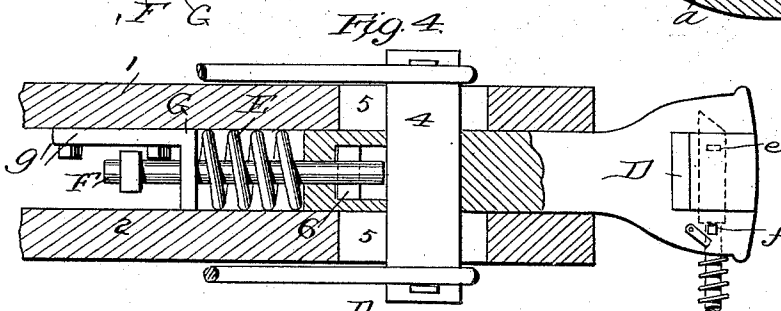
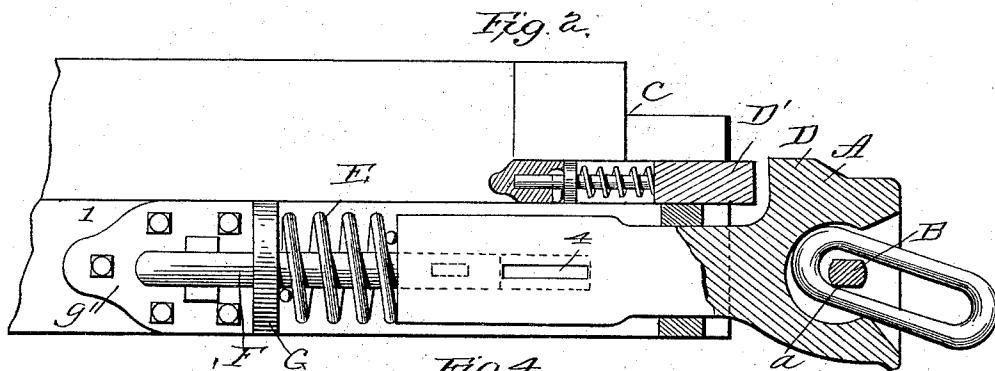
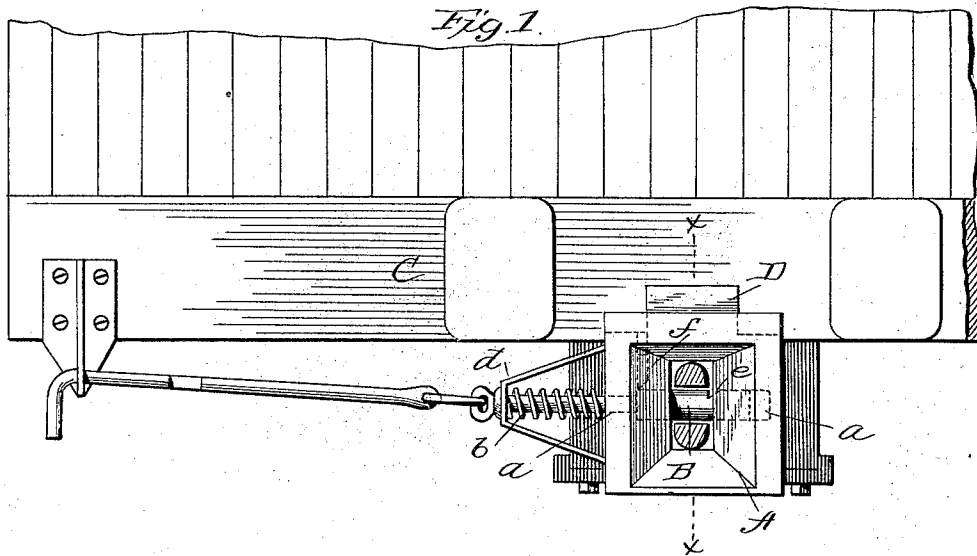


(No Model.)

D. D. GREEN.
CAR COUPLING.

No. 468,602.

Patented Feb. 9, 1892.



Attest
Martin McAdams
J. L. Middleton

Fig. 3.

Inventor
Daniel D. Green
by Ellis Spear
Att'y.

UNITED STATES PATENT OFFICE.

DANIEL D. GREEN, OF SCOFIELD, UTAH TERRITORY.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 468,602, dated February 9, 1892.

Application filed July 31, 1891. Serial No. 401,282. (No model.)

