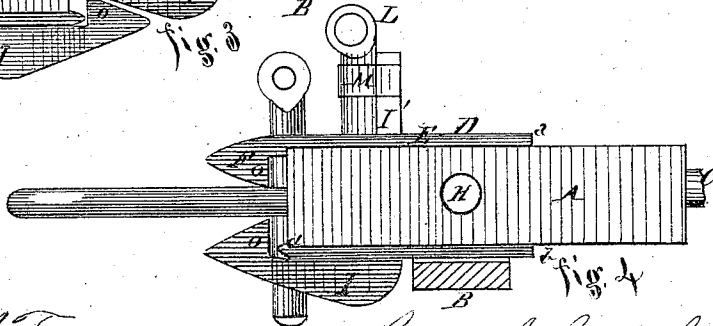
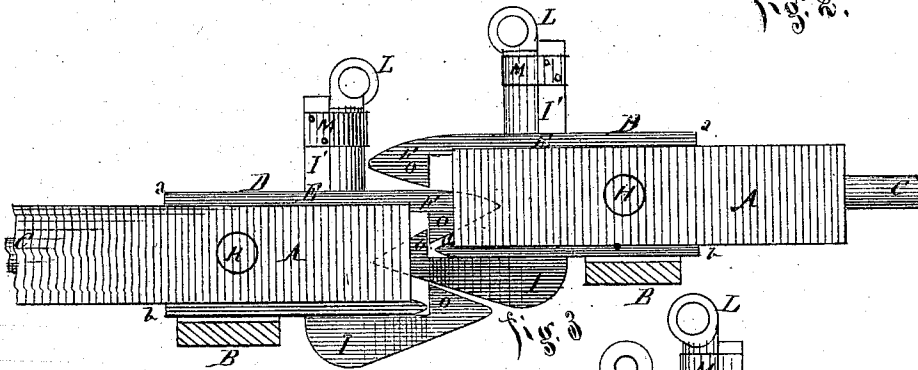
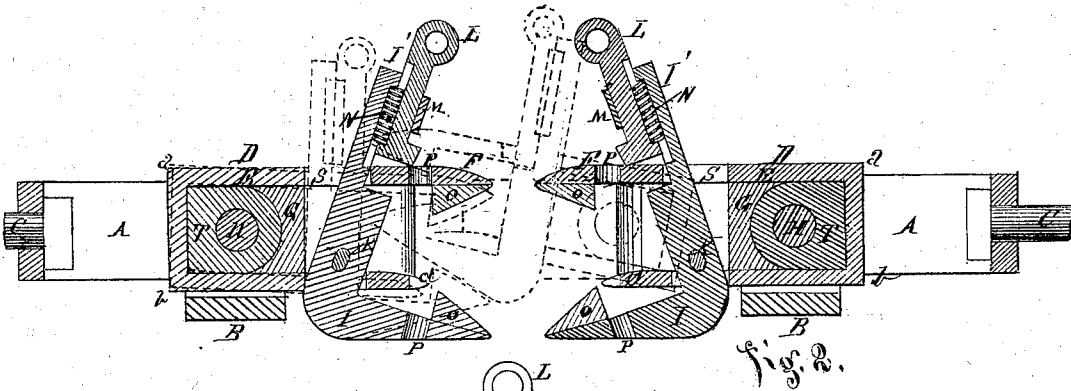
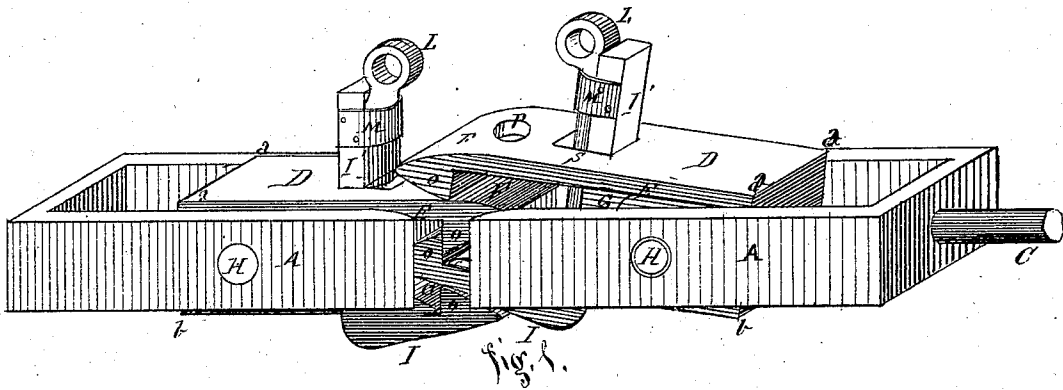


S. C. BOLE.

Car-Couplings.

