C. F. BREM.

Car-Coupling.

No. 211,551. Patented Jan. 21, 1879.

Fig. 1.

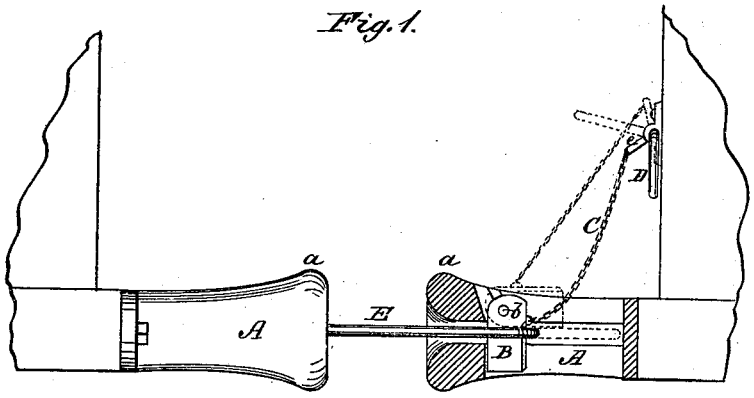


Fig. 2.

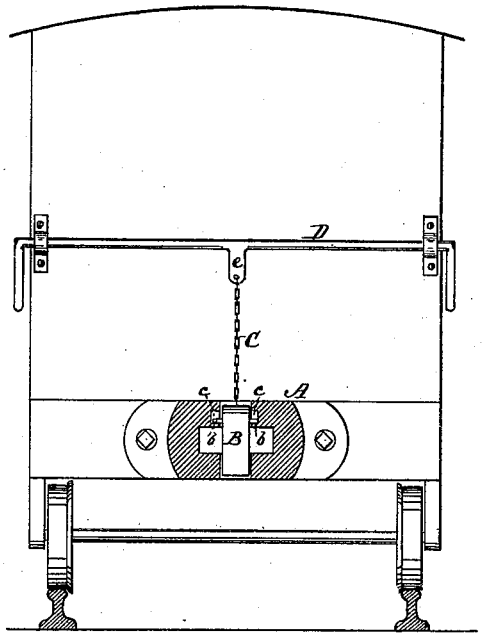
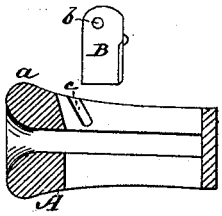


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES F. BREM, OF CHARLOTTE, NORTH CAROLINA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **211,551**, dated January 21, 1879; application filed December 5, 1878.

To all whom it may concern:

Be it known that I, CHARLES F. BREM, of Charlotte, in the county of Mecklenburg and State of North Carolina, have invented a new and Improved Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improvement in the class of automatic car-couplings, and relates to the construction and arrangement of parts, as hereinafter described and claimed, whereby the coupling-pin, which is pivoted in the bumper, is prevented from being raised out of its bearings in the act of coupling or uncoupling, and is nevertheless adapted to be quickly detached from the bumper, when required.

In the accompanying drawings, forming part of this specification, Figure 1 is a partly-sectional view, showing the coupling and fragments of two cars. Fig. 2 is an end view of a car with the bumper in section. Fig. 3 shows a longitudinal section of one of the bumpers, and a side view of the coupling-pin detached.

A A indicate the bumpers of two opposite cars. Each is provided with a vertical lengthwise slot, extending backward from the head *a*, and in such slot is located a swinging pin, B, which has gudgeons or lateral arms *b*, that enter inclined grooves *c* in opposite sides of the aforesaid slot, and constitute the pivots which support the pin, and whereon it turns from a vertical to a horizontal position.

The grooves *c* are inclined forward at an angle of sixty degrees, or thereabout, for the purpose of preventing dislodgment of the pin, as hereinafter explained.

A chain, C, connects the lower end of the pin B with a horizontal crank-rod, D, which is hung in staples or other suitable bearings on the front of the car.

The ordinary open-slotted link E is employed for connecting the cars.

The operation of the coupling is as follows: A link, E, being properly attached to one of the bumpers, when the cars run together said link will enter the opposite bumper and strike against the lower end of the pin B therein, raise the same, and pass under it, as shown in dotted lines, Fig. 1. So soon as the end of the link passes beyond the pin, the latter turns on its pivots and falls back to its normal position, thus entering the slot in the link, and thereby completing the coupling, as shown in full lines, Fig. 1.

To uncouple the cars, the rod or shaft D is rotated a part of a revolution to raise its arm *e*, to which the chain C is attached, and thereby elevate the free or lower end of the pin B out of the slot in the link, as shown in dotted lines, Fig. 1. Upon releasing the crank-rod the pin B gravitates back to its former position, in readiness for recoupling.

It will be perceived that the forward inclination of the grooves *c* prevent the pivots from rising or sliding upward in said grooves when the pin is being tilted by the entering link or by the rotable shaft D and chain C, since the rear sides or walls of the grooves, in consequence of their angle, act as shoulders or keepers, which tend to and do, in effect, confine the pivots to the bottom of the grooves. Yet the grooves enable the pin to be raised easily and quickly, and detached from the bumper whenever desired.

In the case of passenger-cars, a different device may be employed in place of rod D for raising the pin B, for the purpose of uncoupling; or I may dispense with any supplementary device save the chain.

I do not claim a coupling-pin provided with lateral pivot-arms which enter grooves or notches in a draw-head and support the coupling-pin so that it may swing in the vertical slot in the draw-head.

What I claim is—

In a car-coupling, the combination of the swinging pin B, having lateral pivot-arms *b*, with the slotted bumper having the grooves *c*, inclined forward, as specified, for the purpose of holding the pivot-arms fixed therein, and a chain, C, attached to the lower end of said pin, for tilting it, all as shown and described.

CHARLES FRANK BREM.

Witnesses:
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