(No Model.)

C. W. PATTON.

CAR COUPLING.

No. 485,218. Patented Nov. 1, 1892.

Fig. 1.

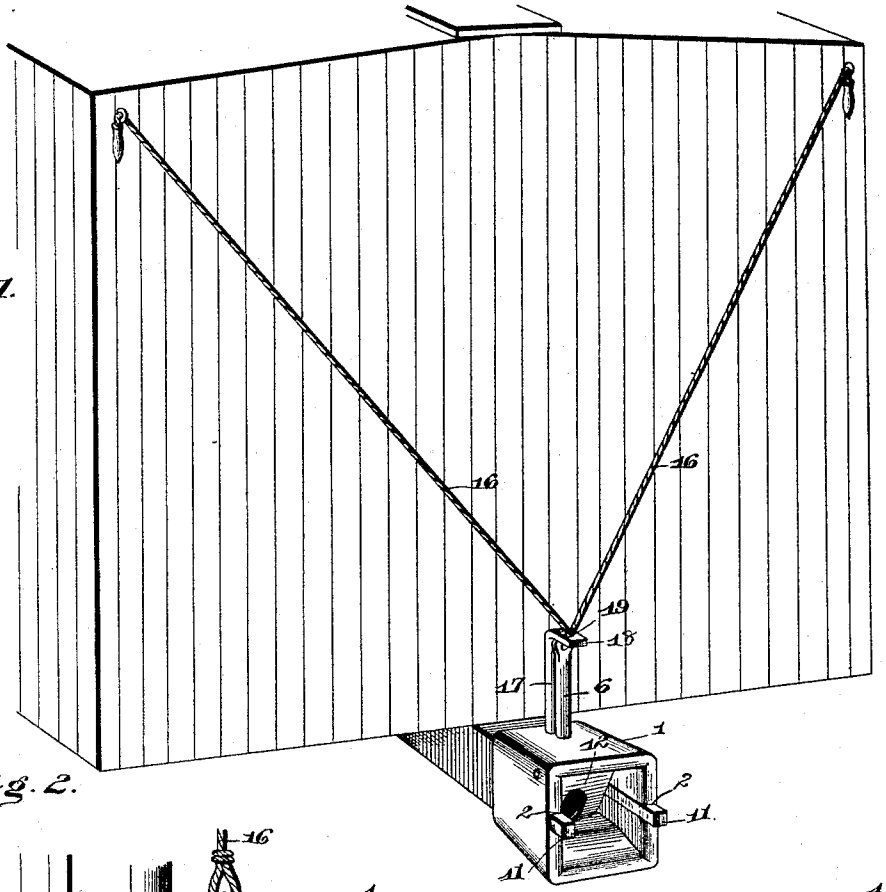


Fig. 2.

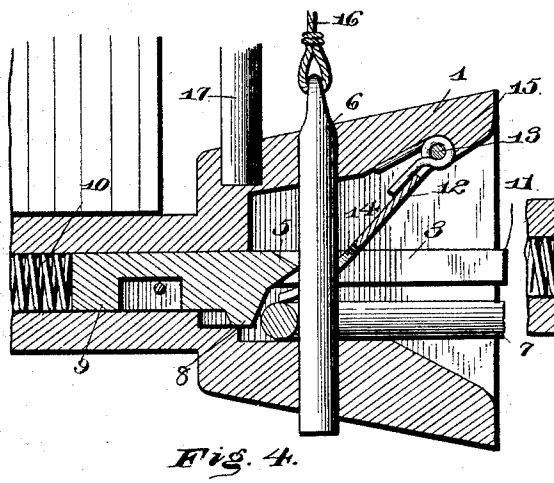


Fig. 3.

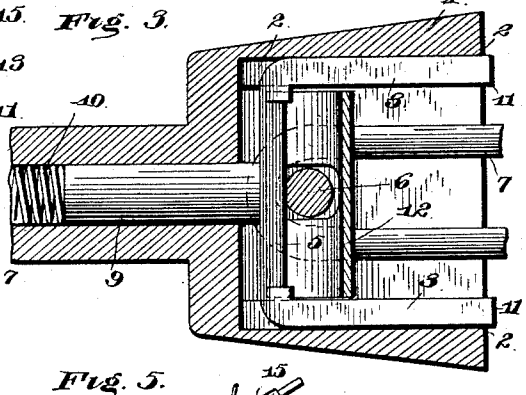
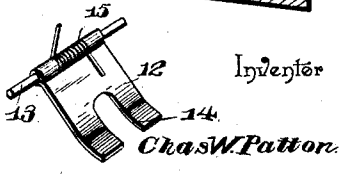


Fig. 4.

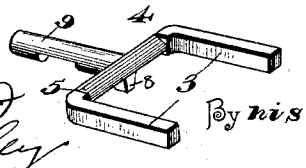
Fig. 5.



Witnesses

Chas. A. Ford

N. P. Riley



Inventor

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By his Attorneys,

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UNITED STATES PATENT OFFICE.

CHARLES WASHINGTON PATTON, OF CLARKSVILLE, INDIANA, ASSIGNOR OF TWO-THIRDS TO JOHN J. RAMSEY AND THOMAS J. RAMSEY, OF SHELBYVILLE, KENTUCKY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 485,218, dated November 1, 1892.

