(No Model.)

L. J. CRALLE.

CAR COUPLING.

No. 255,601. Patented Mar. 28, 1882.

Fig. 1

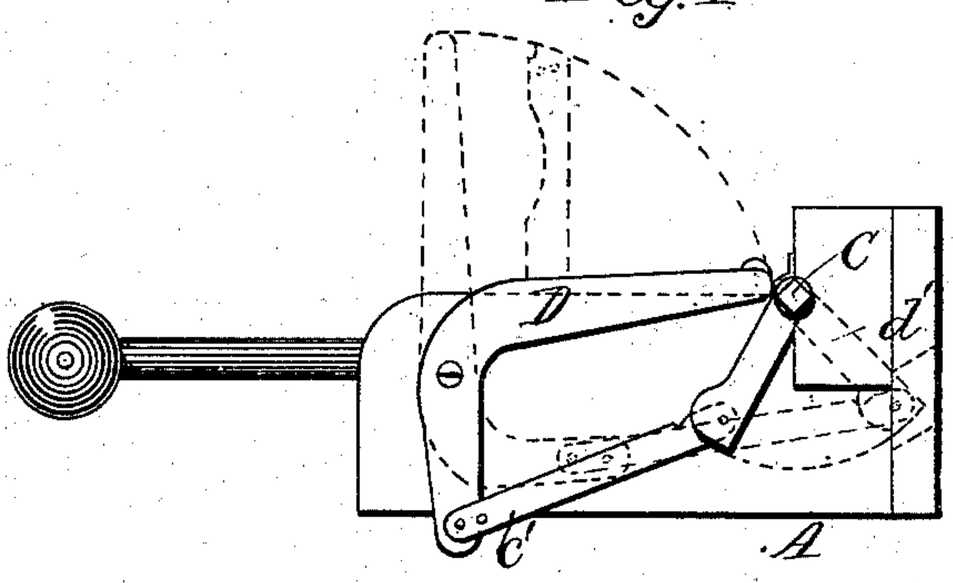


Fig. 2.

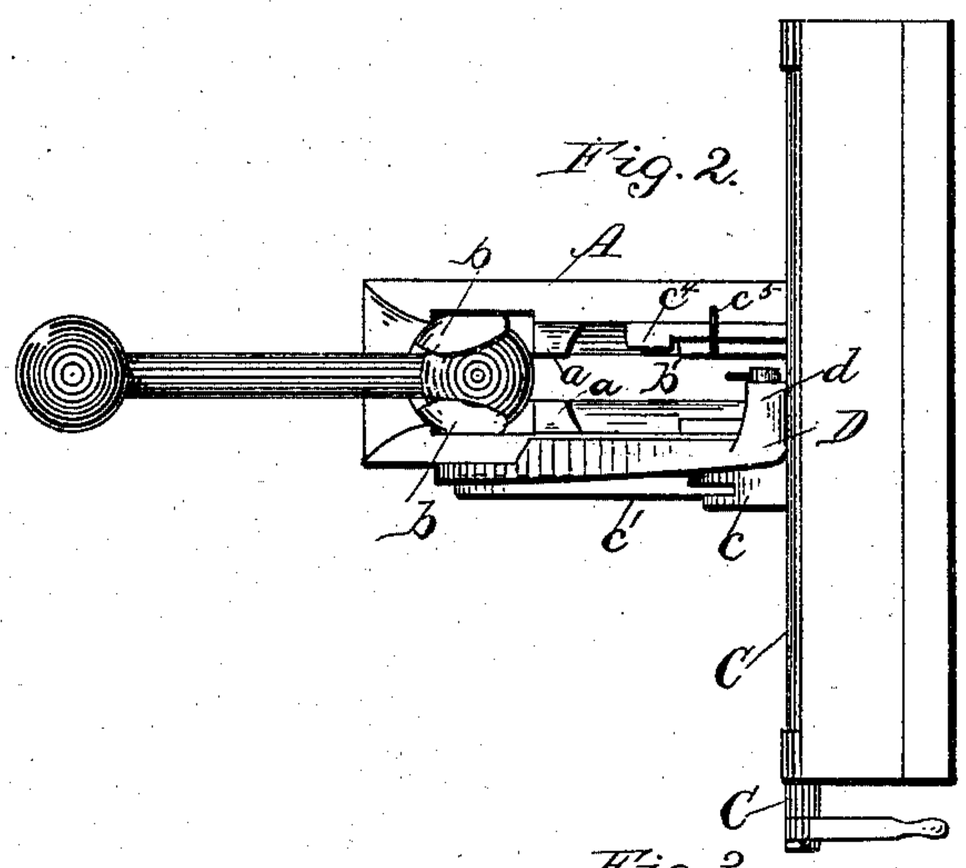


Fig. 3.

