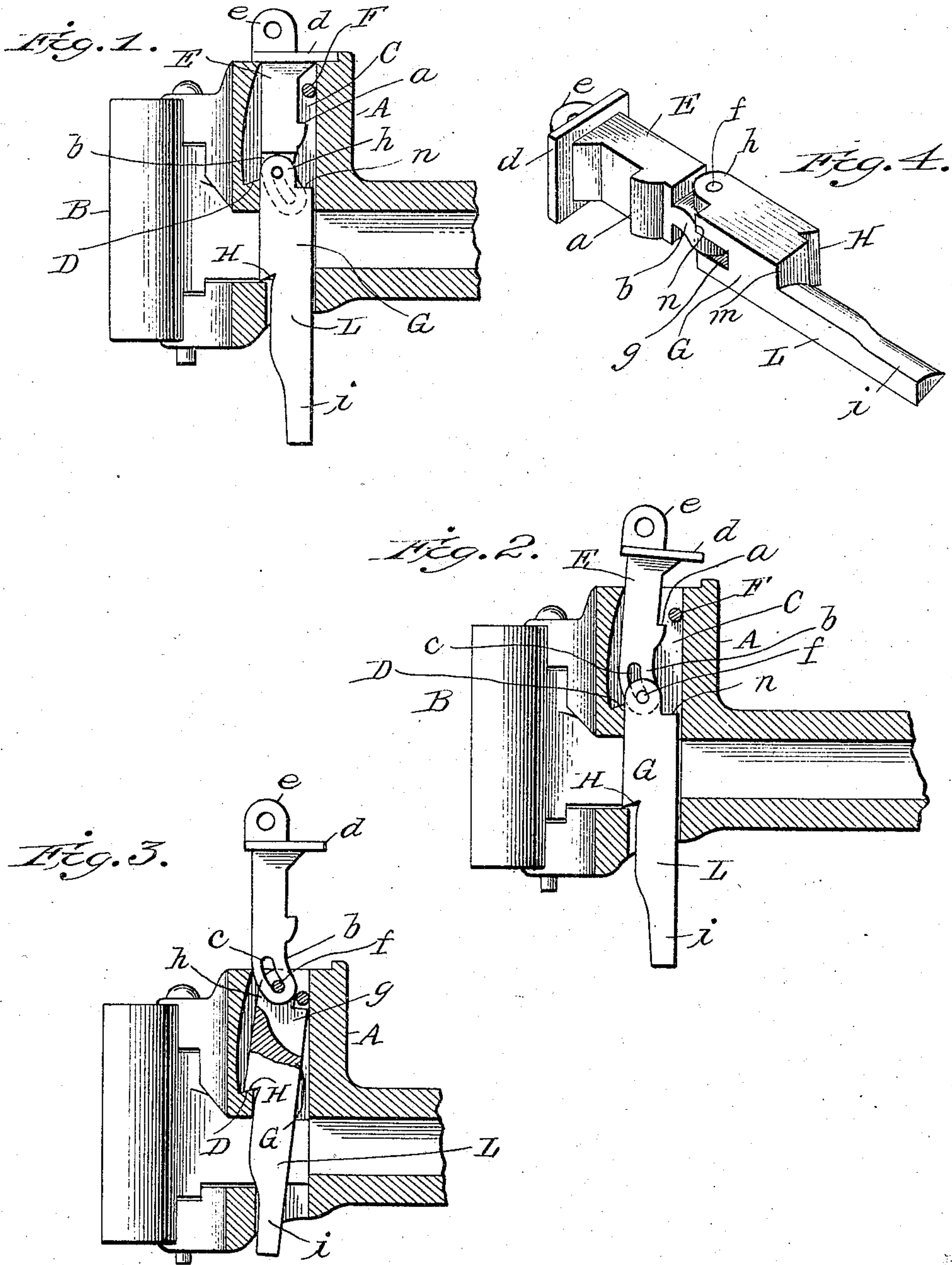


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J. SNYDER.
CAR COUPLING.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 788,173, dated April 25, 1905.

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To all whom it may concern:

Be it known that I, JOSEPH SNYDER, a citizen of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; 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.

This invention relates generally to car-couplers, and particularly to the type of such devices commonly known as the "Janney;" and it has for its object to provide a simple, exceedingly durable, and comparatively inexpensive coupling device of few parts and adapted to be automatically operated to couple and to be easily uncoupled and in which the creeping of the locking-pin is prevented; and it consists in the parts and combinations of parts hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a longitudinal vertical section through a draw-head, showing my locking device in its locked position; Fig. 2, a similar view showing the locking device as it appears at the moment it is being operated to uncouple; Fig. 3, a similar view showing the device in its unlocked position, and Fig. 4 a detail perspective view of the locking-pin complete.

