

(No Model.)

W. H. UNDERWOOD & W. E. CLUM.
CAR COUPLING.

No. 482,769.

Patented Sept. 20, 1892.

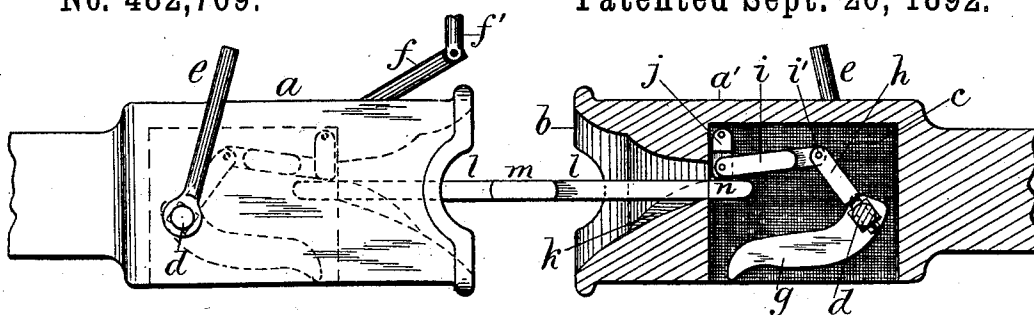


FIG. 1.

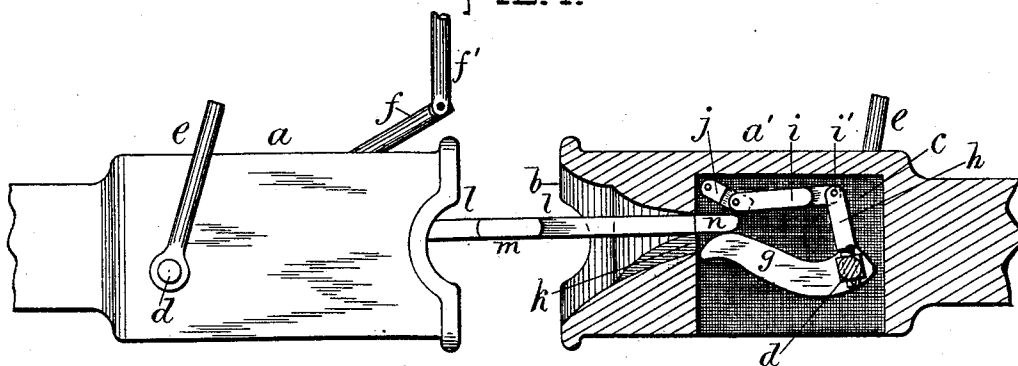


FIG. 2.

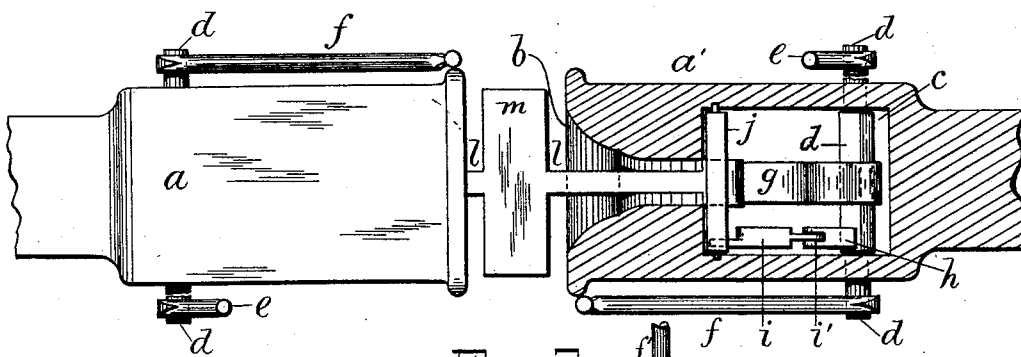


FIG. 3.

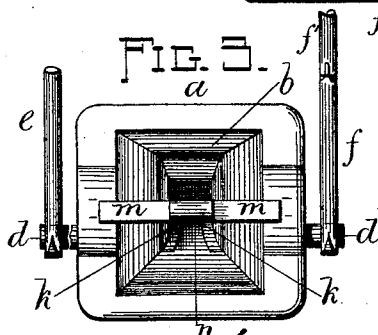


FIG. 4.

WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM H. UNDERWOOD AND WILLIAM E. CLUM, OF WOODLAND, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 482,769, dated September 20, 1892.