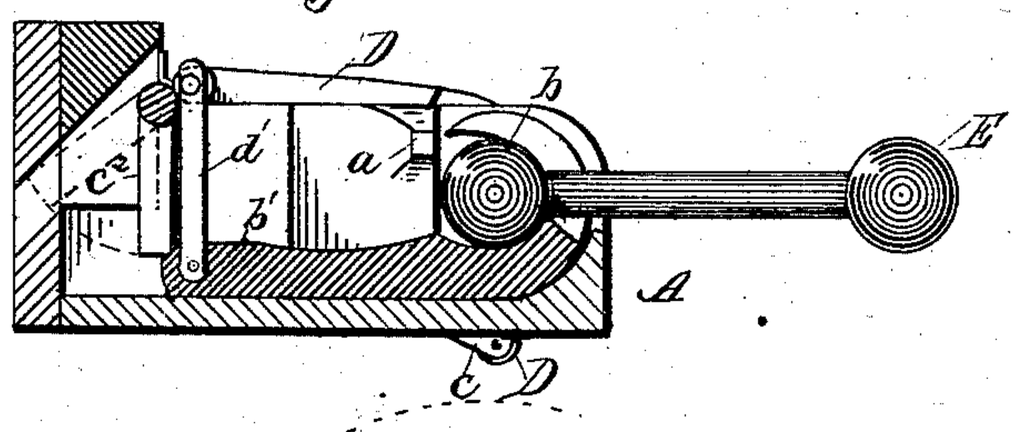
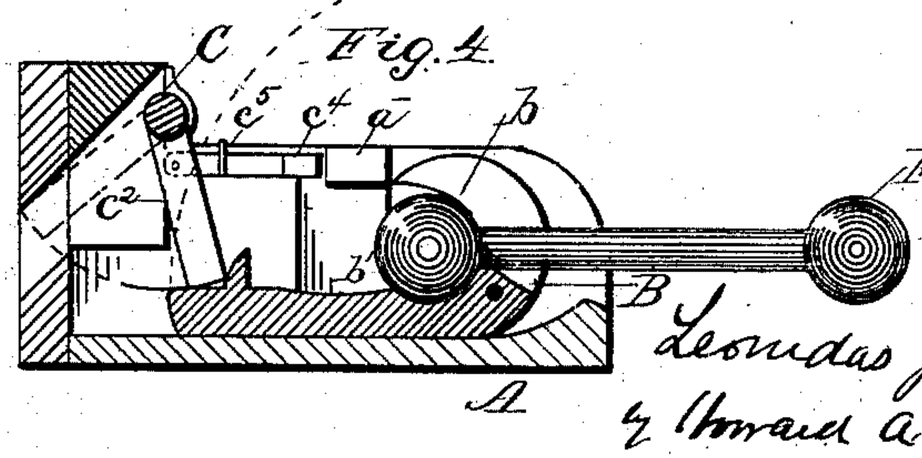


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

LEONIDAS J. CRALLE, OF SANTA ROSA, CALIFORNIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 255,601, dated March 28, 1882.

Application filed February 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, LEONIDAS J. CRALLE, a citizen of the United States, residing at Santa Rosa, in the county of Sonoma and State of California, have invented certain new and useful Improvements in Automatic Car-Couplers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to car-couplings; and it consists in the construction and arrangement of its several parts, as will be hereinafter fully set forth, and pointed out in the claims.

In the drawings, Figure 1 is a side elevation. Fig. 2 is a bottom plan view, and Figs. 3 and 4 are vertical longitudinal sections.

