

W. J. JOHNSON.
Car Coupling.

No. 104,462.

Patented June 21, 1870.

FIG. 1

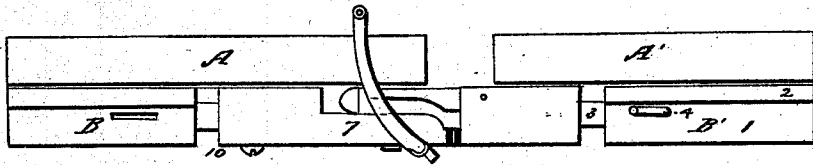


FIG. 2

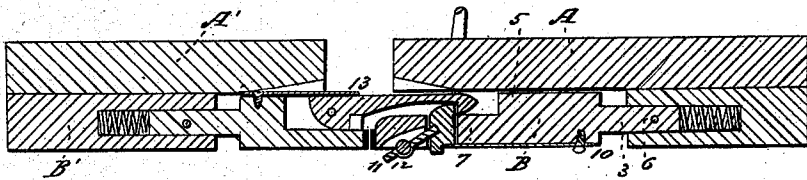
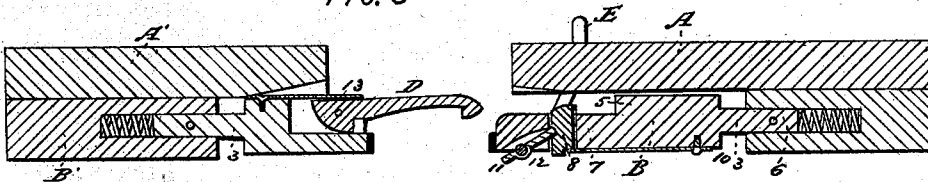


FIG. 3



WITNESSES:

E. H. Levy
Rufus. R. Rhodes

INVENTOR:

William J. Johnson

United States Patent Office.

WILLIAM JOHN JOHNSON, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 104,462, dated June 21, 1870.

IMPROVEMENT IN CAR-COUPPLINGS.

The Schedule referred to in these Letters Patent and making part of the same.

I, WILLIAM JOHN JOHNSON, of the city of New Orleans and State of Louisiana, have invented an improved Coupling Device for Railroad-Cars, of which the following is a specification.

The invention relates to a spring coupling which is self-fastening and at the same time so contrived that it will uncouple automatically, and with unvarying certainty, whenever a car is thrown off the track, although it cannot be uncoupled except by hand unless such an accident occurs.

The objects designed to be accomplished by my invention are, to make it unnecessary for a man to place himself between two cars to couple the same together or to uncouple them, and to prevent a car that is thrown off the rails or track from dragging others off with it.

The precise nature of my invention will be at once understood by referring to the drawing, whereon—

Figure 1 represents small sections of the platforms of two cars, with the two parts which make up my device secured thereto, as when the cars are coupled together;

Figure 2 is a vertical longitudinal section of fig. 1 through the center thereof; and

Figure 3, a similar view to the last, with this difference only, that the cars are not coupled in this figure.

At all the figures—

A A' are sections of the platforms of two cars; and B B', the two main parts of which my device is composed.

The part B is composed of a block, 1, provided with projecting side flanches or wings 2 at its upper corners, to afford a means for securing it firmly in position underneath the platform of the car to which it is attached, through the agency of strong screw-bolts, that are not shown in the drawing, a central circular aperture at its front end, for more than half its length, to receive a helical spring, and a circular bolt-like extension, 3, of another block, 5, attached to another car, and two side slots, 4, through which a pin, 6, passes, with the view to prevent a separation of the parts 1 and 5, when the device is in actual practice or use.

The block 5 is reduced in thickness, as shown at 7, from a point near its center, not reckoning the extension 3 as a part of its length, to its front extremity, so as to leave an open space, C, between the platform A and the said reduced part 7, to receive the catch or hooked bar D.

The front end of the part 7 tapers on its upper side downwardly, as does, also, that part of the platform of the car immediately above it, only the latter inclines upwardly from its under surface, in order to widen the opening C at its entrance, to insure the

entry of the catch-bar or hook D, although and whenever one car may be somewhat higher than the other to which it is to be coupled.

Through the part 7 of the block 5 a vertical rectangular opening or slot is made, to receive a catch-bolt, 8, resting on and sustained by a spring, 9, which extends to the shoulder 10 of said block, and is fitted in a recess in the center thereof, so as to be flush with the under surface of the block when in its normal position, as shown at all the figures.

The catch-bolt 8 is provided on its front side with a notch, as shown at figs. 2 and 3, in which an actuating bar, 11, projecting from a shaft, 12, that is sustained in strap-journals secured on the under side of said block 5, takes, as shown also at figs. 2 and 3.

At the opposite end of the shaft 12, a crank, E, that is sufficiently long to extend above the platform of the car, and within reach of the brakeman, is firmly secured, so as to afford a means for depressing the catch-bolt 8, and hence of uncoupling the two cars whenever desired.

The part B' is secured to the platform of the other car, and constructed exactly in the same way that part B is, except that instead of a catch-bolt, 8, a catch-bar or hook, D, formed and projecting substantially as shown, is pivoted in a recess or open chamber in the part 5 of this block, in such a manner that, while it is held in position by means of a flat spring, 13, its hooked extremity will have a limited measure of up-and-down vibration, so as to conform to the motion of the cars when running, and also accommodate itself to any inequality of height between the cars to be coupled.

The hook at the end of the catch-bar D should be pointed, as shown, in order readily to enter the opening C, and wide enough to prevent a disconnection by the same of the catch-bolt 8, while a train is running on a curve of the road, but yet not wide enough to prevent a disconnection or uncoupling of the part whenever the deflection of a car from the line of the road is as great as it must necessarily be if it be thrown off the track, so that when such an accident occurs to a car no other will follow after it by being dragged off by it.

India-rubber cushions may be substituted for the helical springs underneath the circular bolt-like extensions of the two parts, B B', and will, perhaps, as effectually prevent any violent shock at any time and under all conditions as the said springs.

I reserve the right, therefore, to make such substitution, if I shall find it expedient.

A facing of India rubber on the two parts, as shown at 14 and 15, will most probably be an unnecessary provision in the practice of the invention.

It will, of course, be understood that my device

must be made of metal, and strong enough in all its parts not readily to yield under any ordinary circumstances to which railroad-cars and trains are subjected.

I claim as my invention and desire to secure by Letters Patent—

The parts B B', when the same are constructed as

herein described in all their parts, and are arranged for conjoint operation, as specified, for the purpose set forth.

WILLIAM J. JOHNSON.

Witnesses:

EMILE H. LEVY,

RUFUS R. RHODES.