Application filed April 13, 1892. Serial No. 429,012. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. UNDERWOOD and WILLIAM E. CLUM, citizens of the United States, residing at Woodland, in the county of Barry and State of Michigan, have invented certain new Improvements in Railway-Car Couplings, of which the following is a description.

The nature of our invention relates to the peculiar construction of the draw-heads and the mechanism arranged therein; also to the form of the coupling-bar and the manner of operating the coupling.

That the invention may be seen and fully understood by others, reference will be had to the following specification and annexed drawings.

Figure 1 is a side view of two draw-heads detached from their respective cars, showing one of said draw-heads in longitudinal section with the position of the mechanism when the cars are coupled. Fig. 2 is a similar view showing the position of the mechanism when dislodging the coupling-rod. Fig. 3 is a plan view with one of the draw-heads shown in longitudinal section. Fig. 4 is an end view of one of the draw-heads, showing the coupling-rod in place.

Similar letters of reference designate similar parts in the drawings and specification.

By the use of our improved car-coupling the cars may be coupled or uncoupled from the top or from the ground beside the cars without the danger and uncertainty attendant upon the use of the ordinary coupling.

In the drawings, *a* and *a'* represent two draw-heads, the draw-bars being broken away. The openings *b* in the ends of the draw-heads are in open connection with the interior chamber *c*, Figs. 1, 2, and 3. (As the construction and operation of one draw-head are identical with the other, only one will be described to avoid confusion of parts.) The chamber *c* is open on the lower side, as shown. Passing through said chamber near its rear wall is a shaft *d*, the terminals of which extend out on both sides of the draw-head and have the levers *e* and *f* rigidly attached thereto. The end of the shaft *d*, to which the lever *e* is attached, (shown broken in Figs. 3 and 4,) extends beyond the draw-head *a* far enough to permit of the coupling or uncoupling of the

device by the operator without entering in between the cars. The shaft *d* has its bearings in the two sides of the draw-head and has rigidly attached thereto near the middle within the chamber *c* a tongue *g*. The shaft *d* also has rigidly attached thereto within the chamber *c* the arm or lever *h*, which is pivoted to a link *i* at *i'*. An apron *j* is pivoted to the interior walls of the chamber *c* in the front part thereof, the pivotal points of said apron being near the top, as shown in Figs. 1 and 2, and to the lower part of said apron is pivoted one terminal of the link *i*, having its other terminal pivoted at *i'* to the arm *h*. The upper portion of the interior terminal of the opening *b* is wider than the lower portion, there being two shoulders *k k'* formed thereby. The coupling-bar is formed with two shanks *l l'*, Figs. 1, 2, and 3, with the enlarged portion or plate *m* between said shanks and the heads *n* (one only being shown) at the ends of the shanks *l l'*.

In the operation of the coupling the head *n* of the coupling-bar is pushed into the opening *b* and comes in contact with the apron *j*, raising said apron, as shown in Fig. 2. When the head *n* has passed clear of the shoulders *k k'* the shank *l* will drop down between said shoulders, causing the head to catch thereon. Then by turning one of the levers *e* or *f* to the position shown in Fig. 1 the apron *j* will be brought down on top of the head *n* and thereby lock the coupling. By reversing the lever *e*; the arm *h*, in connection with the link *i*, will raise the apron, and the tongue *g* will come in contact with the under side of the head *n*, raising it up, as shown in Fig. 2, when it is free to be withdrawn. The lever *f* has a rod *f'* attached thereto extending up to the top of the car for operating the device therefrom. The openings *b* are enlarged at their mouths to relieve the strain on the coupling-rod caused by the jolting of the cars.

What we claim, and desire to secure by Letters Patent, is—

1. In a car-coupling, the draw-head provided with the shoulders *k k'* and a chamber *c*, in open connection with the mouth *b*, a shaft *d*, extending through said chamber, with bearings in the sides thereof and levers attached to the terminals of said shaft outside the draw-head, and a tongue *g*, rigidly attached to said

shaft within the chamber, in combination with an arm *h*, rigidly attached to the shaft, the pivoted link *i* and pivotal apron *j*, and the coupling-bar of the form described, substantially in the manner and for the purpose set forth.

2. In a car-coupling, the combination of the coupling-rod having the heads *n* at the terminals thereof, the tongue *g*, shaft *d*, and locking mechanism arranged within the chamber, as described, and the levers *e*, *f*, and *f'*, where-

by the cars may be coupled or uncoupled from the top or on the side, substantially as specified.

In testimony whereof we affix our signatures 15
in presence of two witnesses.

WILLIAM H. UNDERWOOD.
WILLIAM E. CLUM.

Witnesses:

JESSE JORDAN,
ROBERT McMILLEN.