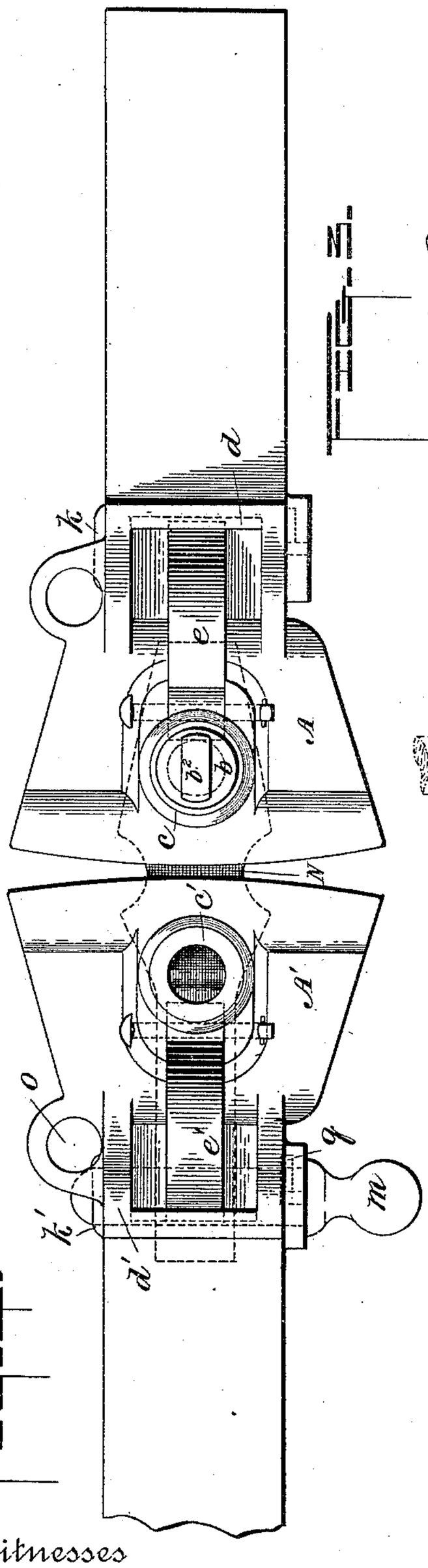
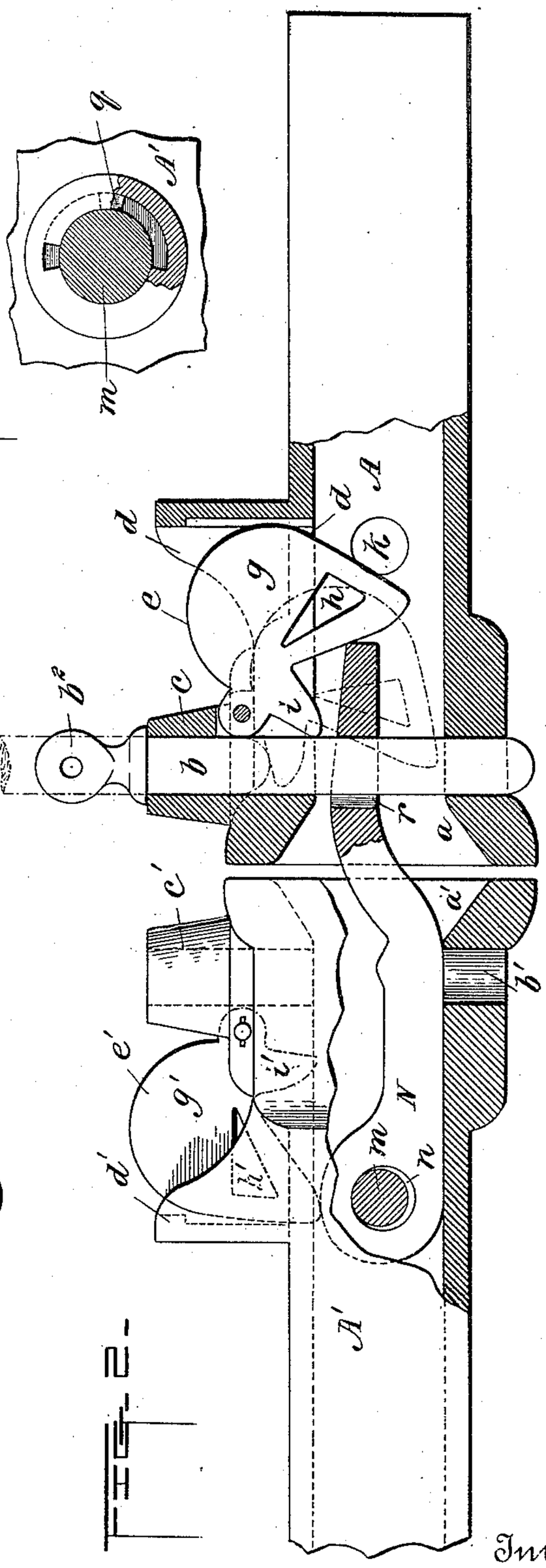
(No Model.)

W. FALKNER.

CAR COUPLING.

No. 421,255. Patented Feb. 11, 1890.





Witnesses
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WILLIAM FALKNER, OF CONNELLSVILLE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO C. A. McDERMOTT, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 421,255, dated February 11, 1890.

Application filed February 21, 1889. Serial No. 300,735. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FALKNER, of Connellsville, in the county of Fayette and State of Pennsylvania, have invented a new and useful Improvement in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of my improved car-coupling device. Fig. 2 is an irregular vertical sectional view of the same. Fig. 3 is a detail view.

