

W. H. MEADOWS.

Car Coupling.

No. 110,580.

Patented Dec. 27, 1870.

Fig. 1.

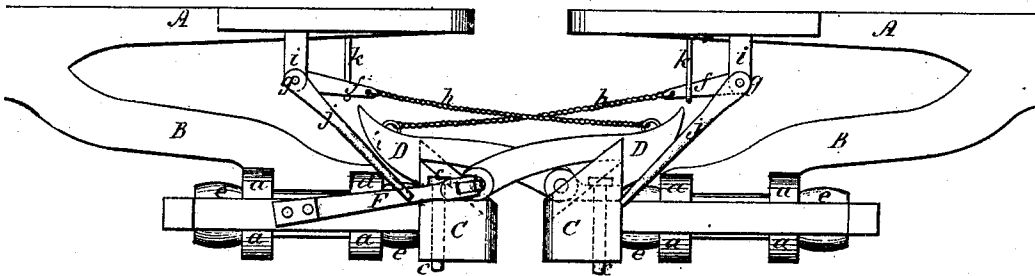


Fig. 2.

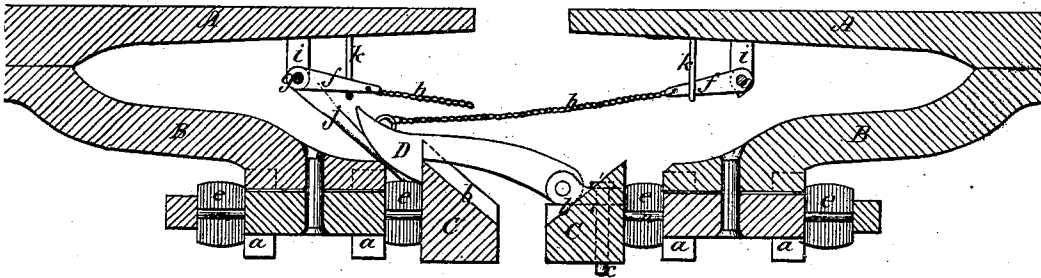


Fig. 3.

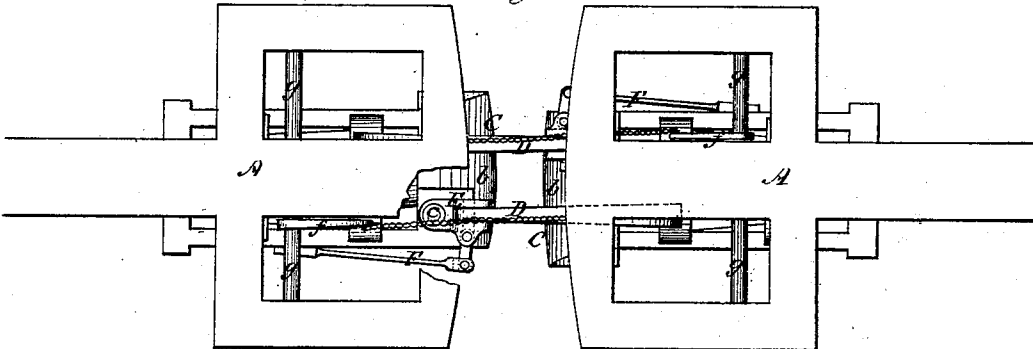


Fig. 4.

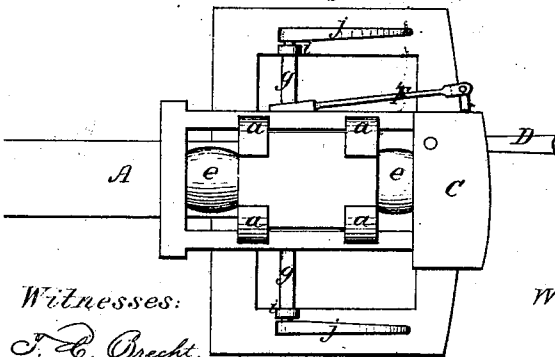
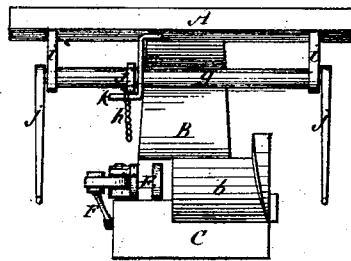


Fig. 5.



