(No Model.)

E. A. YEATON.

CAR COUPLING.

No. 469,110. Patented Feb. 16, 1892.

Fig. 1.

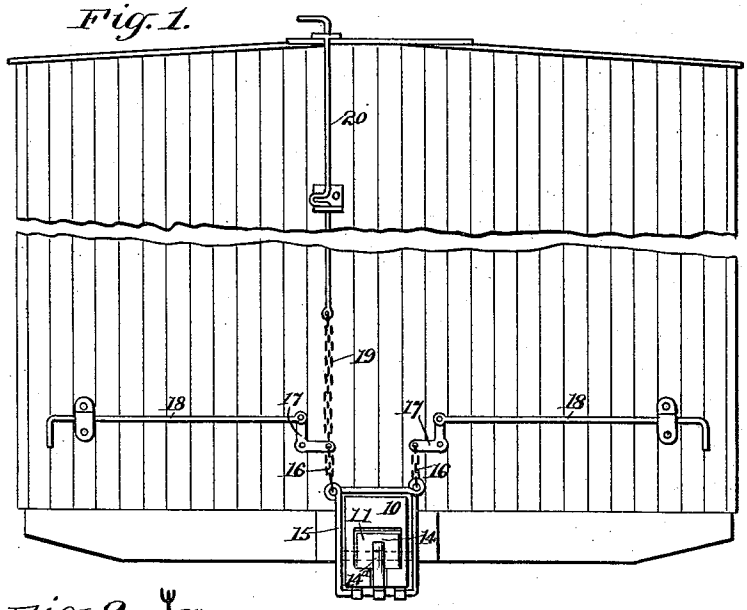


Fig. 2.

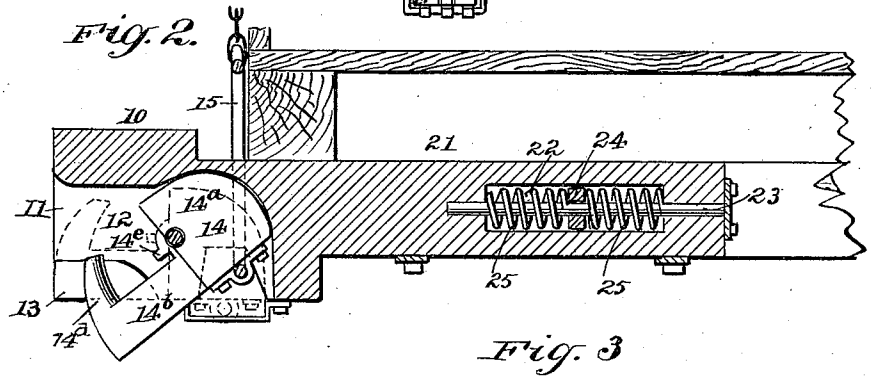
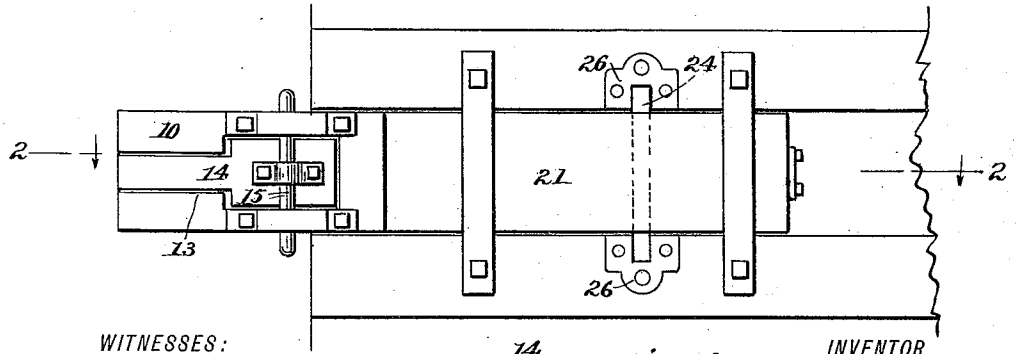


Fig. 3

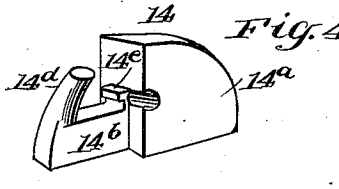


WITNESSES:

J. L. Boswell

E. M. Clark

Fig. 4.



INVENTOR

E. A. Yeaton

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDGAR A. YEATON, OF LYONS, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 469,110, dated February 16, 1892.

Application filed September 4, 1891. Serial No. 404,710. (No model.)

To all whom it may concern:

Be it known that I, EDGAR A. YEATON, of Lyons, in the county of Burt and State of Nebraska, have invented a new and useful Improvement in Car-Couplings, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car-couplers, and has for its object to provide a coupler of exceedingly simple and durable construction and capable of manipulation to couple or to uncouple a car from either side or from the top thereof; and a further object of the invention is to provide the draw-bar with an improved form of spring, whereby it will have a cushion-bearing in whatever direction the car may move.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is an end view of a car having the coupler applied thereto. Fig. 2 is a longitudinal section through the draw-head, the draw-bar, and a portion of the car, taken practically on the line 2 2 of Fig. 3. Fig. 3 is a bottom plan view of the draw-head and draw-bar, and Fig. 4 is a detail perspective view of the coupling hook or pin.

