(No Model.)

A. LEYDEN.

CAR COUPLING.

No. 253,399. Patented Feb. 7, 1882.

Fig. 1.

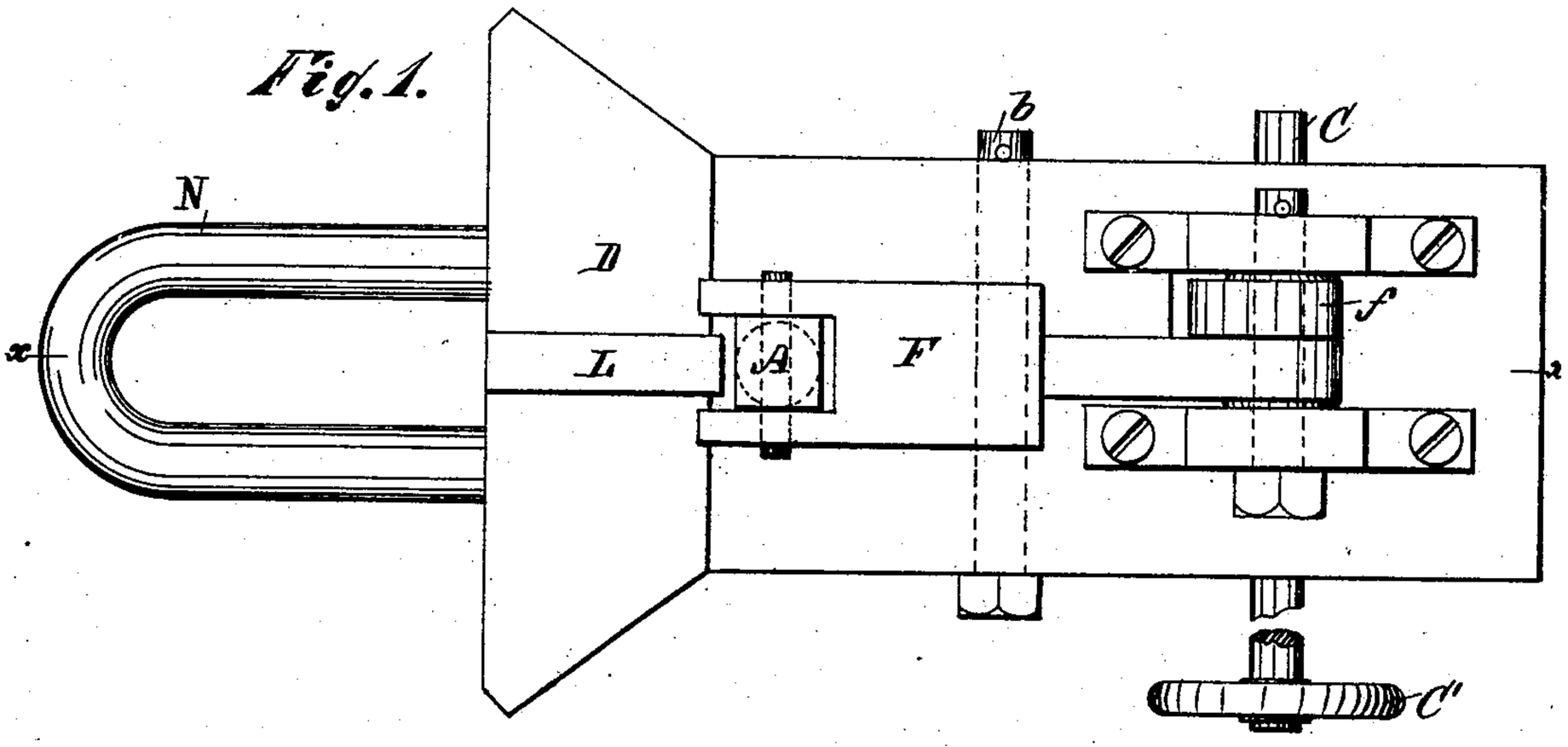

Fig. 2.

