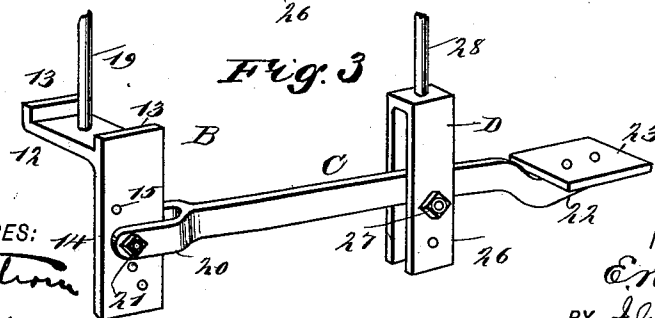
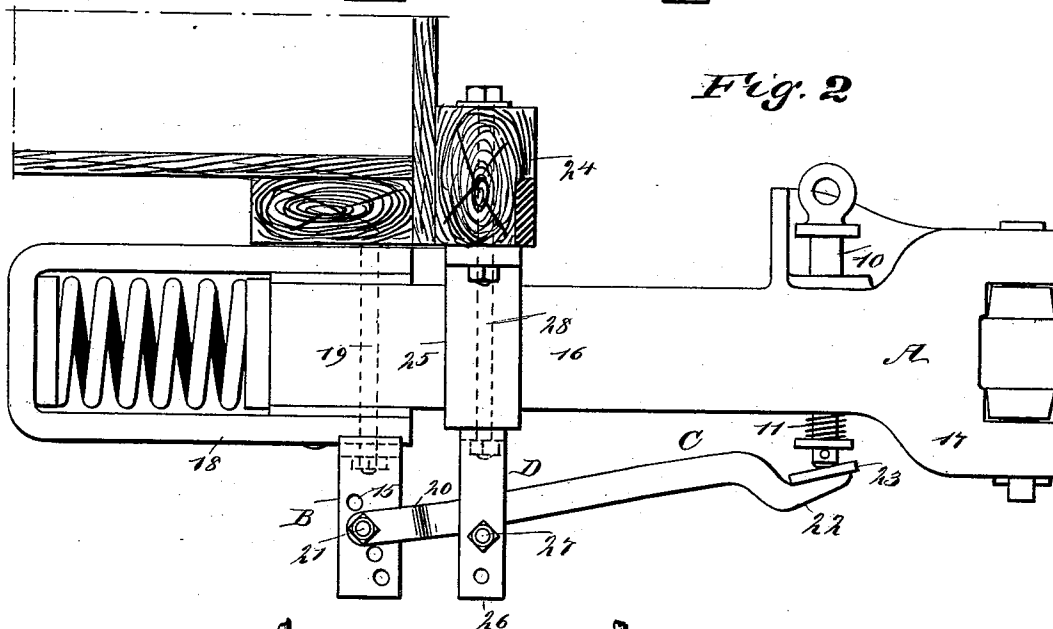
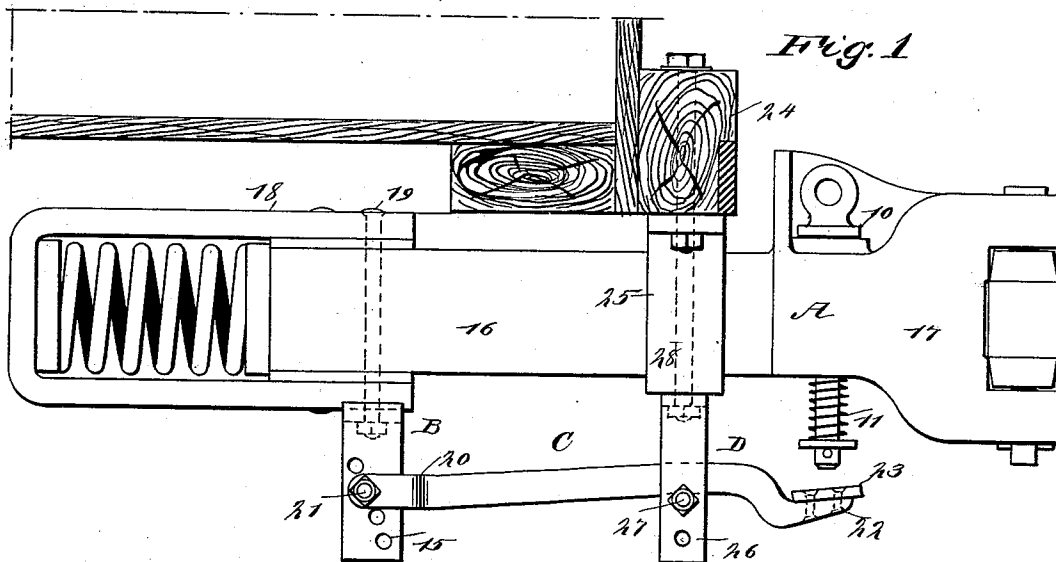


(No Model.)

E. N. & J. J. BYERS.
CAR COUPLING.

No. 508,277.

Patented Nov. 7, 1893.



WITNESSES:

J. A. Beigstrom
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UNITED STATES PATENT OFFICE.

EDWARD NELSON BYERS AND JACOB JACOBSON BYERS, OF CAMERON,
MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 508,277, dated November 7, 1893.

Application filed July 6, 1893. Serial No. 479,777. (No model.)

To all whom it may concern:

Be it known that we, EDWARD NELSON BYERS and JACOB JACOBSON BYERS, of Cameron, in the county of Clinton and State of Missouri, have invented a new and Improved Safety Attachment for Car-Couplers, of which the following is a full, clear, and exact description.

