(No Model.)

E. HAYS.

CAR COUPLING.

No. 513,395. Patented Jan. 23, 1894.

Fig. 1.

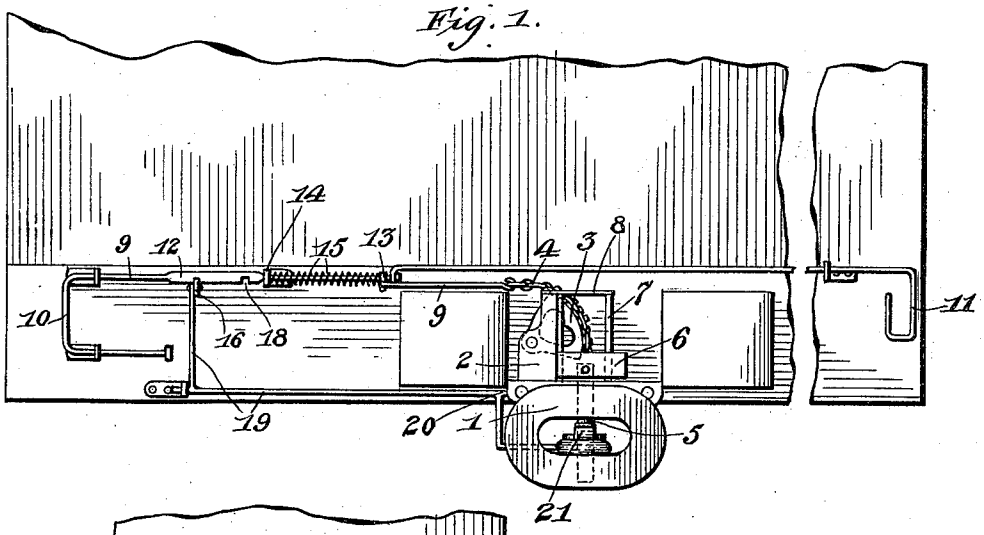


Fig. 2.

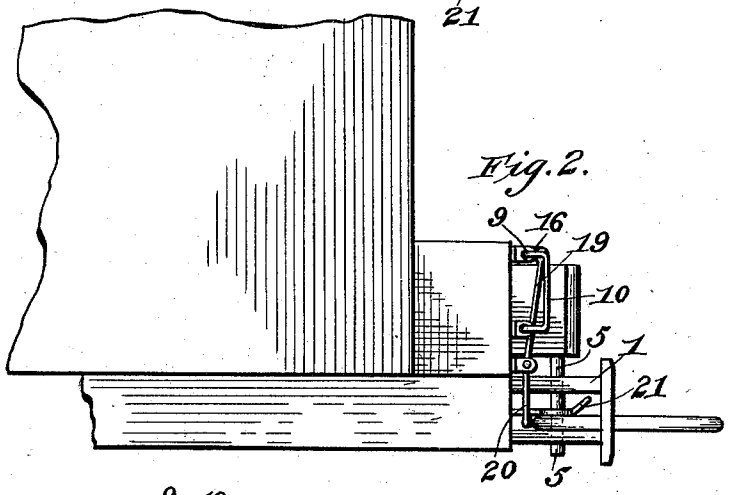


Fig. 3.

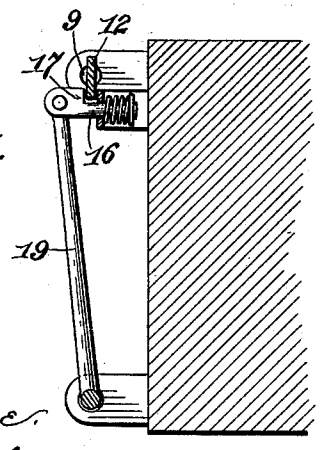
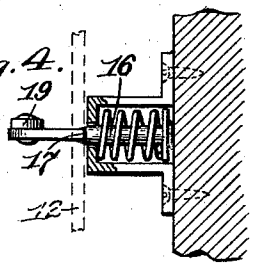


Fig. 4.



