H. B. E. VON ELSNER.

Car-Coupling.

No. 164,615. Patented June 15, 1875.

FIG. 1.

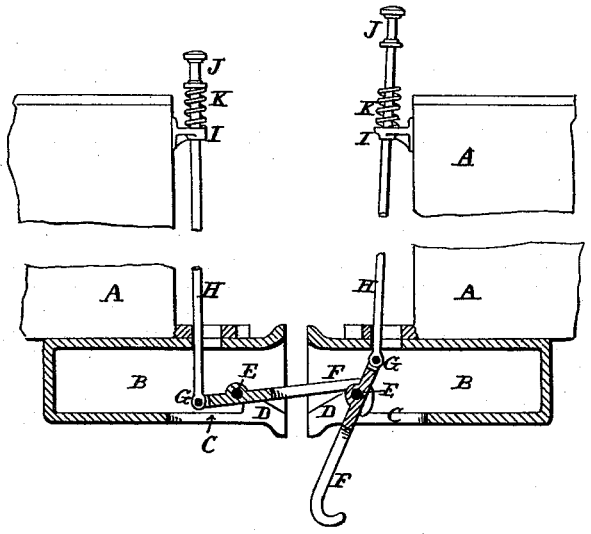
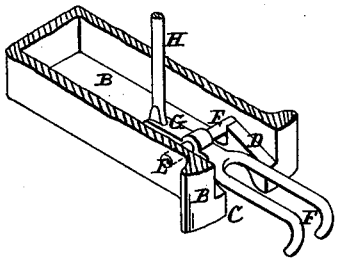


FIG. 2.



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HUGO B. E. VON ELSNER, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **164,615**, dated June 15, 1875; application filed May 1, 1875.

To all whom it may concern:

Be it known that I, HUGO B. E. VON ELSNER, of St. Louis, St. Louis county, State of Missouri, have invented a certain new and useful Improvement in Car-Couplings, of which the following is a specification:

My invention relates to a self-coupling device, in which the coupler is supported on a horizontal pivot passing across through the draw-head. The coupler extends in both directions from the pivot, and its outer end has a double or forked hook whose ends turn downward, and which when coupled take over the pivot-bar of the other draw-head. To the inner end of the coupler is jointed the lower end of a vertical sliding rod, which passes through eye-brackets to the upper part of the car, and which has a spring tending to hold the inner end of the coupler up and the hooked ends down at a certain position, so as to avoid danger of uncoupling from the hooked ends being thrown up.

Figure 1 is a longitudinal section through two draw-heads with the ends of two car-bodies. Fig. 2 is a perspective view of draw-head with top broken out.

A is the car-body. B is the draw-head, which is made of nearly the usual form. The draw-head has preferably a gap, C, in its lower side to allow the outer or hooked end of the coupler to descend, and hang down out of the way when the coupler of the other car is used. At each side of this gap is an inclined track, D, up which the hooked ends of the coupler of the other car slip when entering the draw-head.

E is a pivot-bar or fixed pin which extends horizontally through the cross-head and which passes through the coupler and forms the pivot, on which it has a limited oscillation in a vertical plane.

The coupler consists of a bar of adequate strength whose outer end is forked and formed into two down-curved hooks, F F, which engage over the pivot-pin of the other draw-head upon each side of the other coupler, which hangs upon its pivot so that its forked end is down out of the way of the coupler that is in use.

H is a vertical rod sliding in bearings I, upon the end of the car—the end of a freight-car being shown in the drawing—and the rod H extending above the level of the roof so as to be manipulated from the top of the car.

With a passenger-car the rod H would be modified to render its operation from the platform convenient. The rod H is pivoted at the lower end, in the inner end G of the coupler, so that this end ascends and descends with the rod.

The rod has a head, J, and beneath this and the bearing I, near the top of the car, is a spiral spring, K, which surrounds the rod. When the coupler is about horizontal, which is the position it occupies when the cars are coupled together, the spring has bearing against the under side of the head, and by holding the end G of the coupler up, holds its hooked ends F down, so as to prevent them from being thrown off the pin E.

When uncoupling, the hand or foot is placed on the head J, and the spring compressed as the rod H is forced down, and this carries down the end G of the coupling into the gap C, and lifts up the hook F, so as to disengage them from the pin E.

In coupling, the head J is pressed down until it comes in contact with the spring K, when the hooks F F slide up the incline D, as the cars are brought together.

The relative positions of the heads J J readily show which coupler is in action when the cars are coupled, because the head, in connection with that coupler, is held down by the position of the coupler, while the head, in connection with the idle coupler is raised, owing to the outer end of said coupler being depressed and its inner end G raised.

I claim—

1. The combination of draw-head B, horizontal pivot and draft-pin E and coupler, having forked end with down-turned hooks F, all substantially as set forth.

2. The combination of the coupler F G, rod H, bearing I, and spring K, all constructed and arranged substantially as and for the purpose set forth.

3. In combination with the coupler F G,

rod H and spring K, the draw-head having an opening or gap, C, substantially as and for the purpose set forth.

4. In combination with the coupler F G, and draw-head B, with bottom opening C, and draft-pin E, the inclines D D, at the sides of the opening, to carry up the hooks F F onto the pin E, substantially as set forth.

HUGO B. E. VON ELSNER.

Witnesses:
SAML. KNIGHT,
HENRY GERHOLD.