No. 133,824.

Patented Dec. 10, 1872.



Witnesses { R. H. Bradenich Inventor Samuel C. Bole
J. C. Klingensmith

UNITED STATES PATENT OFFICE.

SAMUEL C. BOLE, OF CONEMAUGH, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN P. KLINGENSMITH, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 133,821, dated December 10, 1872.

To all whom it may concern :

Be it known that I, SAMUEL C. BOLE, of Conemaugh, county of Cambria, Pennsylvania, have invented certain Improvements in Car-Couplings, of which the following is a specification:

My invention has for its object to improve the construction of car-couplings in such manner as to render it possible to couple cars without endangering the lives or limbs of those employed in making up trains. To this end the invention consists in the combination of two hook-jaws and a drop or set pin in such a manner that the jaws can be set open preparatory to coupling; and that they will close automatically and interlock corresponding jaws the moment the cars come together.

In the drawing, Figure 1 is a perspective view of my apparatus, showing the two parts as they would appear when coupling two cars together; Fig. 2, a vertical central section, showing the couplings of two cars with the jaws set preparatory to the cars coming together, and, by dotted lines, the position of the jaws when closed and interlocked; Fig. 3, a side view, showing the coupling as attached to cars of different heights; and Fig. 4, a side view, showing the coupling when used in connection with the common link and pin.

A is the draw-bar, which forms guides in which the coupling hangs. The draw-bar is supported by the stirrup B, and attached to the car by the king-bolt C in the usual manner. D is the coupling, which consists of the upper jaw F and the movable lower jaw I. E is a strong wrought-iron strap, (one end of which forms the jaw F,) bent at right angles at *a* and *b*, the end *d* extending forward nearly to the plane of the jaw F. G is a cast-iron strengthening-block, which is secured within the frame formed by the strap E by means of bolts and rivets. I is the lower or movable jaw, made of a flat bar of wrought-iron, bent and forged into the shape shown in the drawing. The upper part of this bar forms a lever, I', by which the jaw is raised or lowered. The pin K passes through the lever I', which swings on the pin, the ends of the pin being supported by the strap E, which is slotted to allow the lever to pass through it, a corresponding slot being made in the upper part of the strap E, in which slot the lever I' and drop-pin L fit. This

drop-pin is held in contact with the lever I' by the band M, which is secured to the lever; and the drop-pin has a movement parallel to the lever, being drawn up when the coupling is set, as shown in Fig. 2. The drop-pin is drawn down into the slot S by its own weight and the pressure of the spiral spring N, which rests in grooves cut in the pin and lever; and when in this position it locks the lever securely in the slot S and prevents its falling forward, and the dropping of the jaw I. The hooks *o o* are made of steel, riveted to the wrought-iron jaws at a welding heat. The coupling is hung between the guides A A on the pin H, which passes through the gum-spring packing T, which is fitted between the strap E and the strengthening-block G. This spring relieves the jar occasioned by the two couplings coming together. The coupling has a slight movement around the pin H, but is prevented from dropping by the stirrup B.

The coupling is set by raising the drop-pin L and throwing the lever I' forward, which depresses the lower jaw, as shown in Fig. 2. When the couplings come together the points of the jaws of one coupling strike the lever I' of the opposite coupling and throw it back, closing the jaws, and allowing the drop-pin L to fall and seat itself in the slot S, the hooks on the jaws interlocking, as shown by dotted lines in Fig. 2.

Fig. 3 shows the position of the coupling when used on cars of different heights.

When coupling with cars using the link and pin the link is inserted between the jaws F and L, and the pins dropped through the holes P P, as before described.

In uncoupling, the drop-pins of both couplings are raised and set, as shown in Fig. 2.

With couplings of the above-described construction it is not necessary for any one to stand between the cars to couple them.

What I claim as new is—

1. The jaws F and I, lever I', drop-pin L, strap E, and strengthening-block G, when arranged and operating substantially as and for the purpose specified.
2. The combination of the jaws F and I and gum-spring T with the draw-bar A, as specified.

SAMUEL C. BOLE. [L. S.]

Witnesses:

R. H. TRADENICK,
J. P. KLINGENSMITH.