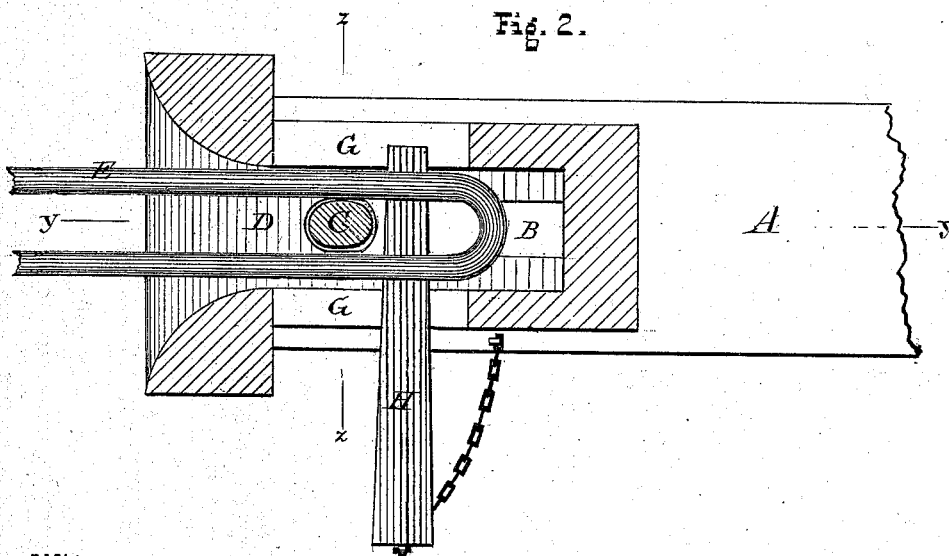
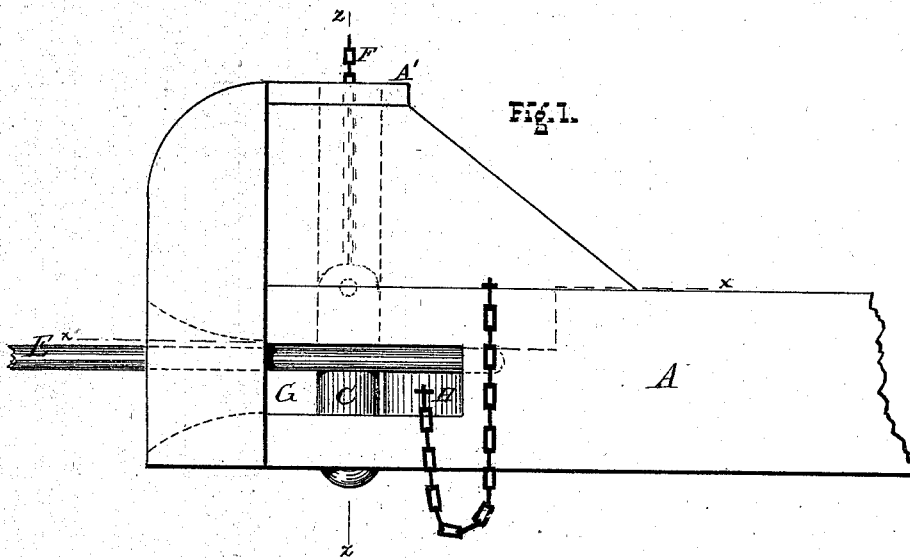


WILLIAM NICHOLS.

Improvement in Car Couplings.

No. 115,507.

Patented May 30, 1871.



Witnesses.

Chas. Poole
John B. Young

Inventor.

Wm. Nichols, by
Orinelle W. Dyer,
Att'ys.

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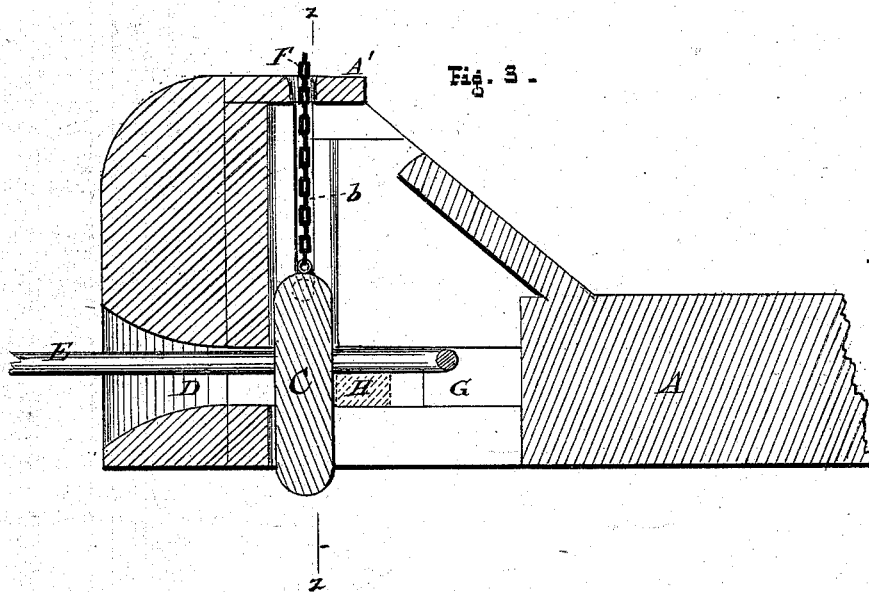


Fig. 4.

