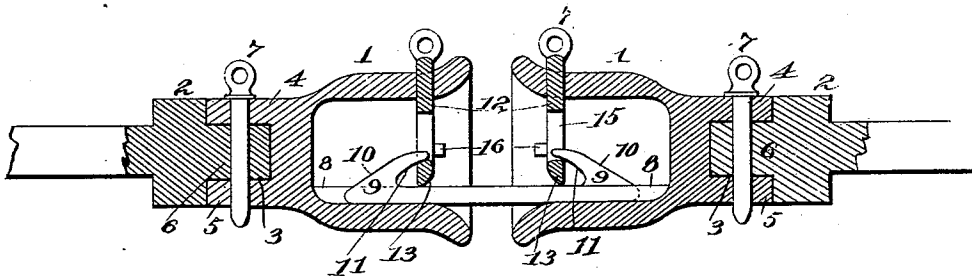


Fig. 4



Witnesses.

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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 570,684, dated November 3, 1896.

Application filed June 22, 1896. Serial No. 596,440. (No model.)

To all whom it may concern:

Be it known that I, GEORGE K. RUSSELL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to car-couplers.

My object is to provide a more cheap and simple car-coupler which will couple automatically and quickly in a highly superior manner, and one which can be uncoupled readily.

A further object is to provide a superior automatic car-coupler of improved construction, so that it will be adapted to swing laterally when the car is going around a curve.

Having these objects in view, my invention consists of certain novel features and combinations appearing more fully hereinafter.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of one of my improved couplers. Fig. 2 is a rear end perspective view; Fig. 3, a front end elevation, and Fig. 4 a longitudinal sectional view showing two couplers locked.

The numeral 1 designates my improved draw-head, and 2 the outer and improved end of a draw-bar, which, when in position on the car, is cushioned in the usual manner. The rear end of the draw-head is bifurcated at 3, thereby providing upper and lower arms 4 and 5.

The numeral 6 designates a tongue which is received in bifurcation 3 and is pivotally held therein by coupling-pin 7, which passes through arms 4 and 5 and said tongue.

The improved construction just described permits the draw-head to swing laterally when the car is going around a curve, thereby materially lessening the strain on said draw-bar.

The draw-head is open as usual, but a coupling-hook has its shank 8 received in the draw-head and securely connected to the bottom thereof at one side, while the front end of said coupling-hook projects out from the draw-head and is provided with a hook-head 9, having a front upwardly and rearwardly

inclined face 10. It will be observed that the rear portion of the hook-head is cut away deeply at 11.

The numeral 12 designates a locking-plate which is slidable vertically in suitable guide-grooves formed in the inner side walls of the draw-head. The lower front edge of this locking-plate is beveled, as at 13, and when said locking-plate is down, which is its normal position, its lower edge rests on the shank 8 of the coupling-hook, so that an opening 14 is provided between said edge and the bottom or floor of the draw-head. This locking-plate is provided with a substantially square opening 15, which is located at one side of the locking-plate, so that it will be in alinement with opening 14 and at one side of the shank of the coupling-hook. The locking-plate is provided with a limit-stop 16, which prevents the plate from being pulled out of the draw-head vertically, as when being raised prior to uncoupling. Any suitable mechanism can be employed in connection with the locking-plate, so that the latter may be raised when it is desirable to uncouple.

An inspection of Fig. 4 will disclose the manner in which two couplers lock. The couplers on two approaching cars are so arranged that when they come together the front ends of the hook-heads enter openings 14 and the beveled edges of the locking-plates ride on the inclined front portions of said hook-heads until the rearmost points of the hook-heads have been reached, whereupon the locking-plates drop by gravity, and when the cars separate slightly those portions of the locking-plates which are below the openings therein enter the notched portions in the rear of the hook-heads, so that the couplings are held in locked position. When it is desired to uncouple, the locking-plates are held at the limit of the upward movement, whereupon, when the cars separate, the couplers will be pulled apart.

Having thus described my invention, what I claim as new is—

1. In a car-coupling, the combination with draw-heads provided with hooks having hook-heads which are notched at their rear portions, of gravity-operated locking-plates having openings, thereby providing lower cross-pieces, said cross-pieces of the locking-plates

being adapted for reception in the notched portions of the hook-heads of the hooks, and the openings receiving the rear upper portions of said hook-heads.

5 2. In a car-coupling, the combination with draw-heads, of individual coupling-hooks having shanks secured to the draw-heads within the same and their hook-heads projecting out from said drawheads, and locking-plates having their lower edges resting on the shanks of the coupling-hooks, thereby forming openings 10 between the lower edges of said locking-plates and the bottoms of the draw-heads, said openings being adapted to receive the coupling- 15 heads.

3. In a car-coupling, the combination with draw-heads, of individual coupling-hooks having their respective shanks secured to the floors of the draw-heads, being located at one 20 side of the latter, the hook-heads of said hooks projecting out in front of the draw-heads, and vertically-slidable gravity-operated locking-plates normally resting on the shanks of the coupling-hooks, thereby providing openings 25 between the lower edges of the locking-plates and the floors of the draw-heads, which openings are adapted to receive the respective

hook-heads so that the locking-plates and hook-heads will be brought into engagement.

4. In a car-coupling, the combination with 30 draw-heads, of coupling-hooks having their shanks secured to the floors of the draw-heads and at one side thereof, and provided with outwardly-projecting hook-heads having front upwardly and rearwardly inclined faces and 35 rear notched portions, and vertically-slidable gravity-operated locking-plates having lower beveled edges resting on the shanks of the coupling-hooks, thereby providing openings 40 between said edges and the floors of the draw-heads, said locking-plates being also provided with openings in alinement with the aforesaid openings, thereby providing cross-pieces, said cross-pieces being adapted for reception in the 45 notches of the hook-heads and the rear upper portions of said hook-heads being received in the openings in the locking-plates.

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

GEORGE K. RUSSELL.

Witnesses:

HARRY HALLENBECK,
CHARLES GALLAGHER.