A. C. RUMBLE.

CAR-COUPLING.

No. 189,791. Patented April 17, 1877.

Fig 1

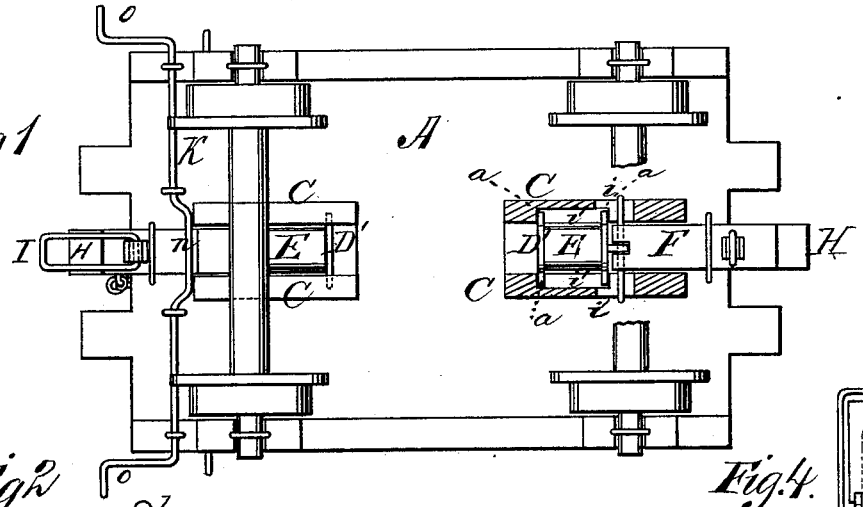


Fig 2

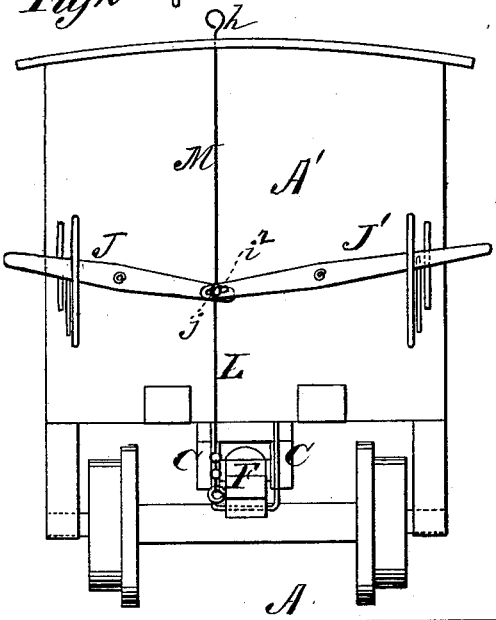


Fig 3.

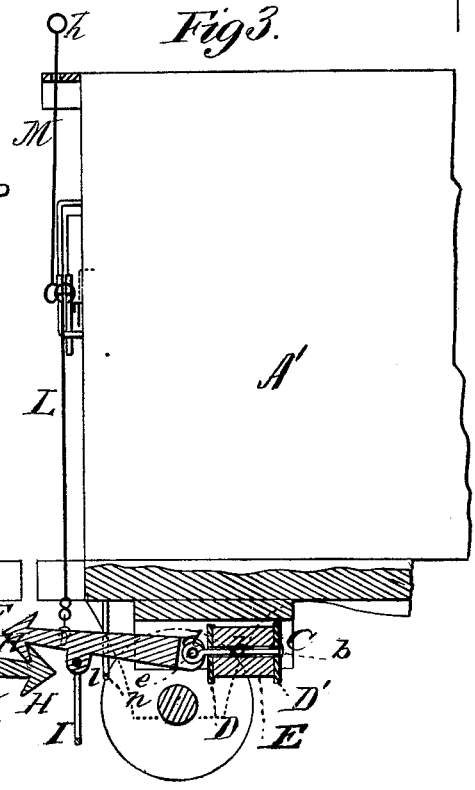
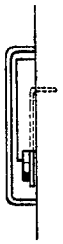


Fig 4.



WITNESSES

Villette Anderson

F. J. Masi.

INVENTOR

A. C. Rumble,

by Ellv. Anderson.

ATTORNEY

UNITED STATES PATENT OFFICE.

ALEX C. RUMBLE, OF LIMA, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES E. PHINNEY, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **189,791**, dated April 17, 1877; application filed March 3, 1877.

