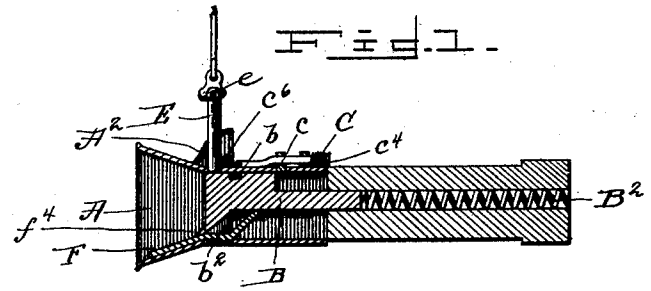
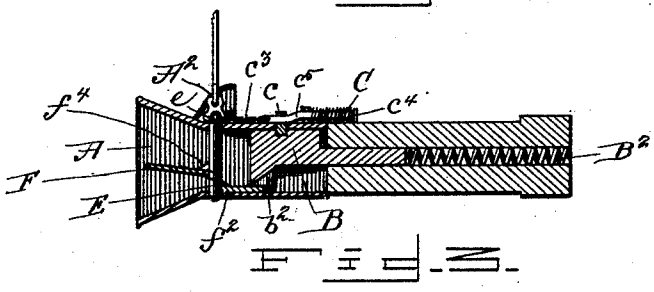
(No Model.)

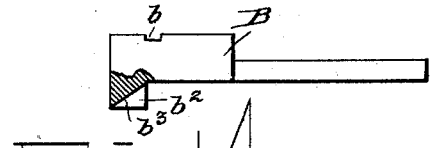
C. JOHNSON & N. OLANDER.

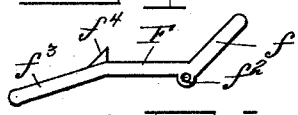
CAR COUPLING.

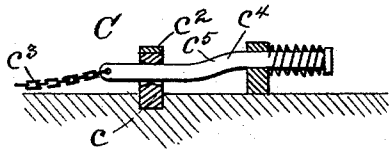
No. 485,042. Patented Oct. 25, 1892.











Witnesses,
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Inventors.
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By their Attorneys,
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UNITED STATES PATENT OFFICE.

CHRIST JOHNSON AND NILS OLANDER, OF WAUSAU, WISCONSIN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 485,042, dated October 25, 1892.

Application filed June 4, 1892. Serial No. 435,490. (No model.)

To all whom it may concern:

Be it known that we, CHRIST JOHNSON and NILS OLANDER, citizens of the United States of America, residing at Wausau, in the county of Marathon and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in car-couplings, particularly to that class wherein a gravity-pin is employed and a latch automatically released as the cars are uncoupled.

The object of the invention is to provide means in a car-coupling whereby the coupling shall be automatic in operation; furthermore, to employ such peculiar means and construction in combination with a gravity-pin, whereby the link may be automatically elevated and supported in horizontal position; furthermore, to obviate all danger arising from binding, sagging, or bending of the link in the operation of coupling, and furthermore, to produce a strong, durable, and thoroughly efficient device comparatively inexpensive of manufacture.

With these objects in view the invention consists in a car-coupling comprising the draw-heads having the sliding spring-bumpers arranged therein; furthermore, in the combination, with the draw-heads having the spring-bumpers arranged therein, of the spring-latches adapted to engage suitably-formed notches of said bumpers as the latter are forced backwardly by the link when the cars come together; furthermore, in the combination, with the spring-bumbers having notches adapted to be engaged by spring-latches, of the gravity-pin connecting with said latches by chains, the chains guided on pulleys, whereby as the pin is elevated to uncouple the cars the latch will automatically disengage the notch and the bumper will be forced outwardly by a spring to support said pin; furthermore, in the combination, with the spring-bumpers arranged in the draw-heads, said bumpers having notches formed therein and adapted to be engaged by spring-latches, and the latch controlled and actuated by the movement of the gravity-pins, of the pivoted arm for supporting the link in a horizontal position, thus insuring against failure in coupling, for example, by sagging or binding. Finally the invention consists in various novel details of construction, whereby the objects are attained.