Our invention relates to a safety attachment for car couplers, and especially to a coupler of the Janney type, and it has for its object to provide an attachment whereby in the event the draw bar should by any possibility be drawn out from its proper seat, the attachment will act automatically and instantly to uncouple the loosened drawhead from the opposing car.

A further object of the invention is to provide a means whereby the attachment may be regulated in a manner to cause an uncoupling after the drawhead has been drawn from its seat a predetermined distance, and in this manner the possibility of the drawhead or drawbar doing damage when loosened from its seat be effectually overcome.

The invention consists in the novel construction and combination of these 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 and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a coupler of the Janney type, illustrating the coupler in its proper or normal position, and the application of the attachment thereto. Fig. 2 is a view similar to Fig. 1, illustrating the draw bar and draw head as drawing from its seat to a dangerous extent, and likewise illustrating the application of the attachment to the knuckle pin, and effecting an uncoupling with an opposing car; and Fig. 3 is a detail perspective view of the attachment.

In carrying out the invention the coupler A illustrated is of the Janney or knuckle type, in which the knuckle or coupling pin 10, is located at one side of the drawhead, the pin extending down below the under face of the draw head, being held in the lower position

by a spring 11. The attachment, which is illustrated in Fig. 3, comprises practically but three pieces, namely, a bracket B, a lever C and a guide D. The bracket is preferably made somewhat angular or inverted L-shape in general contour, and its horizontal member 12, is provided with end flanges 13, while its vertical member 14, has produced in it a series of apertures 15, which are preferably diagonally located.

The bracket B, is adapted to be attached permanently to the drawbar 16 of the drawhead 17 of the coupler, and its horizontal member fits up close to the drawbar, or to the draft yoke 18, thereof, preferably the latter, the flanges 13 projecting upward and in contact with either the drawbar or draft yoke, while the said horizontal member is rigidly attached to the draw bar or draft yoke through the medium of a bolt 19, or its equivalent. In this manner the vertical member of the bracket is located at one side of the drawbar, being so placed that it is upon the same side as the coupling or knuckle pin 10.

The lever C, is preferably provided with a bifurcated rear end 20, which receives between its members the vertical member of the bracket B; and the said inner end of the lever is pivotally connected with the bracket by passing a suitable bolt 21 through the members of the lever and through one of the bracket apertures 15. The lever is in a measure inclined upon its lower edge, the inclination being upward in direction of its free end, and the free end of the lever is preferably curved downward and is then carried horizontally forming a step 22, and upon this step a plate or platform 23, is bolted or otherwise rigidly secured, the said plate or platform being in a horizontal position.

The drawbar is usually supported beneath the sill 24 of a car by means of a stirrup 25, and the guide D, is either secured to this stirrup or to both the stirrup and the sill. In other words the bracket D is in no manner attached to the drawhead or the drawbar, it being permanently secured to any convenient fixed support carried by the car body, while the bracket B, being secured to the drawbar will move with it in whatever direction it may be carried.

The guide D, comprises a slotted body 26, through the opening or slot whereof the lever C extends, the lower edge of the lever resting upon a guide bolt or pin 27, adjustably placed in the body and extending across the slot or opening thereof. The connecting medium between the guide and its support consists preferably of a bolt 28.

In the operation of this device the platform or plate 23 is so located as to be at all times immediately beneath the coupling or knuckle pin 10, and no matter in what direction the drawhead or drawbar may be moved, the platform end of the lever will always remain beneath the knuckle pin. In the event that the drawhead or drawbar should by any possibility be so disconnected from its seat as to be drawn outward from beneath the car to a dangerous extent, the lever C traveling with the drawhead will, as it is carried forward or outward, so ride upon the guide pin 27 that its forward or platform end will be elevated and will so bear against the knuckle or coupling pin 10 as to force the latter upward to the uncoupling position, as shown in Fig. 2, thereby releasing the car from the drawhead which has become unseated, and avoiding dangers consequent upon such a contingency.

It is evident that by changing the fulcrum of the lever, its operative or platform end may be made to rise in a manner to force the knuckle pin upward after the drawhead and drawbar have been carried outward from their normal position to a predetermined extent. In any event the attachment may be relied upon as effecting an uncoupling of a damaged drawhead or draw bar from an opposing drawhead or drawbar when such an uncoupling is desirable, and the uncoupling

will be effected in a thoroughly automatic manner.

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

1. A safety attachment for car couplers, the same consisting of an uncoupling lever connected with the draw bar and having one end located beneath the coupling pin, and a guide connected with a fixed support, whereby the lever is elevated at the end beneath the coupling pin as the draw bar or draw head of the coupler is carried outward from a predetermined position, as and for the purpose set forth.

2. A safety attachment for car couplers, the same consisting of a lift lever adjustably connected with the draw bar or draw head of the coupler, the free end of the lever being located beneath the coupling device of the drawhead, and a stationary guide upon which the lever rides, as and for the purpose set forth.

3. In a safety attachment for car couplers, a lift lever adjustably connected with the draw head or draw bar, said lever being provided with an inclined lower edge and a guide device upon which the said inclined end of the lever rides, a portion of the lever being located permanently beneath the coupling device of the coupler, whereby when the draw head or draw bar is drawn outward from its seat to a predetermined extent the lever will rise and effect an uncoupling, as and for the purpose specified.

EDWARD NELSON BYERS.
JACOB JACOBSON BYERS.

Witnesses:

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C. H. HAMMOND.