Like letters of reference indicate like parts in each.

The principle features of my improvement are draw-heads capable of use in connection with my improved link or with the ordinary link; a bent link having a supporting-face; an independent side link-securing device, whereby the link, while it is held on a fixed plane, is free to move laterally, so as to allow for the movement incident to the cars when passing a curve; and a coupling-pin-supporting device whereby the pin is supported until it is released automatically by the link entering the draw-head, the whole being so arranged as to enable the cars to couple with each other without auxiliary support or direction being applied to the link while the cars are being coupled.

I will now describe my invention, so that others skilled in the art may manufacture and use the same.

In the drawings, A A′ represent the two draw-heads, which are similar to each other in construction and arrangement of parts. These draw-heads are provided with the ordinary open flaring mouths *a a′*, in the rear of which are the coupling-pin holes *b b′*. These holes are of the ordinary form, excepting that on the top of the draw-head a supporting-extension *c c′* is formed, which increases the depth of the walls or sides of the pin-holes without unduly adding to the weight of the draw-heads. In the interior of the draw-heads in the rear of the coupling-pin holes the base of the cavity in the draw-head is level and flat, so as to afford a supporting-surface for the link, while the upper portions of the draw-heads in the rear of the coupling-pin holes are provided with slots *d d′*, in which slots are the pin-supporting devices, which consist of the swinging lugs *e e′*, which are pivoted in the slots *d d′*, and at their rear ends are provided with solid or heavy portions *g g′*, the forward portion being slotted or recessed, as at *h h′*, so as to lessen the weight at this end. At the upper portion of the forward end or face are the pin-supporting lugs *i i′*. In rear of the swinging lugs *e e′* are transverse or horizontal securing-pin holes *k k′* for the reception of the pin *m*, which secures one end of the link N in the draw-head. This link N is provided at one end with a transverse or horizontal pin-hole *n*, which is somewhat greater in diameter than the holes *k k′*, and is adapted to receive the securing-pin *m*, which passes transversely through the holes in the draw-head and link, and is secured by a locking-lug *q*, formed at the shoulder on the pin, which lug fits and locks in a recess in the draw-head, as shown in Fig. 3, which is a detached view showing these parts more in detail. This locking-lug serves merely to prevent the securing-pin *m* from working out of the pin-holes. In front of the pin *m* the link is provided with a flat edge or face, which rests on the level portion of the base of the draw-head cavity. At the mouth of the draw-head the link is bent upward, so that the coupling end which projects from the mouth of the draw-head shall be kept in an elevated position and adapted to enter the mouth of the draw-head of the car to which it is desired to couple the link. In this outer end of the link is a vertical pin-hole *r*, which is adapted to receive the coupling-pin b^2, which passes through the pin-hole *b* when the cars are coupled.

The operation of my improvement is as follows: When it is desired to couple one car with another, the link N is secured in one draw-head by the transverse pin *m* passing through the pin-holes *k k′* in the sides of the draw-head and the pin-hole *n* in the link. The pin is then turned so as to lock itself by means of the locking-lug *q*. When so secured, the forward end of the link extends out of and beyond the mouth of the draw-head at a point at or slightly above the middle of the same, and, owing to the support afforded by

the flat or level face of the link resting on the level portion of the base of the cavity in the draw-head, the link is kept in a horizontal position, the forward projecting end being by these means prevented from dropping or sagging below the level of a horizontal line. When the link is so secured in the draw-head, the coupling-pin is placed in the side pin-hole *o*, which is a receptacle for the pin when not in use, and is preferably formed on the outer side of the draw-head. In the opposite car to which the first car is to be coupled the link is removed, and also the transverse pin *m*. The coupling-pin is placed in the pin-hole *b*, and is supported by the bracket or lug *i* on the swinging lug *e*, which is held in its lower position by the gravity of the heavy or weighted rear part *g*, as shown by dotted lines in Fig. 2. When the cars come together, the projecting end of the link, being supported in its horizontal position, enters the mouth of the opposite draw-head and strikes the pin-supporting lug *e*, and, driving it back, releases the coupling-pin b^2, which then drops into the pin-hole in the link, and the cars are coupled, as shown in full lines in Fig. 2.

Where cars of unequal height are to be coupled, the link N may be reversed, so as to bring the projecting coupling end below the level of the mouth of the draw-head; or, should the link be broken, the ordinary link may be employed with a coupling-pin in each draw-head.

The advantages of my improvement are that the link, being supported in a horizontal position, is enabled to couple automatically with the supported pin of the opposite draw-head, while at the same time, owing to the flare of the mouths of the draw-heads, and the transverse pin *n* passing through an enlarged or elliptical pin-hole, sufficient lateral play or movement is permitted to enable the cars to pass curves without danger of injury to the links.

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

1. In a car-coupling, the combination of a draw-head having a pivoted counterweighted lug for supporting the coupling-pin in position for engaging the link, a link, and a pin passed transversely through the draw-head and link to secure the latter, substantially as and for the purposes described.

2 In a car-coupling, the combination of a draw-head having a pivoted counterweighted coupling-pin-supporting lug, a link, a transverse securing-pin, and a locking device for holding the transverse pin in place, substantially as and for the purposes specified.

In testimony whereof I have hereunto set my hand this 15th day of February, A. D. 1889.

WILLIAM FALKNER.

Witnesses:
C. A. McDERMOTT,
JOHN KURTZ.