In the accompanying drawings, forming a part of this specification, wherein like letters of reference indicate corresponding parts in the several views, Figure 1 is a central longitudinal sectional view of a draw-head constructed and arranged to embody certain improvements herein described. Fig. 2 is a similar view showing the parts as they appear in a locked position, and Figs. 3 and 4 are detail views of the bumper and link-supporting arm. Fig. 5 is an enlarged view of the spring-latch.

In the drawings, A indicates the draw-head, having arranged therein a bumper B, the latter being provided with a notch b, which is adapted to be engaged by a spring-latch C, secured on the upper side of the draw-head, as shown in Fig. 1. The bumper B is also provided with a slot b^2, having the inclined portion b^3, whereby as the cars come together the link D abuts against the face of the bumper, and, forcing it backwardly against the action of the spring B^2, allows the gravity-pin E to fall and engage the link at the same time the angular extremity f of the pivotally-supported arm F is engaged by said inclined portion of the slot b^2 and turned on its pivot f^2 until it assumes a horizontal position, Fig. 2. As the extremity f of the arm F is engaged by the incline b^3 and forced downwardly to a horizontal position, the opposite extremity f^3 is moved upwardly, carrying with it the link, Fig. 2. Thus it will be at once understood that the link is normally held in a position to enter the opposite draw-head as the cars are brought together and all danger arising from binding, sagging, or bending of the link obviated in a satisfactory manner. The spring-latch C is so arranged as to engage the notch b of the bumper on its rearward movement and retain the latter against the action of the spring B^2 until the gravity-pin is elevated to uncouple the cars, and consists of a vertically-sliding apertured dog c, automatically actuated by the spring c^2 to engage the notch b. The chain connections c^3 between the gravity-pin and a spring-held rod c^4, having an inclined portion c^5, are guided

by the pulleys c^6, mounted on studs of the hood A^2 and secured to the apertured lugs *e e* of the gravity-pin, whereby as said pin is elevated motion will be transmitted to the rod c^4 through the connections c^3, and the inclined portion of this rod, sliding through the aperture of the dog *c*, will tend to elevate said dog, disengaging the same and releasing the bumper, the latter being forced outwardly by the spring, as will be readily understood. As the bumper is forced outwardly, the lower end of the inclined portion of the slot b^2 will engage a lug or projection f^4 of the pivoted arm F, turning the latter on its pivot to a position shown in Fig. 1, where it is retained until the next operation.

Having fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a car-coupling, the draw-heads having spring-pressed bumpers arranged therein, the spring locking-latches adapted to engage said bumpers, the gravity-pin suitably connected with said latches, and the link-elevating arm automatically operated by said bumper, substantially as and for the purpose described.

2. In a car-coupling, the combination, with the draw-heads, of the spring-pressed bumpers arranged therein, said bumpers having notches adapted to be engaged by spring locking-dogs, the rods sliding through apertures of said dogs and provided with inclined portions, the connections between said rods and the gravity-pins, and the pivoted link-elevating arms having oppositely-inclined ends and adapted to be automatically operated by an inclined portion of said bumper, substantially as and for the purpose set forth.

3. In a car-coupling, the draw-heads A, the bumpers B, having notches *b*, the springs B^2, the latches C, comprising the apertured dogs *c* and the rods c^4, the springs c^2, the chain connections c^3, and the pulleys c^6, in combination with the gravity-pin E, having lugs *e e*, the elevating-arms F, having oppositely-inclined extremities, the inclined slotted portions f^2 of said bumpers engaging said extremities to automatically elevate and support the link in a horizontal position, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

CHRIST JOHNSON.
NILS OLANDER.

Witnesses:
MILO WOODBURY,
ED. B. PARKER.