(No Model.)

A. G. CANADA.

CAR COUPLING.

No. 449,928. Patented Apr. 7, 1891.

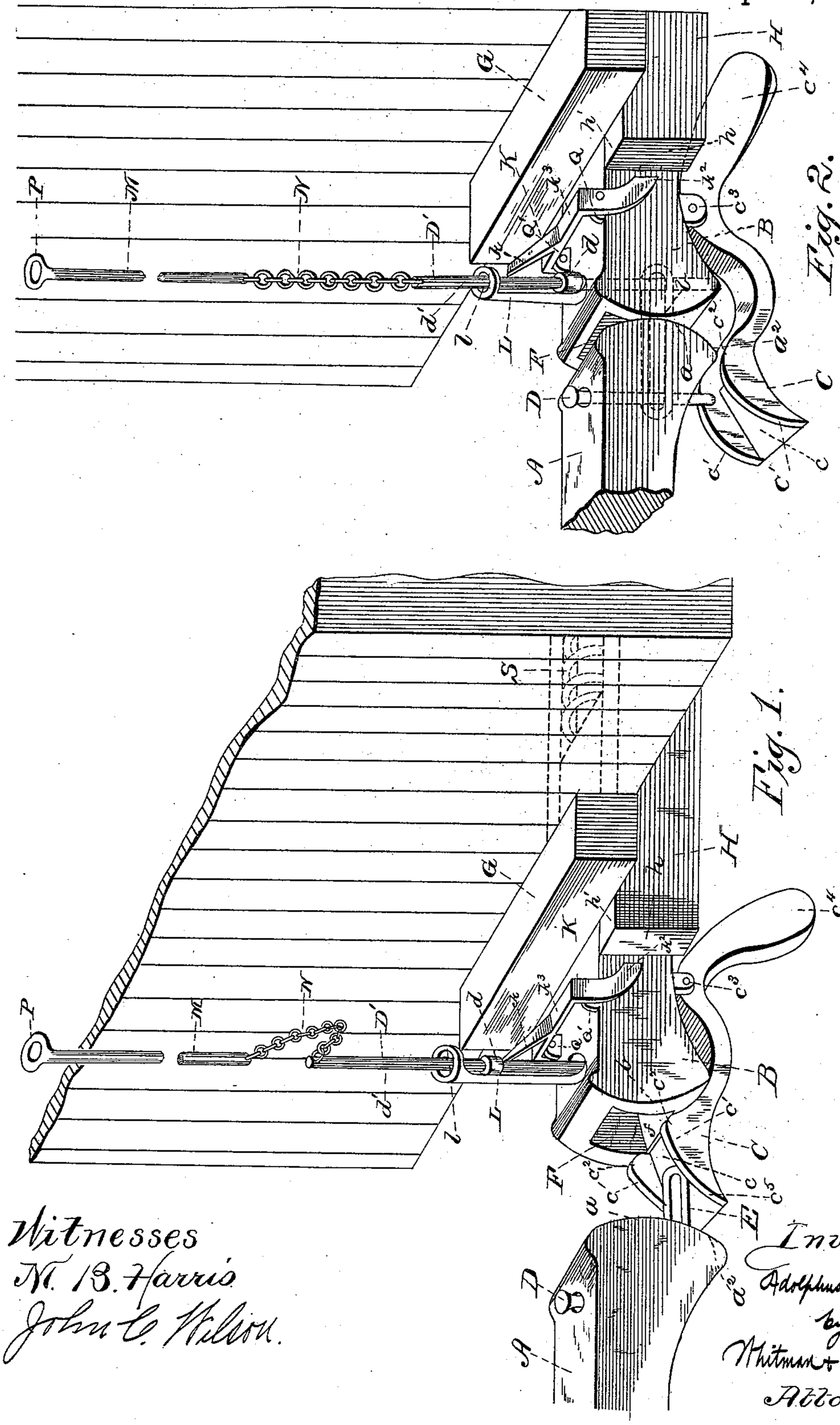

Fig. 2.

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

ADOLPHUS GUSTAVUS CANADA, OF HORN LAKE, MISSISSIPPI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 449,928, dated April 7, 1891.

Application filed October 4, 1890. Serial No. 367,100. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHUS GUSTAVUS CANADA, a citizen of the United States, residing at Horn Lake, in the county of De Soto and State of Mississippi, have invented certain new and useful Improvements in Car-Couplings; and I do hereby 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.

My invention relates to car-couplings and applies especially to those known as "link-and-pin couplings."

It has for its object the providing of a suitable device for guiding the link into place and for dropping the pin to securely hold the said link without the necessity for the dangerous practice of stationing a man between the two cars as they come together in coupling.

My method of accomplishing these objects will be understood by reference to the accompanying drawings, wherein the same parts are indicated by the same letters.

Figure 1 represents a perspective view of my invention and shows the draw-heads of two car-couplings as they are about to come together. Fig. 2 represents a perspective view of my invention after the two cars are coupled together.

A represents a draw-head as ordinarily fitted for link and pin, E being the link and D being the pin.

B represents a draw-head similar to A, but fitted with my device.