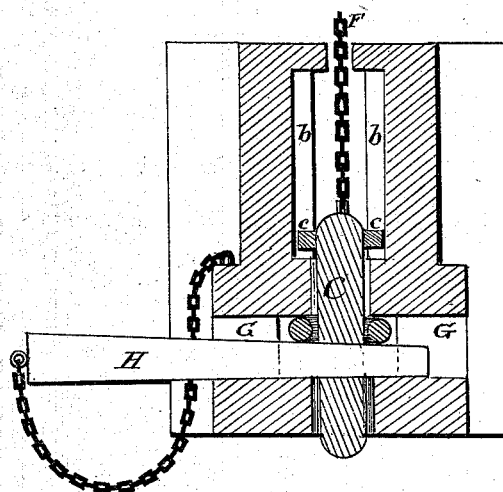
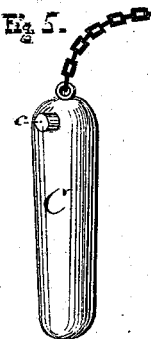


Fig. 5.



Witnesses.

C. H. Poole,
John R. Young

Inventor.

Wm Nichols, by
Prindle & Byers
Att'ys.

UNITED STATES PATENT OFFICE.

WILLIAM NICHOLS, OF CENTRALIA, ILLINOIS.

IMPROVEMENT IN CAR-COUPINGS.

Specification forming part of Letters Patent No. 115,507, dated May 30, 1871.

To all whom it may concern:

Be it known that I, WILLIAM NICHOLS, of Centralia, in the county of Marion and State of Illinois, have invented certain new and useful Improvements in Car-Couplings; and do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation of my improved device; Fig. 2 is a horizontal section of the same on the line *x x* of Fig. 1; Fig. 3 is a vertical longitudinal section on the line *y y* of Fig. 2; Fig. 4 is a vertical cross-section on the line *z z* of Figs. 1, 2, and 3; and Fig. 5 is a perspective view of the coupling-pin.

Letters of like name and kind refer to like parts in each of the figures.

As car-couplings are usually constructed the brakeman, in coupling together cars, is required to raise the link connected with one draw-bar, and guide its end into the mouth of the opposite head, which operation is attended with great danger, and causes frequent injury to the operator.

To remove all liability to danger from such cause, and render the operation of coupling together cars entirely safe, is the object of my invention, which consists in the construction and operation of the devices used for sustaining the link in a horizontal position, substantially as is hereinafter shown and described.

In the annexed drawing, A represents the draw-bar, provided with a vertical longitudinal slot, B, for containing the coupling-pin C, and with a horizontal longitudinal slot, D, for the reception of the link E, said latter slot being provided with a flaring or bell-shaped mouth, and having a vertical depth equal to about twice the thickness of said link. Extending horizontally outward from opposite sides of the coupling-pin C, near its upper end, are two studs, *c*, which fit into corresponding vertical grooves, *b*, cut within opposite sides of the slot B, near its forward end, and hold the head or upper end of said pin in longitudinal position within the draw-bar while permitting a free vertical movement of the former within the same, and also a free rotary motion rearward of the lower end of said pin, for which motion the studs furnish axial bearings. A chain, F, secured to and extending upward from the upper end

of the coupling-pin, furnishes a means whereby the latter may be raised, its upward movement being limited by a plate, A', extending across the upper end of the slot B, and its downward movement by the slots *b*, which extend downward to a sufficient distance only to permit the lower end of said pin to pass through the draw-bar.

As thus arranged the coupling-pin remains suspended upon the studs and against the front end of the slot B, except when a link is introduced into the draw-bar, in which event the lower end of said pin swings rearward, until the end of the link has passed the same, when it swings forward to its former position and locks said link in place. When unsupported, the forward or outer end of the link drops downward until below the opening within the opposite draw-bar, in which position it would be impossible for said link to enter the same.

In order that the link may be adjusted to and secured in the necessary position, a slot, G, corresponding in vertical depth and position with the slot D, is cut transversely through the draw-bar, at and in rear of the coupling-pin, so as to permit a wedge, H, to be inserted beneath the link, and press the same upward against the upper side of its slot. Being thus held in a horizontal position, the link readily enters the opposite draw-bar, after which the wedge, being no longer required, is caused to drop out from its slot by making its outer end sufficiently heavy to be readily affected by the jar of the cars while in motion.

By this construction of a car-coupling, the links may be adjusted so that, without further attention, any desired number of cars shall be coupled by simply backing them together, and, while possessing this advantage, its cost is not materially increased.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

The wedge H, in combination with the link E and with the draw-bar A, constructed as described, and provided with the transverse slot G, substantially as and for the purpose specified.

WILLIAM NICHOLS.

Witnesses:

W. D. HUTCHENS,
GEO. W. SISSON.