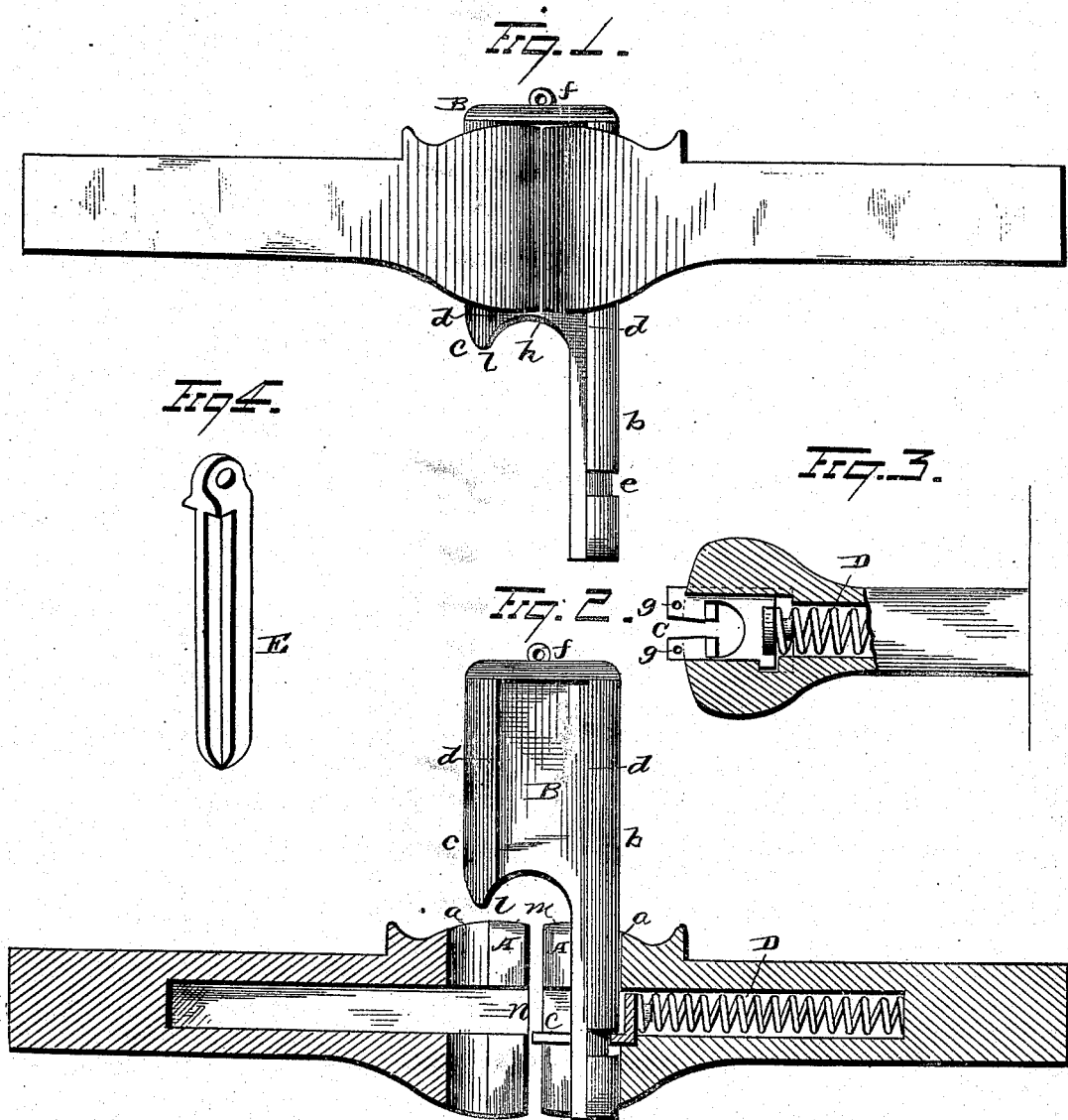


(No Model.)

R. H. DOWLING.  
Car Coupling.

No. 240,580.

Patented April 26, 1881.



WITNESSES

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# UNITED STATES PATENT OFFICE.

ROBERT H. DOWLING, OF NEWARK, OHIO.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 240,580, dated April 26, 1881.

Application filed November 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, ROBERT HARRIS DOWLING, of Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of the invention is to provide a device adapted in an improved manner to attain the following ends: to couple cars of different height, to hold the coupled cars steady on the track, to automatically couple cars, to maintain cars coupled with a short intervening distance, and to prevent lost motion between the coupled cars. These various results are accomplished by a simple and economical construction of a coupling-slide having two longitudinal edges of different length, said edges being adapted to engage with the walls of vertical slots formed in the opposing draw-heads. A locking device is adapted, by engagement with the long edge of the coupling-slide, to maintain the latter in raised position, so that the short edge of the coupling-slide may automatically drop into the vertical slot of the appropriate draw-head.