Application filed May 20, 1892. Serial No. 433,740. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WASHINGTON PATTON, a citizen of the United States, residing at Clarksville, in the county of Hamilton and State of Indiana, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car-couplings.

The object of the present invention is to simplify and improve the construction of that class of pin-and-link car-couplings in which the coupling-pin preparatory to coupling is supported in an elevated position and falls into engagement with a link when the cars come together.

A further object of the invention is to insure coupling each time the cars come together and to provide means for holding the link in a horizontal position preparatory to coupling.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a car-coupling constructed in accordance with this invention. Fig. 2 is a central vertical sectional view. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail perspective view of the pin-support. Fig. 5 is a similar view of the link-holder.

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

1 designates a draw-head having a longitudinal opening and provided in opposite sides thereof with horizontal grooves 2, forming guides for sides 3 of a pin-support 4, which is composed of the said sides, and a cross-piece 5, which is adapted to support a coupling-pin 6 in an elevated position and to be moved rearward by a link from beneath the coupling-pin to allow the latter to fall in engagement with the link 7. The cross-piece 5 is provided with a depending tongue 8 and a rearwardly-extending lug 9, against which bears a spiral spring 10, and which connects the spiral spring with the rear end of the pin-support. The spiral spring holds the pin-support forward beneath the coupling-pin and is adapted to be compressed to allow the coupling-pin to fall. It also holds the tongue 8 in engagement with the inner end of the link 7 to hold the latter forward and to allow the same to give when the cars come together to prevent a breakage of the link.

In order to insure coupling when the cars come together and to cause the pin to fall even though a link for any cause should fail to engage the depending tongue and move the pin-support rearward, the ends 11 of the sides 3 of the pin-support are extended outward, and when the pin-support is in its forward position the extended ends 11 project beyond the draw-head and are adapted to be engaged by the front end of the draw-head of another car and to be moved rearward by the latter to cause the coupling-pin to fall. It will thus be seen that the cars on coming together will couple, as the operation of the coupling-pin is positive and reliable.

The link is held in a horizontal position and maintained in a proper position for coupling by a plate 12, which is hinged by a pintle-rod 13 to the front and top of the draw-head, and it has its rear end 14 bifurcated to receive the coupling-pin and projecting rearward on opposite sides of the same and adapted to bear down upon the inner end of the link. The plate 12 is caused to bear upon the inner end of the link with the necessary pressure by a spiral spring 15, disposed on the pintle-rod 13, and having one arm bearing against the top of the draw-head and another arm engaging the upper face of the hinged plate 12.

The upper end of the coupling-pin is provided with an eye, to which are secured the lower ends of operating-ropes 16, which extend upward from the draw-head to the top of the cars and have their upper ends arranged at the sides thereof, so that the cars may be readily uncoupled from the tops. The vertical movement of the coupling-pin is limited by a vertical rod 17, rising from the rear part of the draw-head, and is provided at its upper end with a horizontal arm 18, extending outward over the coupling-pin and provided with

an opening 19, through which pass the operating-ropes 16. The horizontal arm 18 forms a stop to prevent the coupling-pin being entirely withdrawn from the draw-head, and it also serves as a guide for the operating-rope in order that the direct vertical pull may be given to the coupling-pin, so as to render the operation of uncoupling positive.

It will be apparent that the car-coupling is simple and comparatively inexpensive in construction and positive and reliable in operation, and should either the pin-support or link-holder become injured or broken they may be readily removed, the former by lifting the link-holder and withdrawing it and the latter by simply removing the pintle-rod.

The upper end of the hinged plate is provided with eyes to receive the pintle-rod, and the spiral spring is arranged between the eyes.

What I claim is—

1. In a car-coupling, the combination of a draw-head provided in its sides with longitudinal grooves, an approximately-U-shaped pin-support comprising parallel sides arranged in the grooves, and a cross-piece connecting the inner ends of the sides and adapted to support a pin, and a spring for moving the pin-support forward, substantially as described.

2. In a car-coupling, the combination of a draw-head provided in its sides with longitudinal grooves, an approximately-U-shaped pin-support comprising parallel sides arranged in the grooves and having extended ends projecting beyond the draw-head, a cross-piece connecting the inner ends of the sides and adapted to support a coupling-pin, and a spring for moving the pin-support forward, substantially as described.

3. In a car-coupling, the combination of a draw-head, a coupling-pin, a pintle-rod arranged transversely of the draw-head at the top thereof, a plate hinged to the draw-head by the pintle-rod and having its rear end bifurcated and adapted to engage the link, and a spring disposed on the pintle-rod and pressing the plate downward, substantially as described.

4. In a car-coupling, the combination of a draw-head provided in its sides with horizontal grooves, a pin-support provided with side bars arranged in the grooves and having a cross-piece connecting the side bars, a coupling-pin arranged in advance of the cross-piece, and a plate hinged to the top of the draw-head and having its rear end bifurcated and extending rearward beyond the coupling-pin on opposite sides of the same, substantially as described.

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

CHARLES WASHINGTON PATTON.

Witnesses:
JOHN H. SIGGERS,
BERNICE A. WOOD.