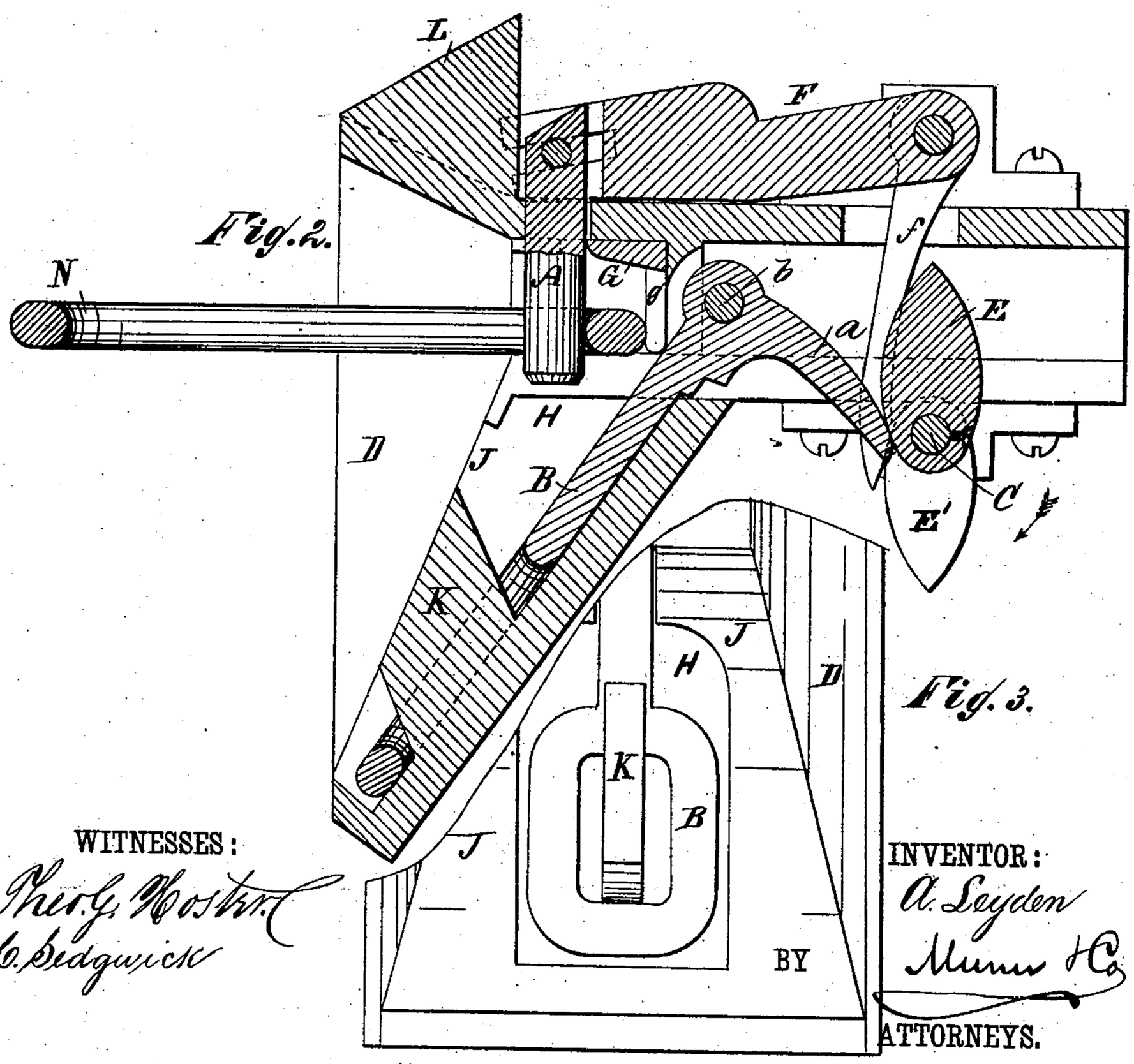

Fig. 3.

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AUSTIN LEYDEN, OF ATLANTA, GEORGIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 253,399, dated February 7, 1882.

Application filed September 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN LEYDEN, of Atlanta, in the county of Fulton and State of Georgia, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact specification.