Similar letters refer to similar parts throughout all the views.

Referring to the drawings, A represents a draw-head, and B the knuckle, of a car-coupler of the Janney type. The locking-pin opening C is formed with a ledge or shoulder D in its front wall, which is somewhat inclined or wedge-shaped and down to which the said front wall extends in an inclining direction, so that the opening is greater in width between the walls above the shoulder than it is at the top and bottom. This construction provides the necessary space for the operation of the lifting-section E of the locking-pin.

A transverse perforation is formed in the side walls of the locking-pin opening C near its upper end for a pin F, which acts to prevent the withdrawal of the locking-pin from said opening and also to prevent the locking-

pin from creeping upwardly while the car is in motion, as will be explained hereinafter. The locking-pin opening also extends through what may be termed the "floor" of the draw-head, so as to provide for the extension thereof through of the tailpiece of the locking-pin.

The locking-pin is composed of two sections, a lifting-section E and a locking-section G. The lifting-section E is formed with a transverse shoulder *a* at its rear side and a curving tongue *b* at its lower end, in which is formed a curved slot *c*. At its upper end the lifting-section is provided with a flange *d*, which supports the pin on the draw-head and prevents it dropping through the opening, and with a perforated ear *e*, to which the uncoupling-chain (not shown) is to be connected. As clearly shown, the perforation in the ear *e* is formed at a point to one side and forward of the center line of the pin, so that the pull thereon will have a tendency to draw the lifting-section forward or toward the front wall of the opening, the direction of which movement is assisted by the curved slot *c* working on the pin *f*, extending across the groove or channel *g*, formed in the upper end of the locking-section G of the locking-pin. (See Fig. 2.) By thus raising the lifting-section E it is carried forward, so that its shoulder *a* may pass the check-pin F in uncoupling the knuckles. The check-pin serves to engage the shoulder *a* to prevent the pin creeping up while the train is in motion; but owing to the peculiar shape and construction of the lifting-section, as described, it does not interfere with the lifting of said section when it is desired to uncouple the knuckles.

The lower half or locking-section G of the locking-pin is formed with the groove or slot *g* at its upper end, the bottom of which is curved to conform to the shape of the tongue *b* of the lifting-section and is provided with the ears *h*, between which the tongue *b* is secured by the pin *f*. The locking-section G is also formed with the inclined shoulder H, which is adapted to engage the shoulder or ledge D in order to support the locking-pin in its raised position. The lower or tail part L of the locking-section is triangular in cross-section and is also reduced in size, as at *i*, at

its extremity. Forming the triangular tail-piece produces the shoulder *m*, which rests on the floor of the draw-head and prevents the locking-pin dropping to the track in the event of its breaking at any point above the said shoulder. The locking-section is also formed with the shoulder *n* at its rear side, which engages the check-pin *F* to prevent the locking-pin being accidentally withdrawn from the locking-pin opening while it is being lifted to uncouple.

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

1. In a car-coupler, the combination with a draw-head having a locking-pin opening one wall of which inclines away from the other for a part of its length, a transverse shoulder at the bottom of said inclining part, a locking-pin comprising a lifting-section having a tongue at one end formed with a curved slot, a locking-section having a curved groove into which said tongue fits, a pin for securing said tongue loosely in said groove, and a shoulder on said locking-section adapted to engage the shoulder in the locking-pin opening.

2. A car-coupler comprising a draw-head having a locking-pin opening, a shoulder in said pin-opening, a check-pin arranged transversely across said opening, a locking-pin comprising a lifting-section and a locking-section, the lifting-section having a tongue at its lower

end formed with a curved slot, and a shoulder on the rear side of said section; the locking-section having a curved groove at its upper end to receive the tongue, a pin for securing said tongue in the groove, and a shoulder on the forward face of said locking-section.

3. A car-coupler comprising a draw-head having a locking-pin opening formed with an inclining wall, and a locking-pin comprising a lifting-section and a locking-section, the said lifting-section having a tongue formed with a curved slot, and the said locking-section having a groove into which said tongue fits, and a pin for securing said tongue movably in said groove.

4. A car-coupler comprising a draw-head having a locking-pin opening formed with an inclining wall, and a locking-pin comprising a lifting-section having a tongue formed with a curved slot at its lower end, and a perforated ear at its upper end, said ear being to one side of the center line of said pin, and a locking-section having a curved groove to receive said tongue, and a pin for securing said tongue movably in said groove.

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

JOSEPH SNYDER.

Witnesses:

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DAVID HODGE.