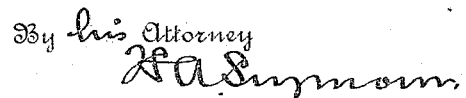


CAR COUPLING.

Patented Apr. 24, 1888.



UNITED STATES PATENT OFFICE.

WILLIAM B. SEAL, OF BALTIMORE, MARYLAND, ASSIGNOR TO WILLIAM S. REINS, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 391,648, dated April 24, 1888.

Application filed June 28, 1887. Serial No. 242,763. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. SEAL, of Baltimore, in the State of Maryland, 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 an improvement in car-couplers.

The object is to provide simple and inexpensive mechanism for attachment to any car, whereby the coupling may be made automatic, or both the coupling and uncoupling and the guiding or controlling link may all be operated from the side of the car or any other convenient place.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figures 1 and 2 are elevations from opposite sides of the car, showing the position of the parts of the coupling mechanism when the pin has been withdrawn from the draw-head, the dotted lines showing the position of parts when coupled. Fig. 3 is a front elevation. Fig. 4 is a modification.

A represents the forward end of the car, and B the ordinary bell-mouthed draw-head. Depending straps or hangers C are secured to the bottom of the car and provided with boxes *a*, in which a longitudinally-adjustable rocking shaft, D, is journaled. This shaft D is provided at each end with a handle, *b*, and at points on opposite sides of the draw-head with the hook fingers *c c'*, the function of which will be later mentioned.

Loosely mounted on the shaft D, or else on a depending bracket, if desired, is an operating-lever, E, which indirectly regulates the coupling-pin. Projecting preferably at right angles to this lever and formed integral therewith is an arm, E', having a weight, F, on its upper end. The rear end of the lever may be guided in its rocking movement by the guards *d*, and the forward end of the lever is provided with an elongated slot, *e*. A link-operating slide, G, having a laterally-projecting arm, G',

is loosely mounted in the socket *g*, and its lower end is pivoted to the operating-lever E in such a manner that the pivot may slide in the elongated slot *e*.

Pivoted to the arm G' is a coupling-pin holder, G², which preferably has either a round, square, or elongated slot, wherein a metallic casing, G³, provided with flanges *g*³, for holding the casing in place, is adapted to loosely slide, and in which casing the pin H loosely passes, said pin extending into the top of the draw-head out of the way, and yet in readiness to drop into the link.

Conveniently located on the opposite side of the draw-head from the mechanism just described there is a hanger, J, and pivoted thereto a link-controller, K. The link-controller consists of two parts, preferably, one section having slots *k* and the other headed pins *h*, extending into these slots, so as to allow the sections a limited longitudinal slide, in order that the concussion will not injure the controller when the arm L is guiding a link and struck suddenly and harshly by an approaching car. This car-controller may have a spring behind the outer section, if desired, in order to automatically extend the parts as much as possible.

From the position of the hook-fingers *c* on the rocking shaft D, when the latter is slid longitudinally in its sockets, one finger may be brought in position to operate the link-controller, and by shifting the shaft in the opposite direction and until another finger, *c'*, rests under the operating-lever E, by again rocking the shaft in a similar manner by the abutment of the finger beneath the lever, the latter is elevated and the pin withdrawn from the draw-head. In a similar manner the finger may be easily made to impinge the upper face of lever E, and thereby drop the coupling-pin should it refuse to drop automatically; but from the construction this will seldom be necessary, as from the position of the weight F back and above the pivotal support of lever E by the striking of the buffers of two cars together this weight will tend to drop forward, thus forcing down the pin. The weight also serves the purpose of holding the pin elevated when in its backwardly-inclined position.

In the modification shown in Fig. 4 the shaft

D is simply a rocking shaft and is not capable of being longitudinally shifted, as in former constructions; but in this construction the finger *c* rests all the time beneath the lever E and above or below the link-controller K, which latter, in this case, is jointed at *e*. The cam or other device M is located and adapted by the rotation of the shaft to gradually elevate the link-controller.

- 10 Economy, simplicity, and sure and exact operation of parts render this coupler desirable for general use.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention; hence I do not wish to limit myself to the particular construction herein set forth; but,

- 20 Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupler, the combination, with a draw-head and a rocking shaft, of a coupling-pin-operating lever, a slide pivoted thereto, and devices on the shaft for operating the lever, substantially as set forth.

2. In a car-coupler, the combination, with a draw-head and a rocking shaft located below same, of a pivoted operating-lever, a slide loosely connected to said lever and carrying a pin-holder, a link-controller, and devices secured to the shaft and engaging, respectively, the link-controller and operating-lever, substantially as set forth.

3. In a car-coupler, the combination, with a draw-head, rocking shaft located below same, and a coupling-pin-operating lever, of a weighted arm projecting from said lever and a device secured to the rocking shaft for operating the lever, substantially as set forth.

4. In a car-coupler, the combination, with a rocking shaft, an operating-lever, a slide loosely pivoted thereto, and a weighted arm projecting from the lever, said slide having a pin-holder pivoted thereto, of an extensible link-controller and devices for operating the controller and the operating-lever, substantially as set forth.

5. In a car-coupler, the combination, with a rocking shaft, of a pivoted extensible link-controller and a device secured to the shaft for operating the controller, substantially as set forth.

6. In a car-coupler, the combination, with a coupling-pin-operating lever, of a sliding and rocking shaft carrying a device adapted to engage said lever.

7. In a car-coupler, the combination, with a link-controller, of a sliding and rocking shaft carrying a device adapted to engage the link-controller for elevating same, substantially as set forth.

8. In a car-coupler, the combination, with a coupling-pin-operating lever and a link-controller, of a sliding and rocking shaft carrying devices adapted to engage said lever and controller for operating same, substantially as set forth.

9. In a car-coupler, the combination, with an operating-lever and slide, of a pin-holder having an elongated slot adapted to receive the pin, substantially as set forth.

10. In a car-coupler, the combination, with an operating-lever and slide, of a slotted pin-holder pivoted to the slide and a casing mounted in the slot, substantially as set forth.

11. In a car-coupler, the combination, with a shaft, of a pin-operating device, a link-controller, and devices secured to the shaft whereby the pin-operating device or link-controller can be moved independently of each other, substantially as set forth.

12. In a car-coupler, the combination, with a sliding and rocking shaft, of a pin-operating lever, a link-controlling device, and devices secured to the shaft and adapted to engage said lever and link-controlling device for operating them, substantially as set forth.

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

WILLIAM B. SEAL.

Witnesses:

W. S. REINS,

G. F. DOWNING.