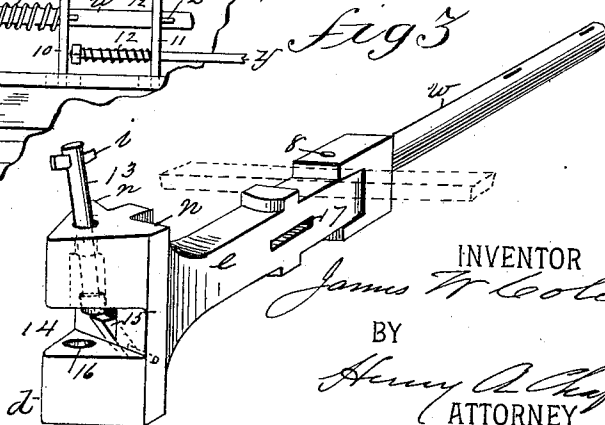
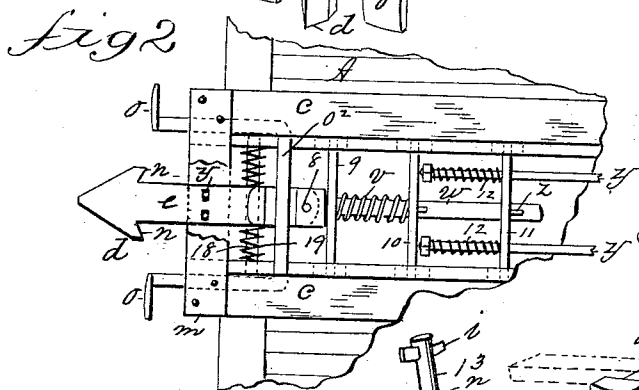
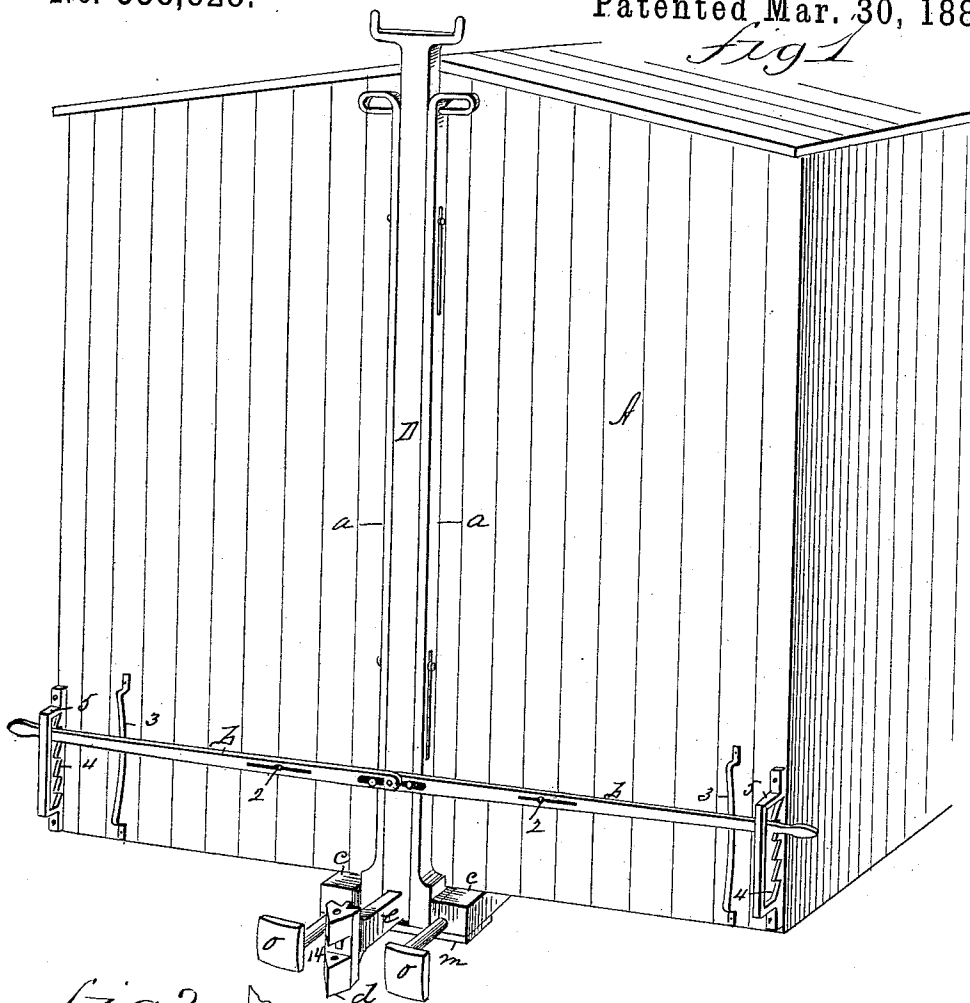


