(No Model.)

W. E. WALL.

CAR COUPLING.

No. 468,449. Patented Feb. 9, 1892.

Fig. 1

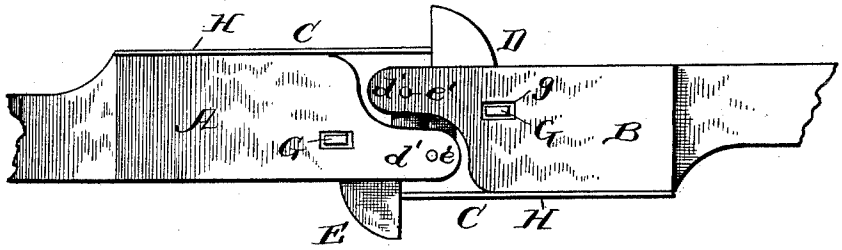


Fig. 2.

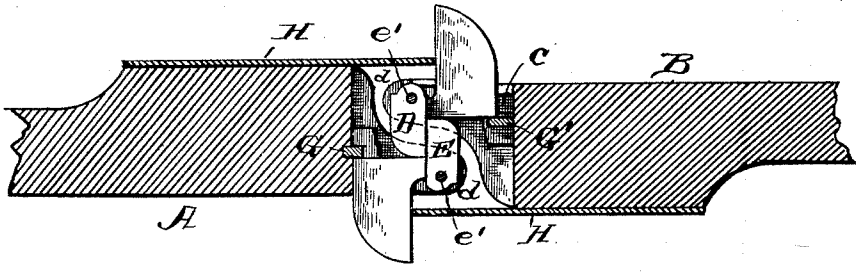


Fig. 4.

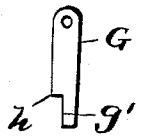
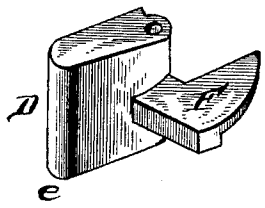


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM EDGAR WALL, OF GRENADA, MISSISSIPPI, ASSIGNOR OF ONE-HALF TO SAMUEL H. GARNER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 468,449, dated February 9, 1892.

Application filed April 17, 1891. Serial No. 389,340. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EDGAR WALL, a citizen of the United States, residing at Grenada, in the county of Grenada and State of Mississippi, have invented certain new and useful Improvements in Automatic Car-Couplers; and I 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.

The present invention is an improvement in car-couplers designed for automatic operation when the cars approach and abut together; and the object is to render automatic the twin jaws of the device and to lock or confine said jaws in position after they have been properly engaged with each other, while at the same time a slight play or movement of the jaws is permitted, as is necessary in passing around curves.

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

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

Figure 1 is a plan view of the draw-heads and coupling devices. Fig. 2 is a horizontal section thereof, and Fig. 3 is a detailed view showing one of the jaws. Fig. 4 is a detail view of the locking-pin.

Like letters of reference denote corresponding parts in the several figures of the drawings, referring to which—

A B designate the two draw-heads, which are suitably mounted on the under side of the cars. The draw-heads are each provided with a forwardly-extending arm C, which is arranged at one side thereof, and in this arm is formed a slot *c*, while the upper and lower sides of the arm, at points beyond the slotted part thereof, are provided with the ears or lugs *d d'*, between which is pivoted the swinging jaw or hook of the coupler.

D E are the two hooks or jaws of my improved coupler, which are the same in construction, except with such slight changes in the shape or position thereof as to adapt them to be applied to the contiguous ends of two cars. The head *e* of the coupling jaw or hook is pivoted near one side between and to the lugs or ears on the arm C of the draw-head, the pivots being indicated at *e'*. The hook or jaw is further provided with an abutment-retainer F, which extends inwardly from the head of the hook and lies in a plane about midway of the height of this vertical head *e*, so as to ride or operate in the slot *c* of the arm C, forming a part of the draw-head. The abutment-retainer extends laterally from the head of the hook or jaw, so as to lie in the path of the head of the other jaw or hook when the hooks are placed in position for coupling, and the rear edge of the abutment-retainer is curved or made segmental in form to adapt it to support a gravity-pin or locking device G G', which is to be sustained in an elevated position when the abutment-retainer is swung around in the path of the head on an approaching coupling-hook, as indicated in Fig. 3. This gravity locking-pin is polygonal in cross-section—preferably rectangular—and it works in an angular vertical hole or opening *g*, formed in the draw-head. The lower end of the gravity locking-pin is cut away or recessed at *g'* to provide a shoulder *h* intermediate of the length of the pin, and when the hook is adjusted for coupling this shoulder rests on the abutment-retainer and is thus supported in an elevated position; but when the head on an approaching hook strikes the abutment the latter and the hook to which it is attached are swung around so that the head engages the head on the other hook or jaw, and the pin falls by gravity to interpose itself in the path of the abutment-retainer and prevent the hook from turning on its pivot to uncouple. Each draw-head is further provided on the side opposite to its arm C with a detaining-arm H, which prevents the draw-heads from separating when rounding a curve, but permits the necessary oscillation without danger of the two heads becoming freed from each other.

The operation is simple and may be briefly described as follows: The hook or jaw on one head is turned to throw its abutment-retainer

through the slot *c*, and thus drop the locking-pin which holds the head of said jaw in position to strike the abutment-retainer on the other jaw, while the last-mentioned jaw is turned so that its head is in line with the arm C, and the abutment-retainer thereof projects inwardly from said arm C and its pin is sustained in an elevated position. When the cars abut, the adjusted jaw or hook is swung around to cause its head to engage the head of the fixed jaw and to withdraw its abutment-retainer from the locking-pin, thus allowing the pin to drop and confine the jaw in place.

The device is simple and durable in construction, and the hooks or jaws cannot become accidentally turned on their pivots under the strain or pull of the cars, as the locking-pins are firmly held in the draw-heads.

What I claim as new is—

In a car-coupling, the draw-head provided with the extended arm *d'* at one side thereof and having the longitudinal slot in said arm and the vertical opening *g* in rear and to one side of the longitudinal slot, combined with the swinging jaws or hooks D E, each having its broad flat head pivoted near one end in one of the arms *d'* and formed at its pivoted side with the integral right-angled abutment F, that works in the slot in the arm, and the gravity-pins G G, fitted in the vertical openings *g g* and having the shoulders *h*, adapted to rest on the abutments F F when the pin is elevated and to lie in the path of said abutments when said pins are lowered, as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM EDGAR WALL.

Witnesses:

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J. A. ROANE.