

(No Model.)

E. B. SANBORN.
COUPLING FOR STREET CARS.

No. 421,870.

Patented Feb. 18, 1890.

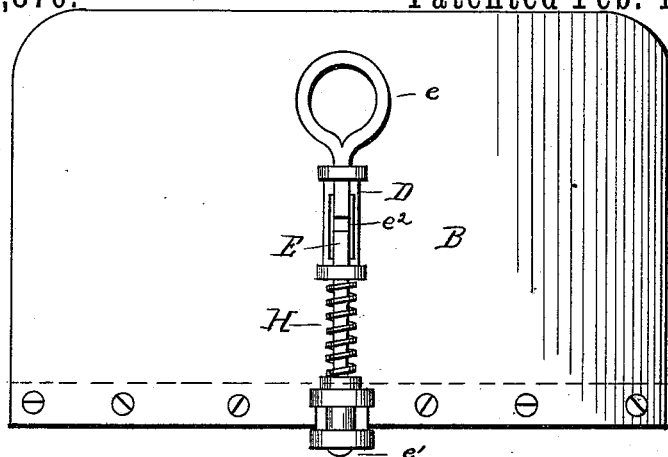


Fig. 1.

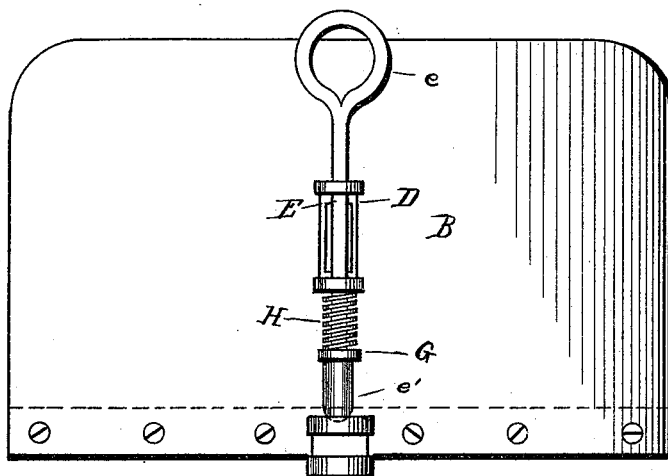


Fig. 2.

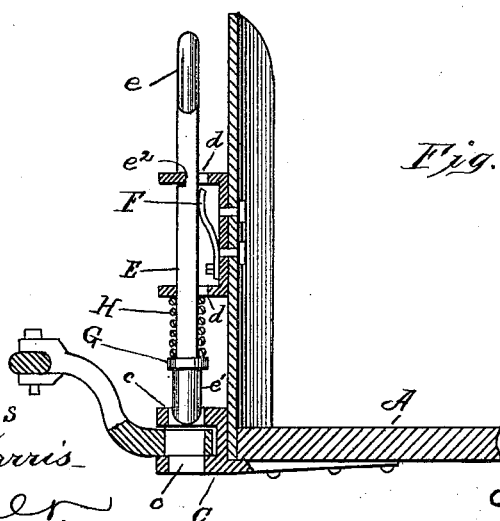


Fig. 3

Witnesses
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UNITED STATES PATENT OFFICE.

EDMOND BURK SANBORN, OF OSHKOSH, WISCONSIN, ASSIGNOR OF THREE-FOURTHS TO CHARLES E. MONTGOMERY, AUGUSTUS BAREUTHER, AND FRANK HEILIG, ALL OF SAME PLACE.

COUPLING FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 421,870, dated February 18, 1890.

Application filed December 13, 1889. Serial No. 333,613. (No model.)

To all whom it may concern:

Be it known that I, EDMOND BURK SANBORN, a citizen of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Couplings for Street or other Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has relation to couplings for street or other cars.

Heretofore in this class of devices, and more particularly in street-cars, it has been found difficult to construct a convenient device whereby the coupling-pin ordinarily employed is prevented from working out of the draw-head and becoming disengaged or uncoupled.

It is the object of my invention to provide a simple and convenient construction designed to obviate the above-named disadvantage, and, furthermore, a construction whereby the coupling-pin may be conveniently manipulated by the operator so as to withdraw the pin from engagement, and to hold said pin securely out of engagement when found necessary; and with these and other objects in view the invention consists in the improved construction and combination of parts, as hereinafter more fully pointed out and described.

In the accompanying drawings, illustrating my invention as applied to a street-car, Figure 1 is a front elevation of the dash-board of a car, showing my invention applied thereto. Fig. 2 is a similar view showing the coupling-pin raised out of engagement with the draw-head; and Fig. 3 is a longitudinal vertical sectional view through the latter figure, showing the coupling connecting the single-tree-supporting iron.

Like letters of reference refer to like parts throughout the several views.