(No Model.)

J. W. COLE.  
CAR COUPLING.

No. 338,828.

Patented Mar. 30, 1886.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES W. COLE, OF WESTFIELD, MASS., ASSIGNOR OF TWO-THIRDS TO  
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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 338,828, dated March 30, 1886.

Application filed July 20, 1885. Serial No. 172,068. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. COLE, a citizen of the United States, residing at Westfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Automatic Car-Couplings, of which the following is a specification.

This invention relates to improvements in car-coupling devices, the object being to provide improved self-coupling devices for uniting railway-cars, together with means for operating the same from either side or from the top of the car.

In the drawings forming part of this specification, Figure 1 is a perspective view of the end of a car-body having applied thereto car-coupling devices embodying my invention. Fig. 2 is a bottom plan view of a part of the car and of the coupling devices attached thereto. Fig. 3 is a perspective view of the draw-bar and a coupling-pin.

In the drawings, *A* is the car, and *c c* are timbers running centrally under the floor of the same from end to end and projecting beyond the end of the car. A post, *D*, is secured on the end of the car, extending from over the draw-bar *e* slightly above the roof of the car, its upper end being provided with lateral projections, as shown, which serve as handles for the brakemen when operating certain parts of the coupling mechanism, as hereinafter described.

On each side of the post *D* is hung a sliding draw-bar stop, *a*, the lower end of which fills the space between the end of the timber *c* and the draw-bar *e*, or nearly so, whereby when one or both of the stops *a* are in the position shown in Fig. 1, the lateral movement of the draw-bar is limited, and when the stops are drawn up above the draw-bar the end of the latter may swing toward one or both of the timbers *c*. The stops *a* have slots through them, as shown, and bolts passing through the slots into the post *D* serve to hold the stops in proper position against the sides of the post, allowing them to slide freely up and down. The upper ends of stops *a* are provided with handles, whereby they are grasped to raise or lower them, and when the brakeman is performing that service he supports

himself by the aforesaid projecting part or parts of the post *D*.

Two hand-levers, *b b*, having their ends pivoted together opposite the post *D*, are hung on the end of the car by bolts *2 2*, passing through slots therein, as shown. The free ends of levers *b* project slightly beyond the sides of the car.

The levers *b* are connected with the stops *a* by bolts passing through slots near their pivoted ends into said stops.

At each edge of the car, near the ends of levers *b*, is placed a strap, *5*, over the end of the lever, and behind the latter under the strap a ratchet-toothed strip, *4*. An easily-yielding spring strip, *3*, is placed under lever *b* near strap *5*.

The purpose of the levers *b* is to provide means for operating the stops *a* from the sides of the car when desired, and their combined operation is as follows: The draw-bar *e* is pivotally connected to its shank *w* by a bolt at *8*, and for self-coupling purposes its outer wedge-shaped end is allowed to swing between the bunters *o o*, when it and the bar of another car are brought together in the usual manner. By swinging downward the end of one of levers *b* the end of the opposite one is depressed, and when just clear of one of the teeth on the ratchet-strip *4*, the spring *3* throws the end of that lever against the inner side of the strap *5*, clear of the ratchet-teeth, holding it there free to swing and to follow the movements of the lever being operated upon, and the latter lever is then swung down, lifting up both of the stops *a*. When the said stops and the levers *b* are in the positions shown in Fig. 1, the brakeman may, by grasping the handle on the upper end of either stop and pulling it upward, disconnect the ends of both levers from said ratchet-teeth, leaving the stops free to be moved up and down. It will be seen that by swinging the end of either of the levers *b* to the lower end of the strap *5* the stops may be secured in an upward position. The shank *w* of the draw-bar is supported in the transverse bars *9, 10, and 11*, the ends of which are supported by string-pieces on the inner opposite sides of the timbers *c*. (See Fig. 2.) The bars *10 and 11* are allowed to slide when

