(No Model.)

W. E. WALL & J. W. HADDICK.

CAR COUPLING.

No. 457,626. Patented Aug. 11, 1891.

Fig. 1

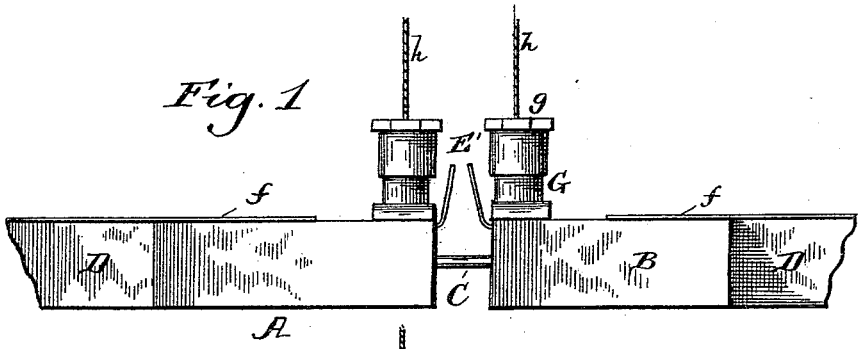


Fig. 2.

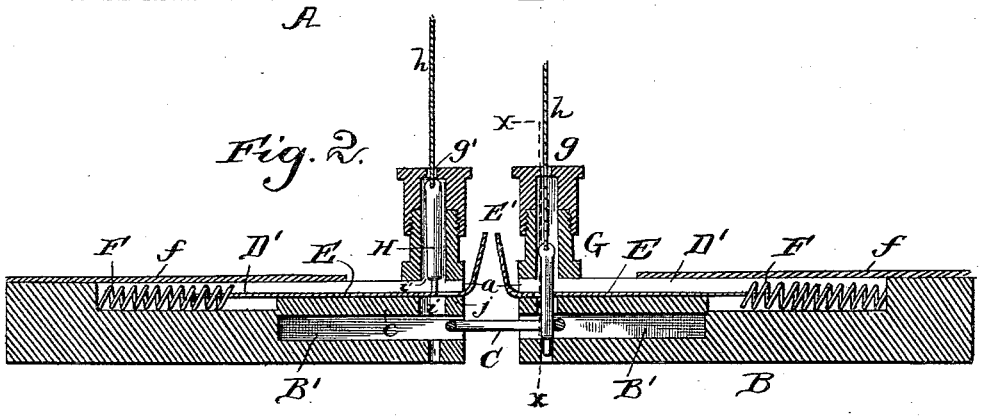


Fig. 3.

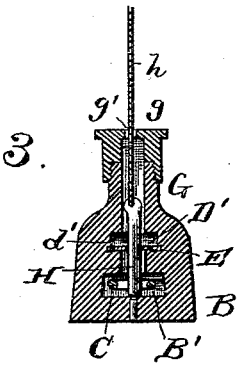
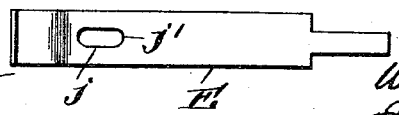


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM E. WALL AND JOHN W. HADDICK, OF GRENADA, MISSISSIPPI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 457,626, dated August 11, 1891.

Application filed April 17, 1891. Serial No. 389,306. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM E. WALL and JOHN W. HADDICK, citizens of the United States, residing at Grenada, in the county of Grenada and State of Mississippi, have invented certain new and useful Improvements in Car-Couplers; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in car-couplers; and the objects are to provide a simple and inexpensive contrivance for automatically coupling two approaching cars, and thus obviate the necessity of the brakeman standing between the cars to couple them, and at the same time enable the coupling-pin to be lifted from the side of the car and placed in position for operation.

With these ends in view our invention consists in the peculiar construction and arrangement of parts, as will be hereinafter fully described and claimed.

To enable others to understand our invention, we have illustrated the same in the accompanying drawings, in which—

Figure 1 is a side elevation of our improved coupler. Fig. 2 is a longitudinal section thereof, and Fig. 3 is a vertical cross-section on the line *x x* of Fig. 2. Fig. 4 is a detail view of the slide.

