

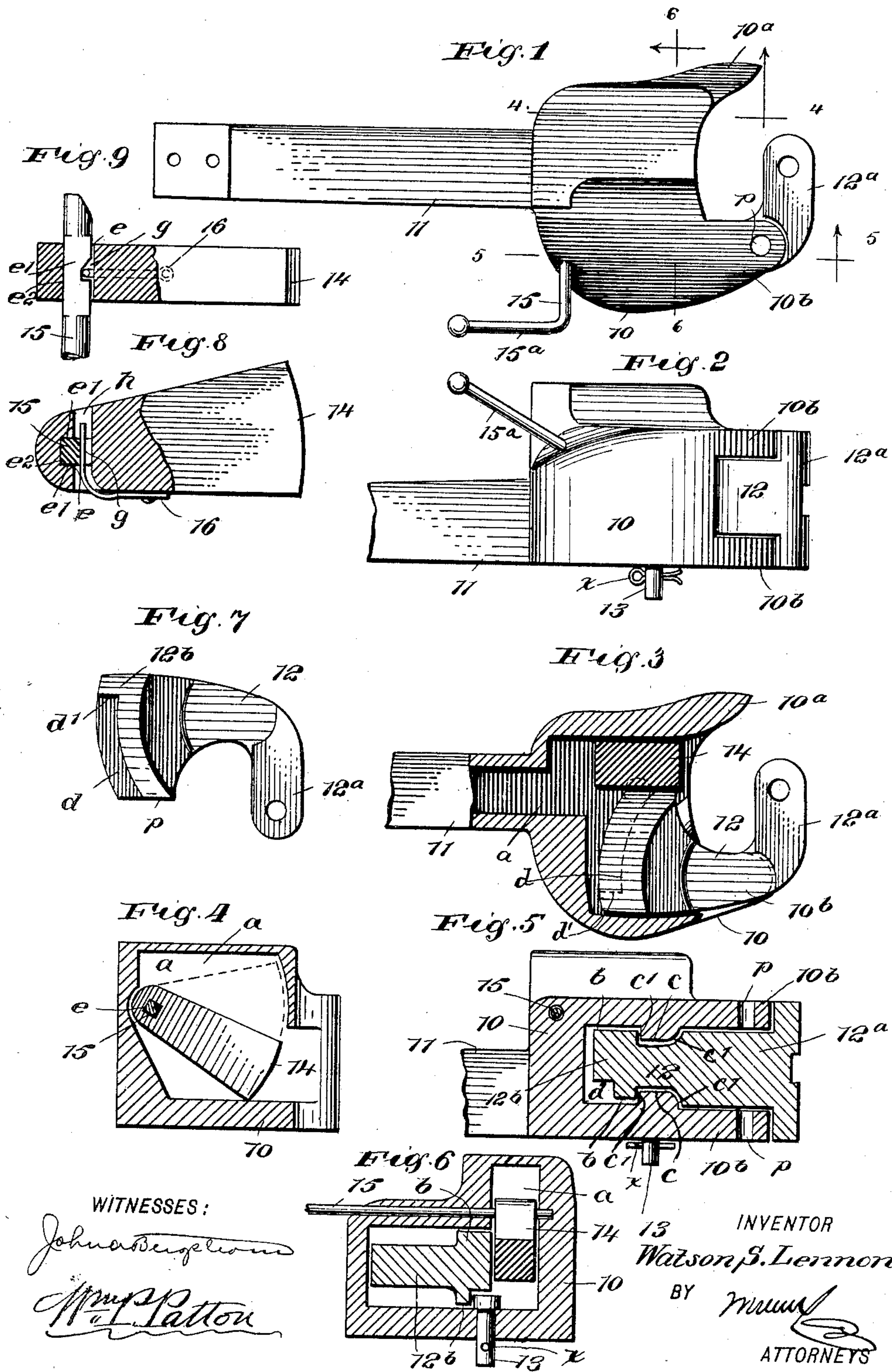
No. 679,629.

Patented July 30, 1901.

W. S. LENNON.  
CAR COUPLING.

(Application filed Mar. 12, 1901.)

(No Model.)