My invention consists in providing mechanism whereby the bolt may be operated from the sides, top, or platform of the car without the necessity of going between the cars to connect and disconnect them, as is now the practice, and of an automatic stop which is adapted to hold the bolt elevated until the link enters the bumper; also, in providing a connecting-link hinged in the draw-head, said link being also adapted to be operated without going between the cars; and, also, in the bumper formed with pieces J J.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts.

Figure 1 is a plan view of my invention. Fig. 2 is a central section taken on the line *x x* of Fig. 1, and Fig. 3 is a partial front view of the bumper.

In the drawings, A represents the connecting-bolt; and B represents the connecting-link, which latter is hinged in the bumper D upon the bolt or pin *b*. The bolt A and the hinged connecting-link are adapted to be operated by means of the cams E E′ upon the crank shaft or rod C, the former through the medium of the bell-crank lever F, pivoted above the bumper, and the latter by means of the cam-faced rear and downward extension *a* of the said connecting-link.

Within the throat of the bumper is placed the automatic stop-plate G, which plate is supported in the said throat upon the legs *g g*, and is adapted to tip forward, when the bolt is raised, across the opening in the bumper through which the bolt passes, for holding the bolt elevated until the approaching connecting-link comes against it and forces it back, which is done at the proper time to let the bolt drop and engage the connecting-link, and thus cause the cars to be automatically coupled.

The link B, when not in use, drops down into the chamber H, formed in the lower diagonal face of the bumper by the elevated side guides, J J, which guides protect the link B and serve to direct the approaching link into the throat of the bumper in proper position to connect with the bolt.

From the center of the chamber H rises the plate K, over which the link drops, as shown in the drawings, which plate is of the same height as the side pieces, J J, and the upper edge of it is made diagonal, as shown in Fig. 2. The chamber H, with its central plate, serves as a housing for the link B when the said link is not in use, and prevents it from being injured by contact with the approaching link.

Upon the top of the bumper is placed the plate L, which is similar in form to the plate K, and is for the purpose of protecting the connecting-bolt A when the same is raised up and held by the automatic stop-plate G.

To one end of the crank shaft or rod C is attached the crank or wheel C′, which in this instance is at one side of the car. By turning this wheel or crank in the direction of the arrow in Fig. 2 the cam E′ will come against the lower arm, *f*, of the bell-crank lever F and cause the bolt A to be raised and the link to be thus disengaged. The stop-plate G will now tip forward and hold the bolt elevated ready for receiving the link from the approaching car, as above mentioned.

If, in connecting the cars, the link B is to be used instead of the ordinary link, N, it is to be raised to a horizontal position for entering the throat of the bumper of the car, to which it is to be connected by turning the crank or wheel C′ in the direction opposite to that indicated by the arrow, thus bringing the cam E against the arm *a* of the link, causing the link to be carried upward on its pivot.

Instead of operating the rod or shaft C by the crank or wheel C′ at the side of the car, it is obvious that the shaft may be provided with suitable connections and levers, by which the same may be operated from the top or the platform of the cars.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a car-coupling, the bell-crank lever F, in combination with the connecting-bolt A and the rod or shaft C, provided with the cam E′, substantially as and for the purposes set forth.

2. The plate G, placed in the throat of the

bumper and adapted to tip forward to support the connecting-bolt, substantially as and for the purposes set forth.

3. The hinged connecting-link B, formed with the extension *a*, in combination with the shaft C, provided with the cam E, as and for the purposes set forth.

4. The bumper D, formed with the chamber H, in combination with the hinged connecting-link B, substantially as and for the purposes described.

5. The bumper D, provided with the chamber H, having a central plate, K, in combination with the hinged link B, whereby the link is protected from injury when not in use, substantially as herein shown and described.

6. The bumper D, provided with the top guide, L, in combination with the bolt A and the means for holding the same elevated, substantially as and for the purposes set forth.

7. In a car-coupler, the shaft or rod C, provided with the cams E and E′, in combination with the bolt A and the hinged link B, substantially as and for the purposes set forth.

8. The shaft or rod C, provided with the cams E and E′, in combination with the bell-crank lever F and the bolt A, and the hinged connecting-link B, provided with the extension *a*, substantially as and for the purposes set forth.

AUSTIN LEYDEN.

Witnesses:
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