A is the draw-head. It is open at the top, and has within it the coupling mechanism. Upon its upper edges, and projecting inwardly, are formed lugs *a a*, as shown, and to the rear of the lugs is formed a recess, through which the head of the link passes into the draw-head. Pivoted in the forward portion of the draw-head is the coupling-hook B. Its forward end is bent upwardly, and is formed into hooks *b b*. Extending backward from its rear portion is the arm *b'*, to the rear end of which is pivoted the actuating mechanism. The upper side of the arm is slightly concaved, as shown.

C is a shaft journaled to the car at the rear and above the draw-head. It is provided with a downwardly-projecting arm, *c*, to the end of which is pivoted the connecting-rod *c'*, the other end of which is secured to the lever D, and with an arm, c^2, which projects downwardly inside the draw-head, and is adapted to slip over the upper side of the arm *b'* and lock the coupling-hook.

D is the L-shaped actuating-lever. Its horizontal arm extends along the upper edge of the draw-head, and upon its rear end is an arm, *d*, which projects into the draw-head, and has pivoted to it the connecting-rod *d'*, the other end of which is secured to the rear portion of the arm *b'*, as shown.

Upon one end or both ends of the shaft is a crank, c^3, by which it is rotated. In the operation of the coupler, when the cars are approaching each other and the link is in position in the draw-head of one the draw-head of the other car will be in the position shown in dotted lines, Fig. 1. When the cars come in contact the link strikes the concaved portion of the arm *b'*, and will force it back into its position with the draw-head. The link will also sink down into the draw-head through the recess behind the lugs *a a*, and will be locked therein by the keeper c^4. This keeper is pivoted to the side of the arm c^2, extends horizontally alongside the upper edge of the draw-head, projects into it to prevent the link from coming out, and is retained in place by the ring c^5, as shown. While in the rotation of the shaft the arm c^2 is carried to the rear, the keeper will be withdrawn from its position, and will allow the link to pass out of the recess.

To uncouple the cars the shaft is rotated to carry the arm *c* to the rear, the L-shaped lever will then be brought to a vertical position, carrying with it the arm *b'* of the coupler B, and the link will slip out from between the hooks *b b*.

I do not confine myself to the arrangement specified above, but provide that the arm *c* of the shaft C, the L-shaped lever and its attachment be removed, and the coupler operate automatically, being simply locked by the arm c^2, as shown in Fig. 4.

E is the link, and consists of a bar having globes upon each end, as shown.

What I claim is—

1. The draw-head A, open at the top and front, provided with inwardly-projecting lugs *a a* upon its upper edges, and adapted to receive the coupling hook and link, substantially as shown and described.

2. In a car-coupler, the coupling-hook B, pivoted in the forward portion of the draw-head, and provided with upwardly-projecting hooks *b b* upon its front end, and an arm, *b'*, all arranged to operate as set forth.

3. In a car-coupler, the coupling-hook B, provided on its forward end with the upwardly-projecting hooks *b b*, and with the arm *b'*, pivoted in the forward portion of and in combination with the draw-head A, substantially as shown and set forth.

4. The shaft C, provided with downwardly-

projecting arms *c* c^2, the arm *c* being adapted to operate the coupling, and the arm c^2 to lock the said coupler when the link is within it, substantially as shown and described.

5. The L-shaped lever D, pivoted to the draw-head A, attached to the arm *c* by the lever *c'*, and provided with an arm, *d*, by which it is pivoted by the lever *d'* to the coupler-arm *b'*, and adapted to elevate or depress the coupling-hook B, substantially as shown and described.

6. The combination of the shaft C, its arms *c* c^2, rod *c'*, lever D, and rod *d'* with the coupling-hook B and draw-head, all arranged to operate substantially as shown and described.

7. The combination of the coupler-hook B with the shaft C, its arm *c*, and arm c^2, provided with a keeper, c^4, arranged to operate substantially as shown and described.

8. In combination with the coupler-hook B, the keeper c^4, pivoted to the arm c^2 of the shaft C, and retained in position on the draw-head by the link c^5, substantially as and for the purpose shown and described.

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

LEONIDAS J. CRALLE.

Witnesses:

H. T. SPENCER,

BEN. S. WOOD.