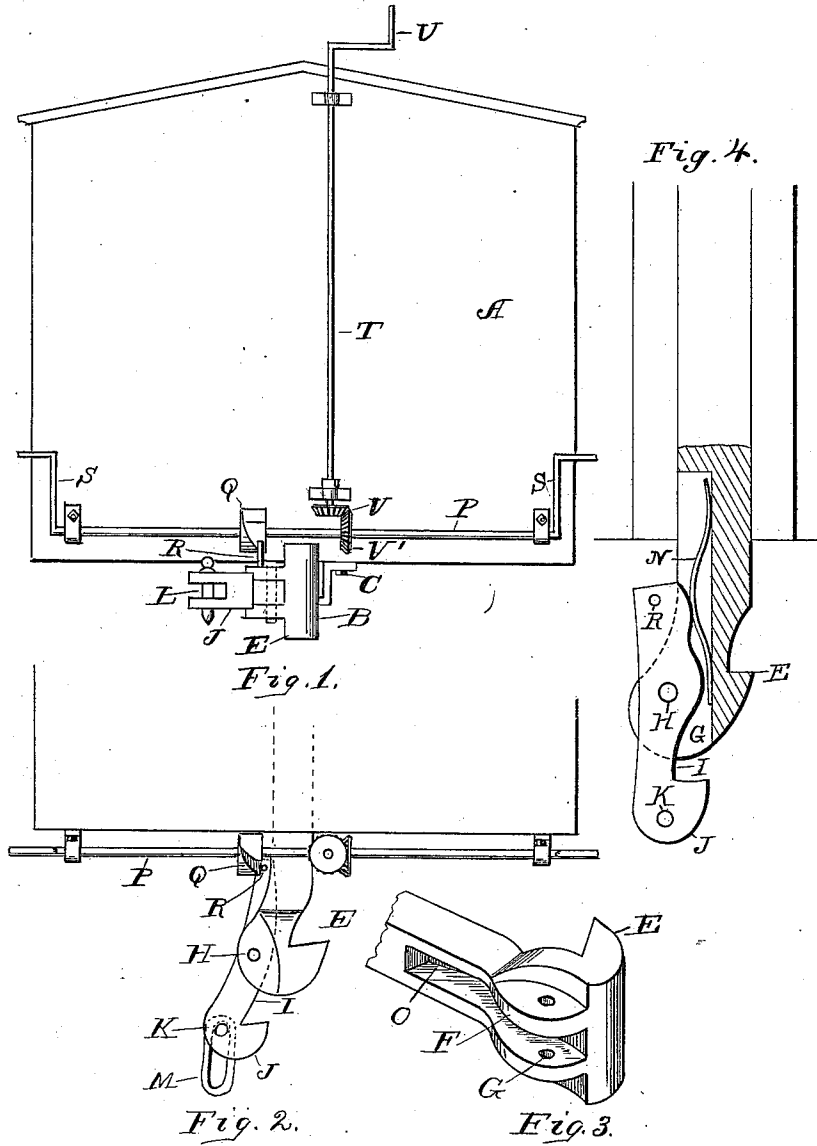


(No Model.)

R. BIGNEY.
CAR COUPLING.

No. 357,451.

Patented Feb. 8, 1887.



WITNESSES:

Robert Kirk.
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UNITED STATES PATENT OFFICE.

ROBERT BIGNEY, OF COPLESTON, ONTARIO, CANADA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 357,451, dated February 8, 1887.

Application filed May 10, 1886. Serial No. 201,666. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BIGNEY, of Copleston, in the county of Lambton and Province of Ontario, Canada, have invented a new and useful Improvement in Car-Couplers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a front view of an ordinary freight-car with my improved coupler. Fig. 2 is a perspective view of the same, and Fig. 3 an enlarged perspective view of a section of the coupler detached. Fig. 4 is a detail view, partly in plan and partly in section, showing how the spring operates the lever.

This invention relates to an improvement in car-couplers wherein I provide a draw-head provided at one side with a hook and at the opposite side with a pair of laterally-disposed ears, within which is a lever pivoted thereto, having forwardly a hook and also a means for connecting the ordinary coupling link and pin, and rearwardly a spring which presses the rear end of the arm outwardly against a cam-wheel, and a horizontal shaft having lateral cranks, and also connecting with a vertical shaft extending to the top of the car and provided with a crank, the said shaft having beveled wheels connecting with a horizontal shaft, the device so disposed as to be in a position for connecting with an ordinary spring-coupler or an ordinary link-coupler, all of which will now be fully set forth.

In the accompanying drawings, A represents the forward end of an ordinary box-car having thereon the coupler B, operating within the keeper C. Forwardly the coupler is enlarged somewhat vertically, as at D, and has a hook, E, at one side. On the opposite side from the hook E, I provide a pair of wings, F, one above the other, having centrally an opening, G, for the reception of the pin H. (Shown in Fig. 2.)

Between these wings F, I provide a lever, I, provided at its forward end with a hook, J, on the side corresponding with the hook E of the coupler. The forward end of this lever also has an opening for the reception of the pin K, and a recess, L, for the reception of an ordinary link, M, as shown in Fig. 2. Rearwardly

this lever I has a spring, N, resting within the recess O of the coupler, and projecting forwardly and so disposed as to rest beneath the rearward end of the lever I, the object of the spring being to throw the hook toward the side of the car carrying the hook E, and thus have it in position to engage with the opposite coupler. The use and operation of the hooks E and J are simply to engage with the corresponding hooks on the coupling of the opposite car.

Above the coupler I provide a horizontal cross-shaft, P, journaled to the forward side of the car, having a cam-wheel, Q, at the side so disposed as to engage with a vertical pin, R, on the rear end of the lever I. The tension of the spring N is such that it will cause the pin R of the lever I to press outwardly against the inclined face of the cam. The ends of the shaft P are provided with cranks S, so that the said cranks may be rotated, while centrally I provide a vertical shaft, T, having a crank, U, at its upper end, near the top of the car, while its lower end has a bevel-wheel, V, engaging with a corresponding bevel-wheel, V', on the horizontal shaft P, so that the cam-wheel Q may be rotated either from the side or top of the car, as desired. As the said cam Q is rotated by the operation of either of the shafts P or T, it presses against the pin R, and in connection with the spring N the lever R is moved laterally on the pivotal pin H.

The hook E and the hook J of the lever I serve a double purpose, as will be noticed, and also, in connection with these, the lever I being provided at its forward end with the recess L and pin K, it may readily be connected with the ordinary coupling-link.

Having described my invention, what I claim as new is—

1. In a car-coupler, the draw-bar B, having the hook E, and oppositely a supplemental pivotal lever having a hook-and-link connection operated by a cam-wheel and shaft, substantially as herein set forth.

2. The combination of the draw-bar B, having at one side a hook, E, and oppositely-disposed wings F, openings G, and pivotal pin H, with the lever I, and supplemental hook J, recess L, and pin R, having rearwardly the spring

N and cam Q on the horizontal shaft P, substantially as herein set forth.

3. The combination of the coupler B, having the hook E, the lever I, hook J, and spring N and pin R, with the cam Q, the shaft P, cranks S, vertical shaft T, and bevel-wheels V and V', the whole arranged as and for the purposes substantially as herein set forth and described.

In testimony that I claim the foregoing I have hereunto set my hand, this 16th day of 10 March, 1886, in the presence of witnesses.

ROBERT BIGNEY.

Witnesses:

DANIEL BUCHANAN,

ANDREW CLIMIE.