C represents a metal guide pivoted at c^3 and having a heavy arm or weight c^4 to keep the sloping guide-face c and contracting walls c' c' up in place for guiding the link when coupling. The link E slides along the sloping bottom c and is guided by the contracting walls c' c' until the end of the link rests on the bottom f of the slot F in the draw-head B. As soon as E is securely supported by f the edge a^2 of the draw-head A strikes the rounded edge c^5 of the guide-plate, and as the cars come together the said guide-plate is pressed out of the way, as shown in Fig. 2. The edges c^2 are also rounded to prevent any undue strain on the guide-plate as the cars separate after uncoupling. As soon as the link is well in slot F the pin is dropped by means of my automatic device.

The draw-head B is held between two side timbers H with the usual dead-wood G and lower support. (Not shown.) It also has the usual spring S on its inner end. On two pivots Q and Q', secured to the upper face of the draw-head in any convenient way, I swing the bent lever K. For greater steadiness in use I make K of a piece of sheet-iron having two legs, one on either side of the draw-head. Both these legs have pivot-holes nearer their rear than their front edges, in order that they may have their center of gravity in front of the said pivot. Both of these pivots should preferably be above the upper face h' of the beam H. The lower parts of the legs of K, I have bent backward, as shown at k^2. On the upper face k^3 of the bent iron lever I bolt or otherwise secure a clutch k, which normally takes under the collar d of the long coupling-pin D'. This collar d is really the head of the coupling-pin, the upper portion d' of the said pin serving merely as a guide for the pin.

L is a guide for the said pin, having a cylindrical ring l at the upper end and being semi-cylindrical in section down to the draw-head, to which it is secured in any convenient way.

N is a chain connecting the coupling-pin D' to the rod M and hand-lift P on the top of the car. The chain N might equally well be lifted from the side of the car by other well-known mechanical devices.

Now when the cars come together the link slides into the slot F, and the face a, buffing against the face b, pushes the draw-head B and spring S inward. The curved arm k^2 then takes against the face h and throws the clutch k from under the collar d, and the slack chain N, Fig. 1, allows the coupling-pin D' to fall into place. By having the pivot k' above the face h' the said pivot will not be carried away should the draw-head B be pushed in too far. The clutch k should be of elastic metal, preferably steel.

In uncoupling, the brakeman pulls the pin D' out by means of the lifting-rod, and as the cars separate the force of gravity will cause K to swing forward again, throwing k under

d, when the lifting-rod should be let go, and the chain will become slack, leaving the pin ready for use in coupling on another car.

I claim and desire to secure by Letters Patent—

1. In a car-coupling, a guide pivoted to the draw-head for the link, said guide having a heavy arm c^4 acting as a counterpoise, with a sloping guide-face *c* and contracting guide-walls *c'* and *c'*, with rounded edges c^2 and c^5, substantially as described.

2. In a car-coupling, the combination of a guide pivoted to a yielding draw-head for the link and normally kept in position by the force of gravity, with a bent lever pivoted to the said draw-head and having one of its arms terminating in a clutch for a collar on the coupling-pin and the other bent backward to engage the face of the side timber when the draw-head is pressed back, substantially as described.

3. In a car-coupling, the combination of a guide pivoted to a yielding draw-head for the link and normally held in position by the force of gravity, with a bent lever pivoted to the said draw-head and having one of its arms terminating in a clutch for a collar on the coupling-pin and the other bent backward to engage the face of the side timber when the draw-head is pressed back, and the said coupling-pin having a long upper arm, as a guide-rod, engaging in suitable guides and being connected with a chain to a lifting-rod, substantially as described.

4. In a car-coupling, the combination of a guide pivoted to a yielding draw-head for the link and normally kept in position by the force of gravity, with a bent metal lever having two legs, one on either side of the draw-head and pivoted to a suitable pivot thereon, with pivot-holes through the rear upper portions of the said legs, the said legs being made tapering and curved to the rear, a steel clutch secured to the upper face of the said bent lever and protruding forward, engaging under a collar on the coupling-pin, and a long coupling-pin having a collar near its center and having an upper arm, as a guide-rod, engaging in suitable guides and being connected with a chain to a lifting-rod, substantially as described.

5. In a car-coupling, the combination of a guide pivoted to the draw-head for the link, said guide having a heavy arm c^4 acting as a counterpoise, with a sloping guide-face *c* and contracting guide-walls *c'* and *c'*, with rounded edges c^2 and c^5, with a bent metal lever having two legs, one on either side of the draw-head and pivoted to a suitable pivot thereon, with pivot-holes through the rear upper portions of the said legs, the said legs being made tapering and curved to the rear, a steel clutch secured to the upper face of the said bent lever and protruding forward, engaging under a collar on the coupling-pin, and a long coupling-pin having a collar near its center and having an upper arm, as a guide-rod, engaging in suitable guides and being connected with a chain to the lifting-rod, substantially as described.

6. In a car-coupling, the combination of the counterpoise link-guide C with the link E, lower face of the slot F, yielding draw-head B, trip-lever K and clutch *k*, pivoted thereto, face *h* of side timber H, coupling-pin D', having collar *d*, guide L, chain N, and lifting-rod M, substantially as described.

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

ADOLPHUS GUSTAVUS CANADA.

Witnesses:

JESSE BURGESS WILLIAMS,

LUCIUS TULLUS MARCELLUS CANADA.