WITNESSES:

*John A. Bergelson*  
*Wm. J. Patton*

INVENTOR

*Watson S. Lennon*

BY

*M. W. Munn*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

WATSON SIMPSON LENNON, OF TUCSON, ARIZONA TERRITORY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 679,629, dated July 30, 1901.

Application filed March 12, 1901. Serial No. 50,821. (No model.)

*To all whom it may concern:*

Be it known that I, WATSON SIMPSON LENNON, a citizen of the United States, and a resident of Tucson, in the county of Pima and Territory of Arizona, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

This invention relates to a class of car-couplings having a laterally-swinging jaw or knuckle adapted to couple with a like knuckle on another car-coupling and by manual adjustment be released therefrom.

The object of my invention is to provide novel simple details of construction for a car-coupling of the class indicated, which adapts it for very efficient service and avoids the contingency of breakage of the draw-head to which others of ordinary construction are liable.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a car-coupling having the improvements. Fig. 2 is a side view of the same. Fig. 3 is a partly-sectional plan view of the improved car-coupling. Fig. 4 is a longitudinal sectional view substantially on the line 4 4 in Fig. 1. Fig. 5 is a longitudinal sectional view substantially on the line 5 5 in Fig. 1. Fig. 6 is a transverse sectional view substantially on the line 6 6 in Fig. 1. Fig. 7 is a bottom plan view of a knuckle-block employed. Fig. 8 is a partly-sectional side view of a locking-block which shows features of the invention, and Fig. 9 is a partly-sectional plan view of the locking-block and a plan view of a portion of a tripping-shaft detachably secured in a perforation in the locking-block.

In the drawings, 10 indicates the draw-head, and 11 the draw-bar, extended from the draw-head, as usual, for connection with a car-frame to adapt the car-coupling for service. A recess or chamber *a* is formed in the draw-head body for the reception of a knuckle-block, which will be hereinafter described. The forward edges of the top and bottom walls

of the draw-head 10 are concaved and merge at one side of the draw-head into a horn 10<sup>a</sup> and at the opposite side thereof into a pair of spaced flanges 10<sup>b</sup>, which is a common construction for this type of car-couplings.

The knuckle-block is substantially L-shaped, and comprises a neck 12, from which is integrally projected the coupling-jaw 12<sup>a</sup>, that extends laterally. A tailpiece 12<sup>b</sup> is integrally formed on the neck 12 and is laterally widened at the same side of the neck from which the jaw 12<sup>a</sup> projects. A curved rib *b* is formed oppositely on each side of the tailpiece 12<sup>b</sup>, the front edges of which are concave and the rear edges convex. The thickness of the tailpiece through the ribs *b* is slightly less than the height of the space or chamber *a* between the upper and lower walls of the draw-head, so that the ribs when introduced will freely move in said chamber.

The neck 12 of the tailpiece is of less thickness than that of the jaw 12<sup>a</sup> or tailpiece at its ribs *b*, and, as shown in Fig. 5, like projections *c* are formed on the upper and lower walls, which define the chamber *a*, loosely engaging the top and bottom surfaces of the neck 12, and likewise the shoulders *c'*, formed where the thinner body of the neck merges into the front edges of the ribs *b* and the rear edges of the coupling-jaw 12<sup>a</sup>, as also appears in Fig. 5.

It will be seen that the ribs *b* may be freely inserted endwise behind the projections or ribs *c* and that said projections *c* will then be adapted to traverse the spaces defined by the shoulders *c'* when the coupling-jaw 12<sup>a</sup> is rocked between the draw-head flanges 10<sup>b</sup>, so as to open or close it. The lower rib *b* is reduced in width for a portion of its length by removal of material at the rear edge thereof, said reduction forming a trackway *d*, terminating at a shoulder *d'* near a side edge of the tailpiece that contacts with the side wall of the chamber *a*, from which the draw-head flanges 10<sup>b</sup> extend forwardly when the coupling-jaw is fully opened.

A headed pin 13 is removably inserted in a perforation in the lower wall of the draw-head chamber *a*, near its forward free edge, and has such a relative position that the head thereof which projects above the draw-head wall will be positioned in the trackway *d*.



