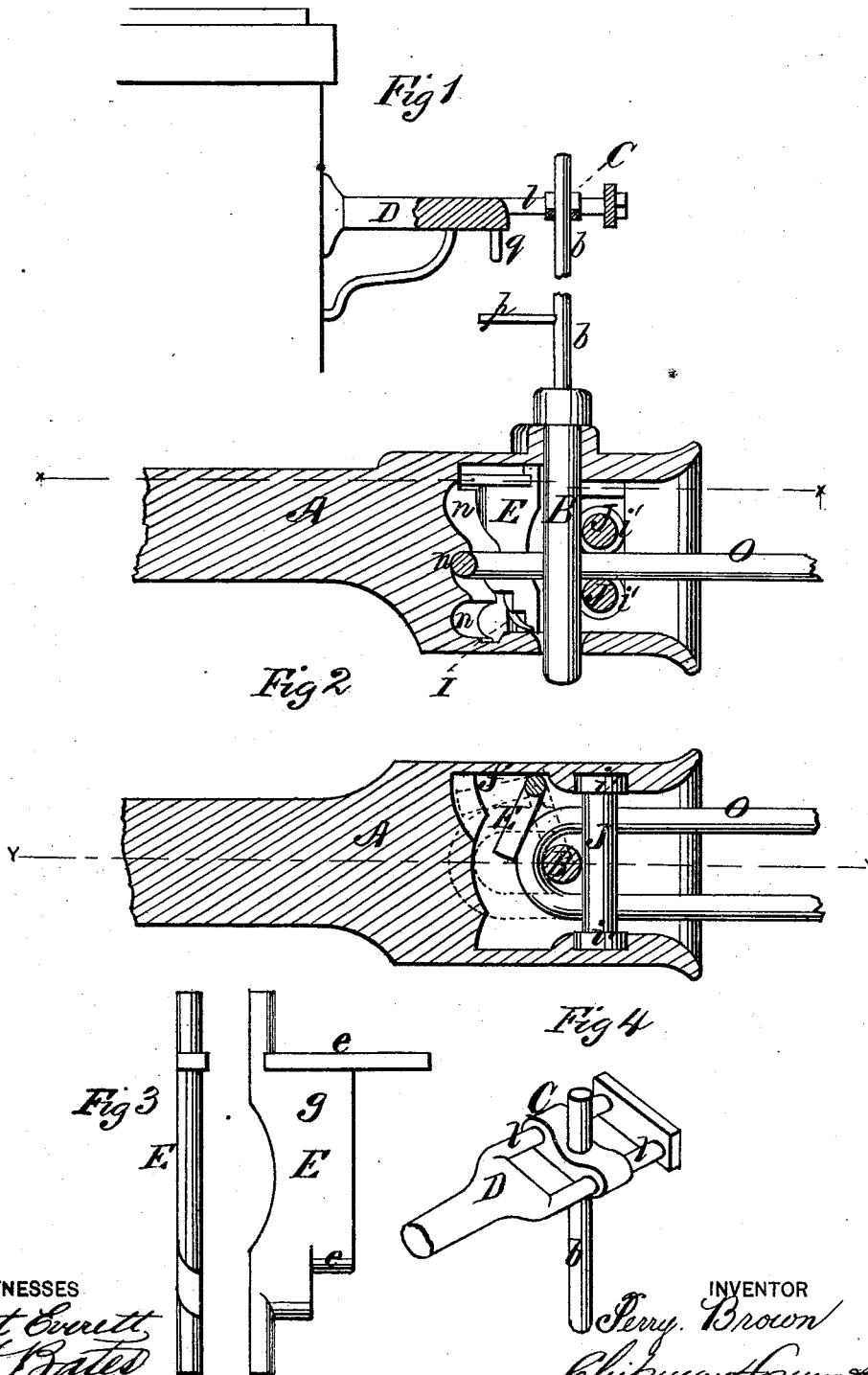


P. BROWN.
Car-Coupling.

No. 163,633.

Patented May 25, 1875.



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PERRY BROWN, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **163,633**, dated May 25, 1875; application filed February 20, 1875.