To all whom it may concern:

Be it known that I, ALEX. C. RUMBLE, of Lima, in the county of Allen and State of Ohio, have invented a new and valuable Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a bottom view of a railway-car, with my coupling applied. Fig. 2 is an end view of the car, showing the slotted uncoupling-levers. Fig. 3 is a longitudinal sectional view of my coupler applied; and Fig. 4 is a detail view.

My invention has relation to improvements in automatic car-couplings; and it consists in the arrangement and novel construction of the draw-spring, its compressor-heads, the dead-blocks, and the vertically-vibrating and endwise-movable draw-head, as hereinafter shown and described.

In the accompanying drawings, the letters A A′ designate two railway-cars supported upon the usual trucks B. C represents two spaced metallic blocks, arranged parallel to each other, and secured lengthwise the car upon its under side and at each end. These blocks are provided with longitudinal slots *i*, for a purpose hereinafter explained. D D′ represent, respectively, the front and rear compressor-plates, between which, at the rear ends of blocks C, is arranged the draw-spring E. Plate D is circular in form, and is provided upon its edges diametrically opposite each other with lugs *a*, which work in grooves *i′* formed in the inner faces of blocks C, so as to slide freely to the rear, but to be incapable of forward movement. Plate D′ has similar lugs, and is capable of forward but not of backward movement. *b* represents an axial bolt passing through the centers of plates D D′ and spring E, and provided upon its rear end with a head or nut, *c*. This bolt has upon its front end an eye, *d*, which enters a notch in the contiguous end of the draw-bar F, and is secured thereto by means of a pin, *e*, passing through perforations in the said draw-bar, registering with the eye *d* and slots *i* aforesaid in blocks C. In this position the heel of the draw-bar bears directly against the compressor-plate D, and in backing the train the said draw-bar will be thrust back, thus gradually compressing the spring E, and protecting the frame-work of the car-body and trucks from the injurious effects of sudden jars. In going forward the draw-bar will be drawn slightly out, owing to its slotted bearings in blocks C and plate D gradually drawn forward by bolt *b*, thereby compressing spring E, and attaining the same desirable result.

When the traction of the engine is fully, or nearly fully, exercised the pin *e* will come in contact with the front end of slot *i*, and, being arrested, will prevent the spring E from being unduly racked. In backing, the pin *e* aforesaid will come in contact with the rear wall of the said slot *i*, and the said spring will be prevented from being unduly compressed whereby its efficiency would be impaired.

The draw-bar F above alluded to has upon its front end, projecting beyond the end wall of the car, a strong broadly-extended barbed head, H. These heads are transverse the shank of the bars, and when brought together in the act of coupling pass each other and become interlocked, as shown in Fig. 1. Upon the lower part of draw-bar F, and in the rear of the head H is cast a lug, *l*, to which is fastened a link, I, for coupling with the ordinary pin-and-link coupler. By arranging the link back of the head H all danger of breakage when the opposite heads come together, is avoided. J J′ represent metallic levers, pivoted at or near the middle of their lengths to the ends of the car, and extending outward at each side thereof a suitable distance. The weight-arms of these levers are provided with longitudinal slots i^2, and connected together by a pivot, *j*, to which pivot is secured a chain or rod, L, connected with the vertically-vibrating draw-bar, and an operating-rod, M, having a handle, *h*, extending to the roof of the car. By drawing up rod M or thrusting the power-arms of one of the levers J J′ downward the barbed head will be raised vertically upward without a cant to the right

or left, and all danger of breaking off the corners of the said heads effectually prevented.

In flat cars the same result will be attained by means of a transverse crank-shaft, K, arranged in bearings under the draw-bar, and having a crank, *n*, adapted to be rotated, and raise the draw-bar. This shaft will be provided with arms *o* at each end, and the draw-bars will be supported in position by the usual stirrups N.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the vertically-vibrating barbed draw-bar F, of the blocks C, having slots *i*, the draw-spring E, compressor-plates D D′, draw-rod *d*, and pin *e*, entering said slots and connecting-rod *b* and draw-bar F, substantially as specified.

2. The combination, with a vertically-vibrating endwise-movable draw-head, of the draw-spring E, the rearwardly-movable compressor-plate D, the forwardly-movable plate D′, the cheek-blocks C C, having grooves *i′ i′* and slots *i i*, and the connecting-rod *b*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALEX. C. RUMBLE.

Witnesses:

M. L. BECKER,

J. N. HUTCHISON.