Like numerals of reference denote corresponding parts in the drawings, referring to which—

A B designate two draw-heads designed to be secured or fastened in any approved manner to the ends of two railway-cars to be coupled together. Each draw-head is provided at its front end with the usual chamber B′, designed for the reception of the link C, which enters the chambers in the two draw-heads, and the draw-heads are extended in rear of the link-chambers to form the draw-bars D, by which the draw-heads are attached to the cars. In the upper part of the draw-bar is formed a longitudinal chamber or recess D′, which extends forward into the draw-head and opens into the link-chamber, and in the side walls of the longitudinal chamber D′ are provided the grooves or ways *d′*, which are parallel and coincident with each other. In these channels or grooves *d′* in the longitudinal chamber are fitted the edges of a longitudinal slide E, which extends for a suitable distance rearwardly in the chamber. The forward end of the slide extends through the upper part of the link-chamber, above the horizontal partition *c* therein, and outward beyond the draw-head through the slot *a* in the front end, and this extended end of the slide is bent upward to form, or suitably provided with, a buffer or head E′, which lies vertically in front of the draw-head and at a suitable distance in advance of the same to permit the slide to have the necessary endwise movement for dropping or releasing the pin before the buffer or head E′ contacts with the draw-head. The slide is backed by a coiled cushion-spring F, seated in the longitudinal chamber of the draw bar and head, and the slide and spring are housed and concealed by a cap-plate *f*, suitably fixed to the top of the draw-bar. This spring normally projects the slide to such a distance beyond the draw-head that the buffer or head E′ is in position to be struck by the corresponding head or buffer on another car, whereby the slide is forced or pushed rearward in its guide-grooves by the impact of the abutting buffers when two cars come together.

At the front end of the draw-head we provide a vertical tubular guide G, which may be integral with or fixed to the draw-head, and the upper end of said guide is closed by a perforated head or cap *g*, in which a central opening *g′* is provided for the passage of the link or cord *h*, that leads to the gravity coupling-pin H, said pin being fitted snugly in the tubular guide and limited in its upward movement or adjustment by the head of the cap.

In the top of the draw-head and the partition *c* are the vertical pin-holes *i i′*, which are in vertical alignment with the hollow guide G, and through which the coupling-pin must pass to enter the link-chamber and engage the link. The pin is sustained in its elevated

position by the spring-pressed slide E, and to permit the pin to drop this slide has a longitudinal slot *j*, the rear boundary-wall *j'* of which is curved and forms part of the perimeter of the pin-hole. As the pin is limited in its upward play or adjustment by the head or cap of the tubular guide, the lower end of such pin rests in the slot in the slide E, and as this slide is normally pressed or forced by its spring the edge *j'* of the slide bears or presses with considerable force against the lower end of the pin, thus gripping the pin between one of the walls of the tubular guide and the edge *j'* of the slotted slide, whereby the coupling-pin is held firmly in its elevated position ready for use at all times.

In coupling cars, the link is passed or fitted in one of the draw-heads and the pin dropped to engage the head of the link. The cars now approach each other, and as the buffers or heads E' strike one another the two slides are forced inward to free one or both of the coupling-pins, which drop through the slots in the slides and engage the link, thus effecting the operation of coupling automatically. To uncouple, it is only necessary to pull on the line or pitman from the side of the car and raise the pin, thus freeing it from the link, whereupon the coiled spring forces the slide forward to cause the edge *j'* thereof to impinge on the pin and sustain the same in its elevated position.

Having thus described our invention, what we claim is—

In a car-coupling, the draw-head having the longitudinal chamber above the link-chamber extending into the draw-bar thereof and provided with the grooved side walls, combined with the vertical tubular guide in line with the pin-holes, the pin fitted in said vertical guide and limited thereby in its upward play, the slide fitted in the grooved sides of the chamber and provided at its front end with the vertical buffer or head and with the longitudinal slot, having its rear terminal forming a part of the perimeter of the pin-hole and impinging forcibly against the lower end of the coupling-pin when elevated, the link, and the cushion-spring impinging against the slide, substantially as described.

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

WM. E. WALL.
his
JOHN W. × HADDICK.
mark

Witnesses:
R. H. HALL,
WALTER S. P. DOTY.