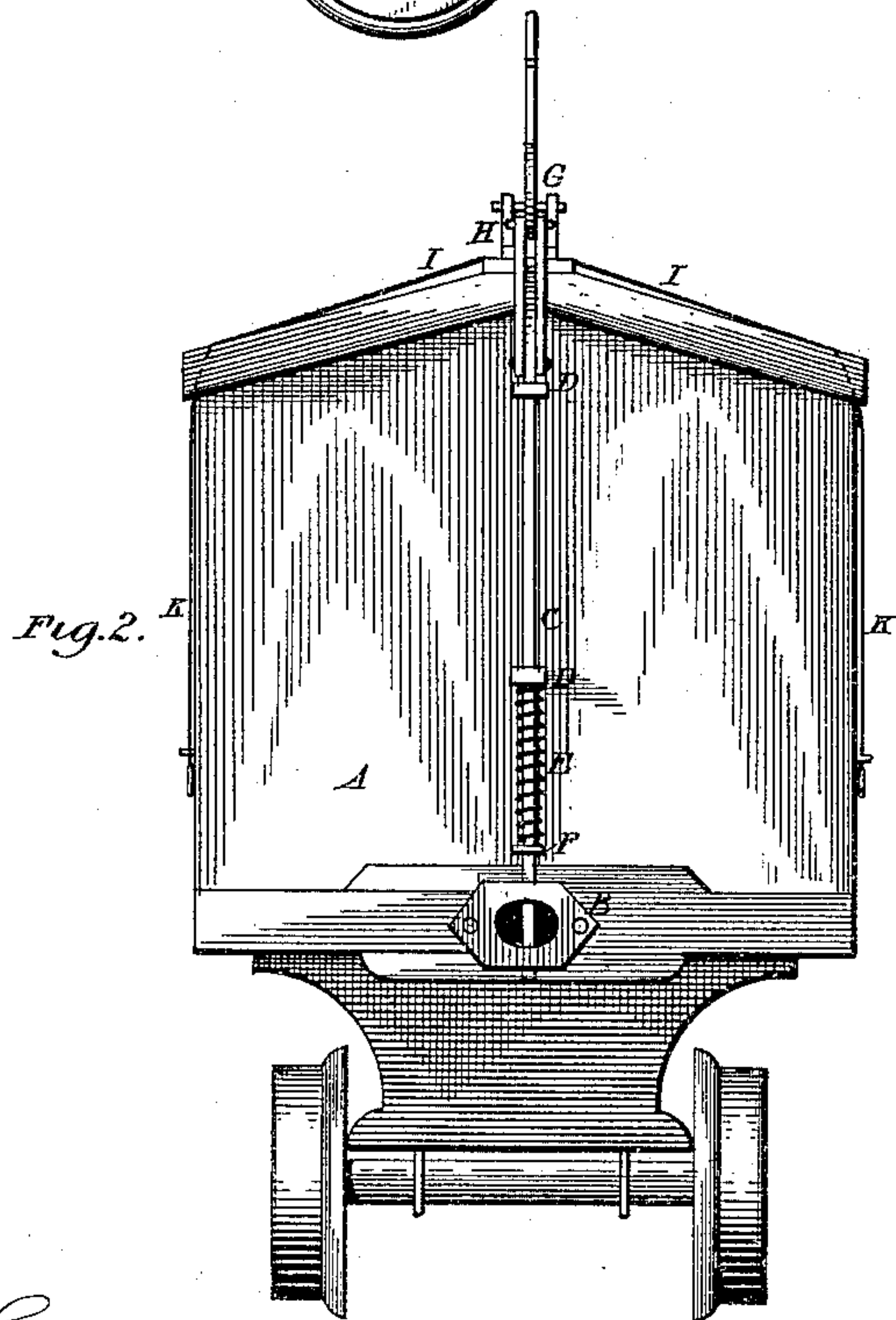
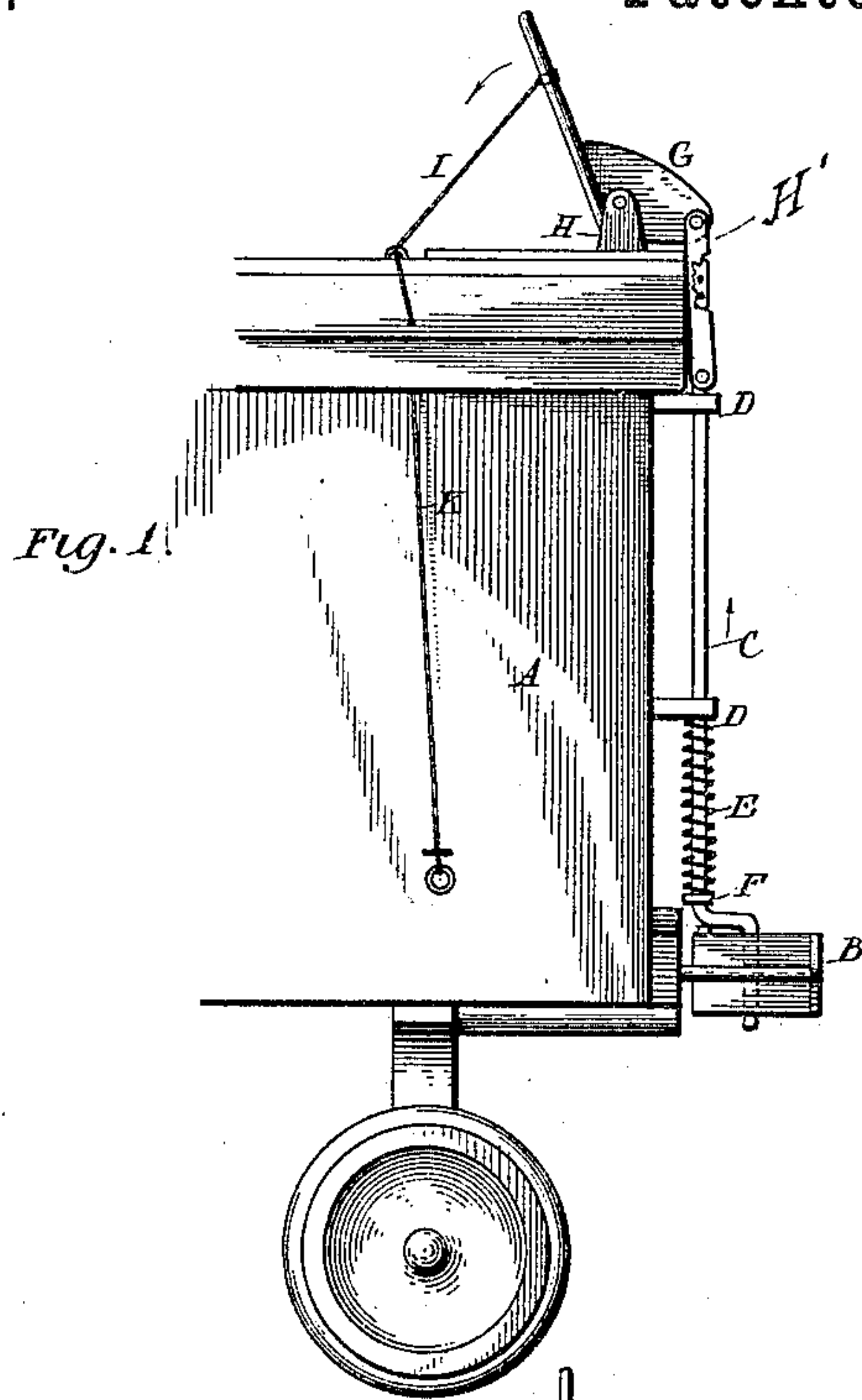