Witnesses:

T. C. Brecht.

Attest: Hamilton & Johnson

William H. Meadows. - Inventor

By his Attorneys.

Opperman & Johnson.

# United States Patent Office.

WILLIAM HENRY MEADOWS, OF McMinnville, Tennessee.

Letters Patent No. 110,580, dated December 27, 1870.

## IMPROVEMENT IN CAR-COUPPLINGS.

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

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY MEADOWS, of McMinnville, in the county of Warren and State of Tennessee, have invented certain new and useful Improvements in Couplings for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing of the same, which makes part of this specification, and in which—

Figure 1 represents a side elevation of the device for coupling two cars together, embracing my improvements;

Figure 2 represents a vertical section;

Figure 3 represents a top view;

Figure 4 represents a bottom view of one coupling device; and

Figure 5 represents a front view of the same.

My invention relates to devices for coupling railroad-cars; and

Its object is to obtain a device that will readily effect its own coupling, be uncoupled with ease and without danger, and to yield to the lateral motions of the cars, without endangering the uncoupling of the device.

In the accompanying drawing—

A represents the frame which carries the coupling device and the bumper. It consists of an upper plate, by which it is secured to the under side of the platform of the car, and a lower arm, B, to the front end of which the bumper C is secured.

The bumper is an open frame, fitted between guides *a*, fastened to or formed on the front end of the arm B, so as to have a sufficient horizontal motion to break the force of the striking of the cars against each other in effecting a coupling.

The upper front portion of the bumper is inclined upward, so as to form a way, *b*, over which the coupling-hook D slides.

The coupling-hook D projects forward from one side of each bumper C, so as to strike upon and be received by the inclined face *b* of the latter, and thus pass each other in making the coupling, the front ends of said hooks being curved, so as to ride over the inclined faces *b*, and hook with the rear side of each bumper C, as shown in figs. 1 and 2.

In order to allow the hooks D to accommodate themselves to the swaying, lateral motion of each car, they are hinged to supplementary plates E, which are secured, by strong pivot-bolts *e*, to the bumpers C, upon which they are free to turn laterally with their hooks, and thereby allow the latter to bend or turn sidewise, to conform to the side vibrations of the cars, and in this way relieve the hinges of the hooks of all lateral strain without interfering with their vertical movement to be locked and unlocked with their bumpers.

To keep the hooks D in a straight line when the cars are uncoupled, I secure the free end of the pivoted supplemental plate E to the bumper-frame by means of a spring, F, the force of which tends constantly to hold the hook D in a line with the length of the car, while, at the same time, it can move sidewise against the force of said spring.

The bumpers, being arranged to have a slight horizontal movement, are also provided with rubber springs, *e*, arranged between the ends of the guide-frame *a* and the inner sides of each end of the bumper-frame, so as to yield not only with the sudden pull of the bumper-hook, but also with the sudden contact of the cars.

The hooks D effect the coupling by their weight; but, in order to uncouple them to detach the cars from each other, I connect each hook with an arm, *f*, of a hand-crank rod, *g*, by means of a chain, *h*, so that, when the arm *f* is elevated, the chain *h* will pull up the hook D above the bumper, and leave the cars free to be separated.

The uncoupling crank-rod *g* is secured in bearings *i*, beneath the upper plate A, and is provided with a hand-arm, *j*, at each end, by which it may be operated from either side of the car.

When uncoupled, the weight of the hook D and that of the lifting-arms *j* will always be sufficient to cause the hook to descend and maintain a position to be in readiness to couple itself when the cars are again brought together.

The arm *f*, that connects with the hook D, is prevented from descending too far by means of a stop, *k*, depending from the top frame A, so that the hook can only be uncoupled by turning the arm *f* upward.

The springs *e* of the bumper C may be held in position by means of guide-pins *n*, projecting from the ends of the supporting and guiding-bar B, as shown in fig. 2.

Having described my invention,

I claim—

1. The supplemental carrying-plate E of the coupling-hook D, hinged to the bumper C, and held in position by a spring, F, in the manner and for the purpose described.

2. The combination and arrangement of the frame A B, bumper C, and its springs *e*, hook D, pivoted carrying-plate E, and its spring F, all arranged and operating as described.

In testimony whereof I have hereunto signed my name.

WM. HENRY MEADOWS.

Witnesses:

SAM. HENDERSON,  
H. H. FAULKNER.