the draw-bar is drawn out, compressing spring *v* against the bar 9. Pins *z* are put through the shank *w* behind the bars 10 and 11. A rod, 18, having thereon the springs 19—one each 5 side of the draw-bar—passes through the long slot 17 in the latter, and its ends are supported in the timbers *c*. Said springs 19 serve to swing the draw-bar to a central position between said timbers when it is free. A plate, 10 *m*, secured under the ends of the timbers *c*, passes under and serves as a support for the draw-bar *e*.

If desired, rollers *y* may be inserted in the draw-bar to bear on plate *m* and obviate any 15 frictional resistance to the free lateral movement of the draw-bar.

The bar shown in dotted lines in Fig. 3 represents the position of a transverse piece on the opposite side of the draw-bar to the part 20 *o*<sup>2</sup> of the bunter *o*, and is not shown in the drawings, the purpose of which is to aid in supporting the bar *e*.

The outer end, *d*, of the draw-bar *e* is of wedge-shape, to facilitate its engagement with 25 one on another car, and on each side thereof is formed a hook, *n*. Thus two draw-bars of this description, coming together endwise, carried by two cars are caused to slip by each other and to have their hooked portions *n* engaged with each other, thereby automatically 30 coupling the cars. When said draw-bars crowd each other to one side to become engaged, as aforesaid, the springs 18 yield and then press the bars one against the other, serving to so 35 hold them.

It is understood that when said self-coupling is operated the stops *a* are raised up, and when the coupling is effected they are dropped to 40 the position shown in Fig. 1.

The bunters *o o*, secured on the ends of a bar, *o*<sup>2</sup>, between the timbers *c*, and passing under the draw-bar, serve the ordinary purpose.

The draw-bar *e* has in its outer end a transverse slot, 14, and a pin-hole, 16, is formed in 45 the draw-bar, to permit of placing therein the coupling-pin 13, so that this description of draw-bar may be used, if desired, with the ordinary link and pin. The pin 13 is formed with a head on its lower end, as shown, and is 50 secured in the draw-bar by the pin *i*, passing through its end. The pin-hole in that part of

the draw-bar above the slot 14 is chambered out, as shown in dotted lines in Fig. 3, to permit of lifting the headed end of the pin 13 55 quite above the upper wall of slot 14, so that the pin-latch 15, pivoted back of said slot, may have its free end swung under pin 13, as in Fig. 3, whereby it is supported in the position there shown, ready to be dropped into a link, 60 which may, by an approaching car, be forced against latch 15, pushing it from under the pin. The pin 13 is inserted in the draw-bar head from below.

By the above-described construction of coupling-pin and draw-bar head the pin is so 65 secured to the latter that it cannot be lost, and is in no manner in the way of the aforesaid proper operation of the draw-bar for self-coupling by the hooks *n*.

Any suitable means may be used to swing 70 the draw-bar to uncouple it.

The rods *yy*, having springs 12 thereon, connect the transverse bar 11 with a like bar at the opposite end of the car, making what is termed a "continuous draw-bar." 75

What I claim as my invention is—

1. The combination, with the pivoted draw-bar *e* and the timbers *c c*, of the vertically-sliding stops *a a*, operating between said timbers and the draw-bar, and means for moving 80 the latter up and down, substantially as described.

2. The pivoted draw-bar *e*, the timbers *c c*, the stops *a a*, the levers *b b*, the straps 5, and ratchet-strips 4, combined and operating sub- 85 stantially as set forth.

3. In combination with the levers *b*, stops *a a*, and the ratchet-strips 4, the springs 3 3, substantially as set forth.

4. The draw-bar *e*, having the wedge-shaped 90 end *d*, provided with the slot 14, and the pin-hole 16, having that part thereof above said slot enlarged for a part of its length, combined with the coupling-pin 13, having a head on its lower end and the pin *i* through its upper end, 95 and the latch 15, pivoted in the draw-bar at the rear of said slot 14, all as set forth.

JAMES W. COLE.

Witnesses:

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J. D. GARFIELD.