(No Model.)

E. GHIRARDI.
CAR COUPLING.

No. 410,754.

Patented Sept. 10, 1889.



Witnesses

Wm. Norton
J. H. Brown

Inventor

Etienne Ghirardi

By his Attorney Wm. W. Dudley

UNITED STATES PATENT OFFICE.

ETIENNE GHIRARDI, OF HOUMA, LOUISIANA, ASSIGNOR OF ONE-HALF TO
HENRY C. MINOR, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 410,754, dated September 10, 1889.

Application filed July 18, 1889. Serial No. 317,936. (No model.)

To all whom it may concern:

Be it known that I, ETIENNE GHIRARDI, a citizen of the United States, residing at Houma, in the parish of Terre Bonne and State of Louisiana, have invented certain new and useful Improvements in Car-Couplers; and I do hereby 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.

This invention relates to certain improvements in safety-couplers for cars; and it has for its objects to so construct the coupler as to prevent the necessity of a person entering between the cars to couple and uncouple the same. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a box-car, showing my invention applied thereto; and Fig. 2, an end view of the same.

The letter A indicates a box-car of the ordinary construction, and B the usual draw or coupler head.

C indicates a vertical rod having bearings in brackets D at the end of the car, in which said rod is adapted to move vertically. The lower end of the rod is bent outwardly at a right angle and then downwardly, the downwardly-bent end constituting the coupling-pin, which works in openings in the upper and lower sides of the coupling-head.

The letter E indicates a spiral spring surrounding the lower part of the rod D, its upper end bearing against the lower bracket D and its lower end against a shoulder F on the lower part of the rod C, so as to hold the rod and its coupler normally down.

The letter G indicates a segment or bell-crank lever fulcrumed to a bearing-block H, secured to the top of the car, and H' two links connecting the short arm of said lever with the upper end of the rod C, whereby the rod may be operated. To the long arm of said

lever are attached the upper ends of the cords I, which extend down through guides secured to the top and sides of the car, whereby the lever may be operated to operate the coupler.

In the drawings the coupling devices are shown in a closed position. To open them for coupling, the long arm of the bell-crank lever is lowered, the spiral spring acting automatically to force the vertical rod C downward, projecting its lower bent end through the apertures in the coupling-head, so as to engage the coupling-link.

As constructed, it will be perceived that the coupler may be operated without the slightest danger, and owing to the small number of parts and its extreme simplicity it can be constructed and applied cheaply, and is not liable to get out of order.

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

1. In a car-coupler, the combination, with the draw or coupler head, of the vertical rod having its outer end bent outward and downward and entering the coupling-pin, openings in the coupling-head, the brackets wherein the said rod has its bearings, the spiral spring surrounding said rod and bearing against the lower bracket and a shoulder on said rod, and the segment-lever and connecting-links whereby the coupler may be operated, substantially as specified.

2. The combination, with the draw-head, the vertical rod having its lower end bent to form the coupling-pin, spiral spring, and bell-crank lever, of the cord connected to said lever and passing through guides down each side of the car, whereby the coupler may be operated from either side, substantially as specified.

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

ETIENNE GHIRARDI.

Witnesses:

F. L. BROWNE,
E. L. WHITE.