Referring to the drawings, the letter A indicates the car-platform, and B the dash-board

thereof. Secured to the platform in any suitable manner is the ordinary form of draw-head C, said draw-head having its upper and lower members provided with apertures *c c*. At some distance above this draw-head is suitably secured, by means of screws, rivets, or equivalent fastening devices, an angular guide-bracket D, the forwardly-projecting arms thereof having square apertures *d d* near their outer edges. Passing through these apertures is an operating rod or bar E, square in cross-section, said bar terminating at its upper end in a hand-piece *e* and at its lower end in a coupling-pin *e'*, said pin being rounded and slightly beveled or pointed at its lower end. The front edge of the operating-rod, at a point about midway between the forwardly-extending arms of the angular bracket, is provided with a notch *e''*, which, when said rod is raised to its uppermost limit, is designed to engage or interlock with the square aperture of the upper arm. In order to securely retain the operating-rod in this raised position, I further provide a flat spring F, secured to the vertical arm of the angular bracket, the free upper end of said spring bearing against the rear side of the operating-rod. Of course when the rod is raised, as previously explained, and the notch catches in the square aperture, the resiliency of the spring will have the effect of pressing the rod forward so as to insure a firm engagement. It is obvious that the aperture should be made somewhat larger than the area of the operating-rod, so as not only to allow the free vertical movement of said rod, but also a slight forward play, so that when the spring presses against the rear side of the same and when in its raised position the notch will be forced into engagement.

Immediately above the lower rounded portion of the operating-rod, which portion constitutes the coupling-pin proper, is formed an annular stop or flange G. Interposed between this stop and the lower arm or member of the bracket is a helical spring H.

Having thus described the construction of my invention, the operation of the same is as follows: If we suppose the coupling-pin to be

in a raised position, as illustrated in Fig. 2, and it is desired to attach the team, the staple or other securing device of the supporting iron or bracket is passed into the draw-head. The operator then simply presses the rod slightly to the rear until the notch is out of engagement, when said rod will be instantly forced downward by the action of the helical spring and the coupling-pin passed through the staple, this being facilitated by the pointed and rounded shape of the pin. When thus coupled, it will be utterly impossible for the pin to work out, as the helical spring is constantly exerting a pressure downward, which any jolting or jarring incident to travel will not be able to overcome. It will also be observed that the square-shaped rod assists in keeping the pointed pin more firmly in place.

While my device is designed for use in connection with street-cars more especially, still I do not wish to be understood as confining myself to that particular adaptation, as it is obvious that the same can with equal facility be used in connection with passenger or freight railroad-cars. In such case the operating-rod of course should be lengthened, so that the brakeman can reach the same from the top of the car, or with but little trouble simple levers could be pivoted at their inner ends to the operating-rod and extended out laterally, so as to be conveniently reached by a person without the necessity of passing between the cars.

It will be seen that my invention is exceedingly simple in construction, effective in operation, and little liable to breakage or damage.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a coupling for street and other cars, the combination, with a car-body, of a draw-head, an annular apertured guide-bracket, a coupling-pin having its lower end passing through the draw-head and provided above the draw-head with an annular stop or flange, and having its upper portion passing through the apertures of the angular bracket and terminating in a handle, and a spring interposed between the annular stop and the angular bracket, substantially as set forth.

2. In a coupling for street and other cars, the combination, with a car-body, of a draw-head, a vertically-spring-actuated operating-rod, square in cross-section for a greater portion of its length and terminating at its ex-

treme lower end in a rounded and pointed portion, forming the coupling-pin proper, and also provided at its upper end with an operating-handle, and an angular guide-bracket secured above said draw-head, having its arms provided with square apertures or perforations, through which the operating-rod passes, substantially as set forth.

3. In a coupling for street and other cars, the combination, with the car-body, of a draw-head secured thereto, a vertically-spring-actuated operating-rod, said rod being square in cross-section for a greater portion of its length and terminating at its extreme end in a rounded portion, forming the coupling-pin proper, and also provided at its upper end with a hand-piece, and somewhat below said hand-piece and upon its front edge with a notch, an angular guide-bracket having its arms provided with square apertures or perforations, through which the operating-rod passes, and a flat spring having its free upper end pressing against the rear edge of the operating-rod and adapted to retain the operating-rod in its raised position when the notch thereof engages the aperture of the upper arm of the bracket, substantially as set forth.

4. In a coupling for street and other cars, the combination, with a car-body, of a draw-head secured thereto, a vertically-moving operating-rod, said rod being square in cross-section for a greater portion of its length and terminating at its extreme end in a rounded portion, forming the coupling-pin proper, and also provided immediately above said draw-head with an annular stop or flange and at its upper end with a hand-piece, and somewhat below said hand-piece with a notch, an angular bracket having its forwardly-extending arms provided with apertures or perforations, through which the operating-rod passes, a flat spring having its inner end secured to the vertical portion of the angular bracket and its free end pressing against the rear edge of the operating-rod and adapted to retain said operating-rod in its raised position when the notch thereof engages the aperture of the upper arm of the bracket, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDMOND BURK SANBORN.

Witnesses:

A. BAREUTHER,

L. ELWARD.