To all whom it may concern:

Be it known that I, PERRY BROWN, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and valuable Improvement in Car-Couplers; 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 drawing is a representation of a longitudinal vertical section of my car-coupler. Fig. 2 is a horizontal sectional view of the same, and Figs. 3 and 4 are detail views.

This invention has relation to improvements in automatic car-coupling devices wherein are employed the usual well-known coupling pin and link; and the nature of the invention and improvement consists in the construction and arrangement of the parts, as will be herein after more fully set forth.

In the annexed drawing, A designates a preferably rectangular draw-bar having the usual well-known flaring mouth and a rectangular chamber, which draw-bar is applied to a car in the customary way, and is provided with a suitable bunter-spring for the purpose of softening the shock occasioned when two or more cars are brought together. B designates a coupling-pin adapted to be inserted in the usual way into registering-perforations made for the purpose in the upper wall and floor of the draw-bar. When applied to a box-car this draw-bar will have its pin B provided with a rod, *b*, extending up to and slightly beyond the car-roof, so that it may be conveniently drawn up out of the slot by a train-hand standing on the said roof. Rod *b* passes centrally through a slide, C, arranged upon the prongs *l* of a bifurcated arm, D, rigidly secured, in a horizontal position, to the end of a car, and is prevented from vertical displacement by means of a brace, *c*. When two cars are brought together, however gently, their draw-bars are always thrust inward to some extent, and, in consequence, I use slide C, arranged upon the bifurcated arm D, for preventing rod *b* from being bent, a result which would otherwise certainly occur. This rod is also provided with a projecting pin, *p*, which is adapted to be engaged in a hook, *q*,

rigidly secured to arm D in a position transverse to its length when it is desired to bring two cars together without coupling.

With a view to rendering the draw-bar thus described automatic in effecting a coupling, I use the following device, to wit: A horizontally-vibrating support, E, is arranged in bearings at one side of the chamber of the draw-bar slightly in rear of its coupling-pin holes, its lower end, *e*, being beveled, and its upper end provided with a flat projecting shelf, *e'*. This support is adapted to be rotated in its bearings with its shelf directly under the coupling-pin-hole in the top of the draw-bar, so that when pin B is drawn up, with its lower end free of the chamber, the said shelf will hold the pin against descending into the same until the link of a car approaching to be coupled thrusts the said support backward from under the pin, allowing the latter to fall through the slot of the link and effect a coupling, the support being received into a recess, *f*, in the side of the chamber. This supporter is caused to vibrate automatically into position for sustaining the pin by means as follows: The broad part *g* thereof is constructed of less length than the vertical height of the draw-bar chamber, and is thus rendered endwise movable in its bearings therein. An upwardly-inclined segment or cam, I, is then arranged in rear of the supporter, up which the latter is driven when it is thrust backwardly by a coupling-link; but when pin B is drawn up and the coupling-link removed it will immediately gravitate downward into position for supporting the latter, ready for a subsequent automatic coupling. J designates cylindrical rollers, two or more in number, arranged one above the other in vertical grooves in the sides of the chamber. These rollers are separated by rollers *i* upon their ends, and are vertically movable in a horizontal plane, so that when the link Q enters the draw-head these rollers will readily separate and allow it to penetrate back into the draw-bar to an engagement with a notch, *n*, as shown in Fig. 1, whereby it is held in a horizontal position, and is accurately directed upward or downward, as the case may be, when the cars to be coupled are of different heights, thus effectually doing away with the dangerous custom of raising the link by hand. Rollers J are

so located, with regard to the coupling-pin holes in the draw-bar, that when the pin is in place its front edge shall be close up against the said rollers. It is thereby greatly strengthened, and is absolutely prevented from being bent, whereby its automatic qualities would be greatly impaired.

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

1. The combination, with an endwise-movable draw-head and a coupling-pin, B, having rod *b*, of the bifurcated arm D and slide C, substantially as specified.

2. The rollers J, separated by rollers *i*, and vertically movable in a horizontal plane in vertical grooves in the chamber of the draw-head, substantially as specified.

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

PERRY BROWN.

Witnesses:

M. MUNDY,
DAVID GOLDMAN.