The draw-head 10 is provided with the usual link-opening 11 in its forward end, leading into an interior chamber 12. The chamber 12 has a longitudinal slot 13, produced in about the center of its bottom wall, to admit of the upward and downward movement of a coupling-pin 14, which pin is pivoted in any suitable or approved manner within the chamber 12 of the head. The upper rear wall of the chamber 12 is concave, as best shown in Fig. 2.

The coupling-pin 14 comprises a rear or body section 14^a, as best illustrated in Fig. 4, through which the pivotal pin passes, the upper end whereof is cylindric to fit into and turn in the concave portion of the chamber 12. From the forward edge of the body 14^a an arm 14^b is horizontally projected, provided with an integral upwardly and rearwardly extending horn 14^d, preferably circular in cross-section, and a horizontal lip 14^e is projected from the front edge of the body-section 14^a a slight distance above the top of the horizontal arm 14^b.

It will be observed that the aperture in the coupling-pin to receive the pivot-pin is located at the front portion of the body, and consequently the rear end of the coupling-pin overbalances the forward end and normally holds the latter portion in a horizontal position, the weight being properly distributed to produce this result.

A yoke 15 is secured to the lower portion of the body-section of the coupling-pin, which yoke passes through a suitable recess (shown in dotted lines, Fig. 2) at the bottom of the draw-head, up at each side of the same, and across its upper surface, the yoke being therefore, essentially, rectangular in general contour, as shown in Fig. 1. This yoke at its opposite upper ends is provided with eyes, and the eyes are connected by chains 16 to elbow-levers 17, the latter being fulcrumed upon the end of the car above at each side of the draw-head, and each elbow-lever has connected therewith a pull rod or chain 18, which are held to slide in suitable bearings and extend nearly to the sides of the car, as shown in Fig. 1. One of the elbow-levers, through the medium of a chain 19, is connected with a perpendicular pull-rod 20, also held to slide upon the end of the car, the latter pull-rod being carried upward to the top of the car convenient to the brake.

The draw-bar 21 constitutes, preferably, an integral portion of the draw-head, and the said draw-bar is provided near its inner end with a longitudinal opening 22, extending through from side to side, the said opening being somewhat lengthy. A rod or bolt 23 is passed through the inner end of the draw-bar, longitudinally through the central portion of the opening 22, and through the forward wall of that opening. A cross-bar 24 is loosely mounted upon the rod 23 within the opening of the draw-bar, and a spring 25 is coiled around the rod at each side of the draw-bar against the end walls of the openings, as is best shown in Fig. 2. The cross-bar extends beyond the sides of the draw-bar, and its extremities fit snugly in sockets 26, inserted in the walls of the groove or compartment in the

bottom of the car in which the draw-head has movement. By constructing a draw-bar in this manner it will be observed that the bar and head have a spring-cushion limiting both their forward and rearward movement and that the said cushions effectually prevent undue shock to the draw-head or to the contents of the car.

In operation the cars are coupled or uncoupled either from the sides or from the top by manipulating the pull-rods 18 or 20—that is, drawing them outward—which action serves to elevate the weight at the inner end of the coupling-pin and permits of a link entering the draw-head in the process of coupling, or the link dropping out when uncoupling. When coupling, after the link has entered the draw-head the pull-rods are released and the coupling-pin by gravity assumes its normal or horizontal position, the horn 14^d thereof passing upward through the link.

A coupling constructed as above set forth is not only simple and durable, but is exceedingly economic, and may be used to couple with an opposing draw-head carrying any form of link.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a car-coupler, the combination, with a draw-head the link-chamber of which is provided with an opening in its bottom wall, and a coupling-pin fulcrumed in said link-chamber above the said slot, the pin comprising a heavy body portion at the rear of its fulcrum, an arm extending from the front of the body portion, a horn projected upwardly and rearwardly from the outer end of the arm, and a lug located over the rear portion of the arm, the lug, horn, and arm being lighter than the body portion of the pin, of a yoke connected with the heavier portion of the pin, extending upward around the draw-head, and provided at its upper corners with eyes, bell-crank levers connected with the eyes of the said yoke, whereby it may be lifted, horizontal rods 18, connected with said levers and extending to the sides of the car, and the vertical sliding rod connected with one of said levers and extending to the top of the car, as and for the purpose set forth.

2. In a car-coupling, the combination, with the draw-bar provided with a longitudinal slot therein, and the slideways of the car, in which the draw-bar has movement, of sockets secured to the said slideways, a rod passed longitudinally through an opening in the draw-bar, a cross-bar mounted upon the rod within the opening and having its ends confined in said sockets, and springs coiled around the rod between the cross-bar and the ends of the opening in the draw-bar, substantially as shown and described.

EDGAR A. YEATON.

Witnesses:
W. D. SMITH,
A. H. WOLFE.