To all whom it may concern:

Be it known that I, DANIEL D. GREEN, a citizen of the United States of America, residing at Scofield, in the county of Emery and Territory of Utah, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention is an improved car-coupling; and my object is to construct a draw-head so that the link, instead of being held therein in a horizontal plane, shall be held in a vertical plane, as I have found in this way that a much smaller opening is required in the face of the draw-head, thus preventing the admission of snow and hail to interfere with the operation, and at the same time by using the link in a vertical position there is less liability to fracture or bend the link than when the link is used horizontally, for the reason that when contact is made with an adjacent car the shock comes upon the link in line with its longitudinal axis and there is no tendency to break or bend. I also provide, in connection with the vertically-arranged link, a horizontally-arranged coupling-pin, which passes through openings in the side walls of the draw-head, having a suitable operating connection to the side of the car.

The invention consists in the details of construction hereinafter particularly set forth.

In the accompanying drawings, Figure 1 is an end view of a portion of a car containing my improved coupling. Fig. 2 is a sectional view on line *xx* of Fig. 1, partly in side elevation. Fig. 3 represents a modified form of link in place in the draw-head. Fig. 4 is a horizontal section through the rear end of the draw-head stem and supports.

In the figures the draw-head (shown at A) may be connected to the car-body in any suitable way. It is provided with an opening in its front end, flaring, as usual; but instead of having its widest opening in horizontal plane this opening extends vertically. The walls of the opening flare inwardly from the sides and from top and bottom, terminating in a very narrow opening only slightly exceeding the width of the link.

The side walls of the draw-head are provided with openings, as at *a*, and through these openings passes a coupling B, supported

in a horizontal position and having a spring *b* located between the shoulder on said pin and a yoke *d*, through which the pin passes, this spring having a tendency to keep the pin pressed to and in engagement with the link. The coupling-pin is connected by means of a rod or chain or other suitable means extending to the side of the car or to the upper part thereof, so that the cars may be uncoupled without requiring the presence of the brakeman between the cars to be coupled or uncoupled. The upper face of the coupling-pin is provided with a depression, as at *e* in Fig. 1, and this is engaged by a gravity-pin *f* in an opening extending vertically through the draw-head to the opening through which the coupling-pin passes, and as the coupling-pin is drawn back this gravity-pin drops into the depression or recess in its face and holds the pin with its end projecting slightly into the cavity of the draw-head. The end of the coupling-pin is inclined on its front toward its rear, and this presents this inclined face to the action of the link, and as the link enters the draw-head it pushes back the coupling-pin by contact with the inclined face, and this has the effect, by reason of the inclined wall of the recess in the coupling-pin coming in contact with the inclined end of the gravity-pin, to raise the said pin, thus allowing the coupling-pin to be forced backward, and as the link is forced inward beyond the line of the coupling-pin it releases the same, and the spring of the pin drives it forward so quickly that the gravity-pin will not engage the recess in the upper face thereof, and the pin will thus cross the line of the draw-head opening to its greatest extent and thus lock the link in place.

In order that my improved draw-head may be used with a draw-head of ordinary construction, I provide a link having one part arranged at right angles to the other, as shown in Fig. 3, so that the part *g* is adapted to enter the vertically-arranged draw-head of my improved construction, while the part *h* is adapted to be used with a draw-head as ordinarily constructed. The draw-head, as shown, is placed below the cross-beam C and is usually provided with springs on the draw bolt or rod. In connection with the same

and in order to prevent too great compression of these springs I provide a projection or stop D on the upper part of the draw-head, which is adapted to come in contact with the cross-beam and prevent further rearward movement of said draw-head.

As shown in Fig. 2, a spring buffer-block D' may be placed in rear of the draw-head, and the projection D will then strike against this and prevent jar and at the same time reinforce the spring E about the draw-bolt F. This bolt passes through a plate or washer G at its rear end, which is held in position between the beams 1 2 of the car by the plate g', bolted to one of said beams.

The rear end of the stem of the draw-head is slotted transversely, and through this slot the key 4 passes and out through slots 5 in the beams, these slots being of sufficient length to allow the draw-head its longitudinal play. The key serves to support the draw-head stem and to guide it. The cavity 6 receives the end of the draw-bolt, which is held therein by a key passing through it and bearing against the walls of the cavity. The

spring E is interposed between the rear end of the draw-head stem and the washer G.

I claim as my invention—

1. In a car-coupling, a draw-head having a vertically-arranged elongated opening therein, a spring coupling-pin operating horizontally, said pin having an inclined end, and a gravity-pin engaging a recess in the upper face of said coupling-pin, substantially as described.

2. In combination, the car-beams, the draw-head having its stem extending between them, the said stem being recessed and slotted, the draw-bolt secured in said recess by a key, the washer G, having a plate g' bolted to the beam, and the spring E between the washer and the draw-head stem, substantially as described.

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

DANIEL D. GREEN.

Witnesses:

THOMAS LLOYD,
CHRISTIAN J. JENSEN.