The pin 13 may be held in place by a cross-key  $x$  or by any other preferred means. It will be seen that upon rocking the coupling-jaw 12<sup>a</sup> to open it said rocking movement  
 5 will be arrested when the head of the pin 13 contacts with the shoulder  $d'$ , and it is also apparent that while the pin 13 is in position it will not be possible for the knuckle-block to become accidentally detached from the draw-  
 10 head 10 or be designedly removed therefrom.

The width of the chamber  $a$  affords a suitable space at the straight side edge of the tail-piece when the coupling-jaw of the knuckle-block is in closed adjustment, as shown in  
 15 Fig. 3, and in this space a locking-block 14 is held to rock toward and from the bottom wall of the chamber  $a$ , as shown in Fig. 4. The locking-block 14 is parallel on its sides and of a thickness which permits it to fit loosely  
 20 between the adjacent side of the chamber  $a$  and the straight side of the tailpiece on the knuckle-block.

An angular perforation  $e$ , preferably square in form, is produced transversely in the locking-block 14, near its normal rear end, and a  
 25 tripping-shaft 15, which is held to rock transversely in a perforation in the draw-head body 10, has at a suitable point two opposite and parallel flat places  $e'$  formed thereon. The flattened  
 30 reductions  $e'$  on the cylindrical body of the tripping-shaft 15 will fit into a corresponding recess  $e^2$ , formed in the rear side of the main perforation  $e$  in the locking-block 14, as shown in Fig. 8. In the forward edge of the  
 35 shaft 15, where it has the flattened formations  $e'$  thereon, a notch  $g$  is formed, and a mating slot  $h$  is produced in the locking-block 14, which crosses the path of the transverse perforation  $e$ .

An L-shaped detent-dog 16, preferably formed of spring metal, has one of its members secured near the forward end upon the  
 40 lower edge of the locking-block 14, so that the other member thereof may project loosely up into the vertical slot  $h$  and have a locking engagement with the notch  $g$  if the shaft 15 is inserted sufficiently to cause the notch  $g$  and slot  $h$  to register with each other.  
 45

It is obvious from the foregoing description  
 50 of parts that when the knuckle-block is swung so as to close the jaw 12<sup>a</sup> and the locking-block 14 is lowered so as to occupy the space in the draw-head at the side of the tailpiece

of the knuckle-block said jaw 12<sup>a</sup> will be held in closed adjustment, as is clearly shown in  
 55 Fig. 3.

The outer end of the shaft 15 may terminate in a crank-handle 15<sup>a</sup>, or this may be an arm coupled with a suitable device on a car  
 60 for manual adjustment by a person on the car, and as this is an ordinary provision it is not necessary to show it in connection with the improved car-coupling.

It is claimed for the improvement that it will remove draft strain from the flanges 10<sup>b</sup>  
 65 of the draw-head, whereon it is common to pivot the knuckle-block, and as these flanges are the weakest part of the draw-head their breakage is frequent when they sustain the pull of the coupling-jaw on the knuckle, as  
 70 is the case in the ordinary construction of car-couplings of this class.

The flanges 10<sup>b</sup> are shown as perforated in alinement in Fig. 1, which is not essential, but may be done, so as to allow a common  
 75 knuckle-block to be introduced in case of accident to the one of preferred construction, the perforations  $p$  in this case accommodating a pivot-bolt, as usual.

Having thus described my invention, I  
 80 claim as new and desire to secure by Letters Patent—

In a car-coupling, the combination with a chambered draw-head, and a rockable knuckle-block therein which is L-shaped, of a  
 85 transverse tripping-shaft rockable in the draw-head near its rear end, a locking-block of elongated form through which the shaft passes and an L-shaped detent-dog having one member secured upon the lower side of  
 90 the locking-block, and the other member which is resilient projecting up through a slot in the locking-block to enter a notch in the tripping-shaft and thus hold the locking-block detachably secured upon the shaft which  
 95 block when in lowered adjustment contacts with a side of the tailpiece on the knuckle to hold it stationary.

In testimony whereof I have signed my name to this specification in the presence of  
 100 two subscribing witnesses.

WATSON SIMPSON LENNON.

Witnesses:

F. J. RUSSELL,  
 JOHN AUG. OLSON.