The entire mechanism will be set forth in the description, and the essential features of invention pointed out in the claims.

In the drawings, Figure 1 is a view in side elevation of two draw-heads coupled by the invention. Fig. 2 is a vertical sectional view taken longitudinally through two draw-heads, showing the coupling-slide in raised position preparatory to automatically couple the draw-heads together, the main portion of the slide being shown in side elevation. Fig. 3 is a top view of one of the draw-heads, partly in section, showing the locking device. Fig. 4 is a view of a coupling-pin to be used when the ordinary coupling-link is employed in substitution for my coupling-slide.

The draw-heads are respectively provided with vertical slots A, having open opposing

sides, and formed with enlarged recesses *a* on their inner sides.

The coupling-slide B has two longitudinal edges, *b c*, of unequal length, which fit in the said enlarged recesses, both these edges of the slide being provided with ribs *d*, adapted to engage with the walls of the recesses. The long edge of the slide has its lower rear portion provided with a transverse groove, *e*, in which fits the corresponding portion of a locking device, C. The latter is adapted to have longitudinal sliding movement in a suitable way formed in the appropriate draw-head, and it maintains the coupling-slide in raised position, preparatory to automatically couple the draw-heads together. This locking device may or may not be provided with a spring, D, to press it against the long edge of the coupling-slide.

The slide may be provided at its top with a loop, *f*, a cord or chain being connected with the latter, and extending up to the top of the car, to permit the slide to be raised by an operator at that point. So, too, the slide may have a chain or suitable fastening to secure it to the car when not in use.

The locking device may be provided with finger-holes *g*, for use in drawing it into engagement with the groove of the long edge of the coupling-slide, when the spring is dispensed with. The coupling-slide is provided with a web, *h*, which extends between the two longitudinal edges throughout the entire length of the short edge and an equal portion of the long edge. This web constitutes a continuous body between all points of draft-strain upon the two edges of the coupling-slide.

To couple two cars together the slide is raised and the locking device is put in engagement with its long edge. When the cars butt together the projecting portion of the locking device is struck by the opposite draw-head, the locking device is pushed inward so as to leave the long edge of the coupling-slide free, and the latter drops by its own gravity. The short edge of the slide, which was previously maintained in a horizontal plane above that of the opposing draw-head, drops into the latter. Both ribbed edges of the slide are thus brought

into engagement with the walls of the recesses of the appropriate draw-heads, and the web of the slide fits in the vertical slots of the draw-heads. The cars are thus coupled with the draw-heads close together, preventing lost motion, and steadying the cars in position on the track. The lower end of the short edge of the slide is formed as a point, *l*, and the tops *m* of the recesses in the draw-heads are formed funnel-shaped, thereby insuring a ready introduction of the short edge into its appropriate recess.

The draw-heads may be made with mouths *n*, so that, if desired, a car may be coupled with the ordinary link. In such case, a pin, *E*, is used to couple the link. It is apparent that the ordinary form of draw-head may be readily adapted for use of my invention, and either the said coupling-slide or the pin and link may be used in any particular instance.

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

1. A car-coupler consisting in the combination, with two draw-heads, respectively provided with vertical slots having open opposing sides, the inner sides of the slots being formed with enlarged recesses, of a coupling-slide having longitudinal ribbed edges adapted to engage with the walls of the appropriate recesses, the slide being provided with a web forming a continuous body between its ribbed edges, and fitting in the draw-head slots, substantially as set forth.

2. In a car-coupler, the combination, with two draw-heads, respectively provided with vertical slots, and a coupling-slide having two longitudinal edges formed of different length,

said edges adapted to engage with the walls of the slots, of a locking device which, by engagement with the long edge of the slide, maintains the latter in raised position on the appropriate draw-head, substantially as set forth.

3. In a car-coupler, the combination, with two draw-heads, respectively provided with vertical slots, having open opposing sides and inner sides formed with enlarged recesses, the tops of the latter being funnel-shaped, of a coupling-slide having two longitudinal edges of different length adapted to engage with the walls of the slots, the short edge of the slide having a pointed lower end, substantially as set forth.

4. In a car-coupler, the combination, with two draw-heads, respectively provided with vertical slots having open opposing sides, the inner sides of the slots being formed with enlarged recesses, of a coupling-slide having longitudinal ribbed edges adapted to engage with the walls of the appropriate recesses, the longitudinal ribbed edge which fits in one draw-head being of greater length than the longitudinal ribbed edge which fits in the other draw-head, said slide being provided with a web which forms a continuous body between the entire length of the short ribbed edge and an equal portion of the long ribbed edge, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of November, 1880.

ROBERT HARRIS DOWLING.

Witnesses:

ANDERSON T. SPEER,  
EDSON B. DENNIS.