Witnesses

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 513,395, dated January 23, 1894.

Application filed May 26, 1893. Serial No. 475,593. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH HAYS, of Warsaw, Kosciusko county, Indiana, have invented a new and useful Improvement in Automatic Car-Couplers, of which the following is a clear and exact specification, reference being had therein to the accompanying drawings.

The object of my invention is to overcome the necessity of persons standing between the cars to couple or uncouple the same and my device may be briefly described as follows:

I use the ordinary pin and link coupling and my invention can be readily applied to the form now in use. To the pin I connect a chain which passes over a gear segment pivoted to one side of the coupling. This chain is connected to a sliding rod which extends to either side of the car ending in a suitable handle. This rod is spring-actuated to drop the pin and couple the cars, and is held normally out of contact by a spring lock released by the entrance of the link.

To more fully describe my device reference is made to the accompanying drawings of my invention, in which—

Figure 1 is an end elevation of a car with my coupling attached. Fig. 2 is a side elevation of the car and coupling. Figs. 3 and 4 are details of the locking latch.

In the drawings, the draw-head 1 is supported in the ordinary manner and having secured to it, the vertical standard 2 on which is pivoted the gear segment 3, so that the chain 4 attached to the pin 5 will pass over it in a path always over the center of the pin. To this pin the cross-head 6, is secured. Adjacent to the standard is the column or rod 7 mounted in the draw-head and passing through the cross-head 6 to hold and guide it in connection with the tongue on the standard. The standard 2 and rod 7 may be connected at their upper ends by a brace 8. The chain passes over the gear segment and is connected to the sliding rod 9 which extends over the coupling and along the end of the car to each side. At either end of the rod suitable handles 10, 11 are formed by bending the rod into the desired shape, the portion of the rod at 10 being bent back upon itself and passed through a bracket so that it may act as a guide to hold the flattened portion 12 on the rod 9 in its correct position, in relation to the latch.

On the rod 9 is a stop 13, between which and the bracket 14 is the spring 15 embracing the rod 9 and tending to keep it normally pushed toward the draw-head for allowing the pin to fall into engaged position, by gravity. To hold the pin in elevated position a lock is provided consisting of a spring-actuated latch 16 adapted to traverse the path of the flattened portion 12 of the rod 9. A portion of this latch 16 is rounded and embraced by a spring which tends to keep the head 17 drawn in toward the car and rod. When the pin is in raised position the head 17 enters the notch 18 in the flattened portion 12 of the rod 9, the lower edge of which always bears on the rounded shank of the latch 16.

To provide for the automatic release of the pin and its connections one arm of a pivoted bell-crank lever 19 is attached to the latch 16, its other arm 20 projecting into the draw-head and in the path of the link. To make this action more certain, a spring guide 21 is secured in the draw-head to guide the link to press back the rod 20 and withdraw the latch 16 against the action of its spring and allow the rod to be pressed forward and permit the pin to fall.

To uncouple, a pull on the handle 10 or push on end 11 will raise the pin and as soon as the link leaves the head the spring on the latch 16 will draw the head 17 into the notch 18 and thus hold the pin in position to again be coupled on the entrance of the link.

Having thus described my invention, the following is what I claim and desire to secure by Letters Patent:

1. In an automatic car coupler the combination of a draw-head, guides on the draw-head, a pin, a cross-head sliding in said guides, a chain secured to the pin and cross-head a guiding segment, a sliding rod to move the chain and a lock to hold the connections and pin in elevated positions; substantially as described.

2. In an automatic car coupler, the combination of the draw-head, pin and guides, a chain secured to the pin and passing over the guiding segment, the spring-actuated sliding rod, the sliding latch to engage the notch in the rod and the lock-releasing lever; substantially as described.

ELIJAH HAYS.

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