

(No Model.)

R. H. DOWLING.
CAR COUPLING.

No. 424,409.

Patented Mar. 25, 1890.

Fig. 1.

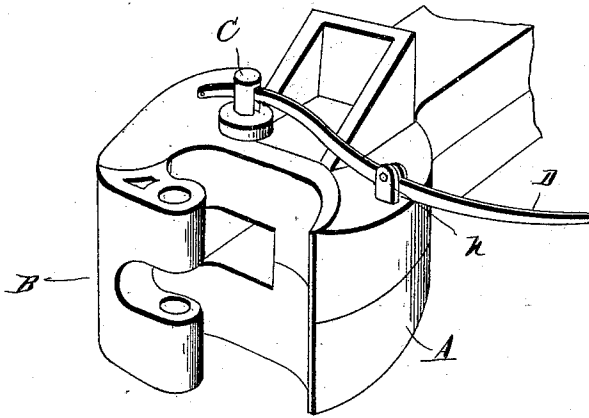


Fig. 2.

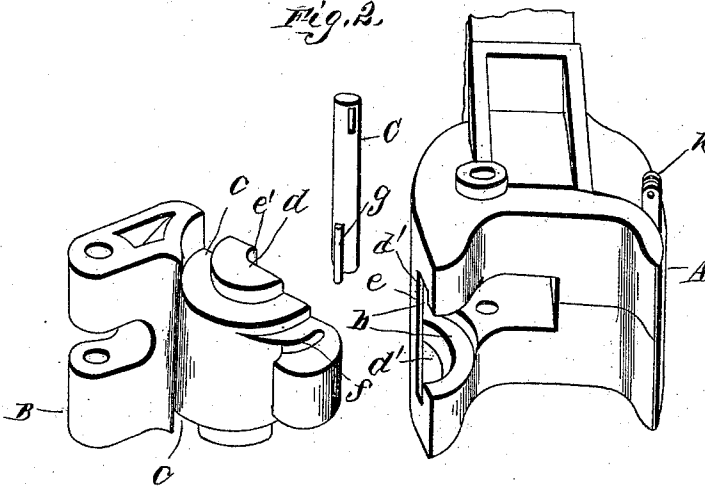
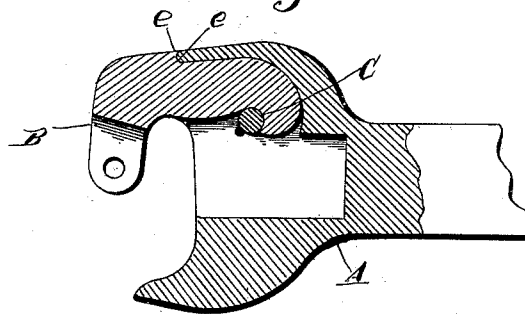


Fig. 3.



WITNESSES
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UNITED STATES PATENT OFFICE.

ROBERT H. DOWLING, OF NEWARK, OHIO, ASSIGNOR OF TWO-THIRDS TO
CHARLES FOLLETT AND CHARLES H. FOLLETT, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 424,409, dated March 25, 1890.

Application filed June 29, 1889. Serial No. 316,092. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. DOWLING, a citizen of the United States, and a resident of Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Devices for Coupling Cars; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a perspective view of the draw-head. Fig. 2 represents perspective views of the parts thereof. Fig. 3 is a horizontal sectional view.

This invention relates to certain improvements in car-coupling; and it consists of the novel combination and construction of parts, as will more fully appear from the following description.

In the embodiment of my invention I employ a draw-bar A and a coupling-hook B. The draw-bar A may be cast or made in two longitudinal sections, each having a curved or arc-shaped rib *b*, which engages a corresponding groove *c* in each side of the hook B to guide the movement of the latter, or cast integral with the ribs *b b*. The hook B has a proximately semi-cylindric hub *d*, which engages a corresponding socket *d'* in the draw-bar. The draw-bar A has at its outer edge, standing about centrally of the hub-receiving socket *d'*, a rib or pivot *e*, which engages a notch or recess *e'* in the outer edge of the hook, thus fulcruming or articulating the coupling-hook B upon the draw-bar. The rib *b*, hub *d*, and pivot-rib *e* of the draw-bar, it will be seen, stand in different planes, being arranged stair-step fashion.

The hook B has in the upper surface of its inner portion, near its articulated end, a curved groove *f*, concentric with the arc of movement of the hook. This groove receives a projection *g* on the lower end of the locking-pin C in its elevated position, and is of sufficient length to permit the coupling-hook to have the requisite uncoupling or outward movement, and yet have its inner closed end

wall serve as a stop, by the engagement of which with said projection such movement of the hook is limited.

At the end of the inward movement of the coupling-hook B, which is effected by the contact of the opposite draw-head therewith, the coupling-hook will pass from under the locking-pin, allowing the projection *g* on said pin to pass out of the groove *f* in said hook and the pin to fall, thus automatically coupling the cars.

D is a lever connected to the upper end of the locking-pin C, and pivoted in any suitable way—as, for instance, in the slot of a post or bracket *h*, secured to the draw-head itself—whereby in the event of removing the draw-head from the car the difficulty which would otherwise be experienced in detaching said lever from the car is avoided. The pin-operating lever D extends to a point that permits its convenient manipulation from the side of the car.

Connection by a rod (not shown) may be effected between the lever D and the top of the car to facilitate operating the pin from that point, if desired.

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

1. In a car-coupling, the coupling-hook having the upper surface of its inner portion provided with a curved groove, and the locking-pin provided with a projection at its lower end which engages said groove, substantially as specified.

2. In a car-coupling, the combination of the coupling-hook having the upper surface of its inner portion provided with a curved groove, the locking-pin provided with a projection at its lower end which engages said groove, the draw-head, and the lever connected to said pin and pivoted upon the draw-head, substantially as set forth.

3. The car-coupling comprising the draw-bar provided with a curved or arc-shaped groove *b*, a semi-cylindric socket *d'*, and a pivotal rib *e*, the coupling-hook having grooves *c*, the proximately semi-cylindric hub *d*, the notch *e'* at its outer edge, and the curved groove *f*, and means connecting said draw-

bar and coupling-hook together, substantially as set forth.

4. The car-coupling comprising the draw-bar provided with a curved or arc-shaped groove *b*, a semi-cylindric socket *d'*, and a pivotal rib *e*, the coupling-hook having a curved or arc-shaped groove *c*, the proximately semi-cylindric hub *d*, the notch *e'* at its outer edge, and the curved groove *f*, and the lock-

ing-pin *C*, having a projection or extension *g* at its lower end, substantially as specified.

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

ROBERT H. DOWLING.

Witnesses:

JNO. M. PENNEY,
N. L. HELPHREY.