(No Model.)

C. O. BARNES.

CAR COUPLING.

No. 297,053. Patented Apr. 15, 1884.

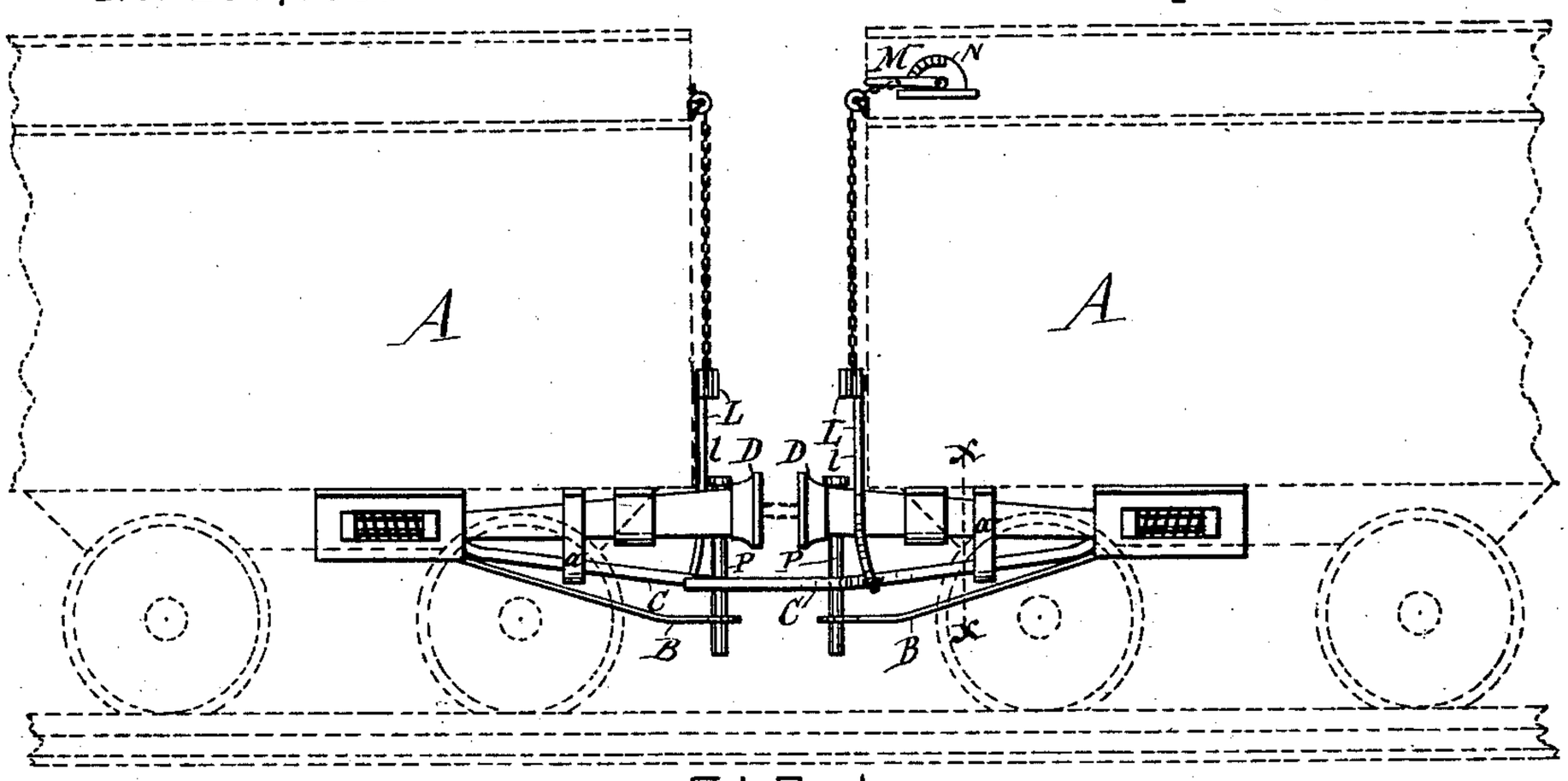

FIG-1-

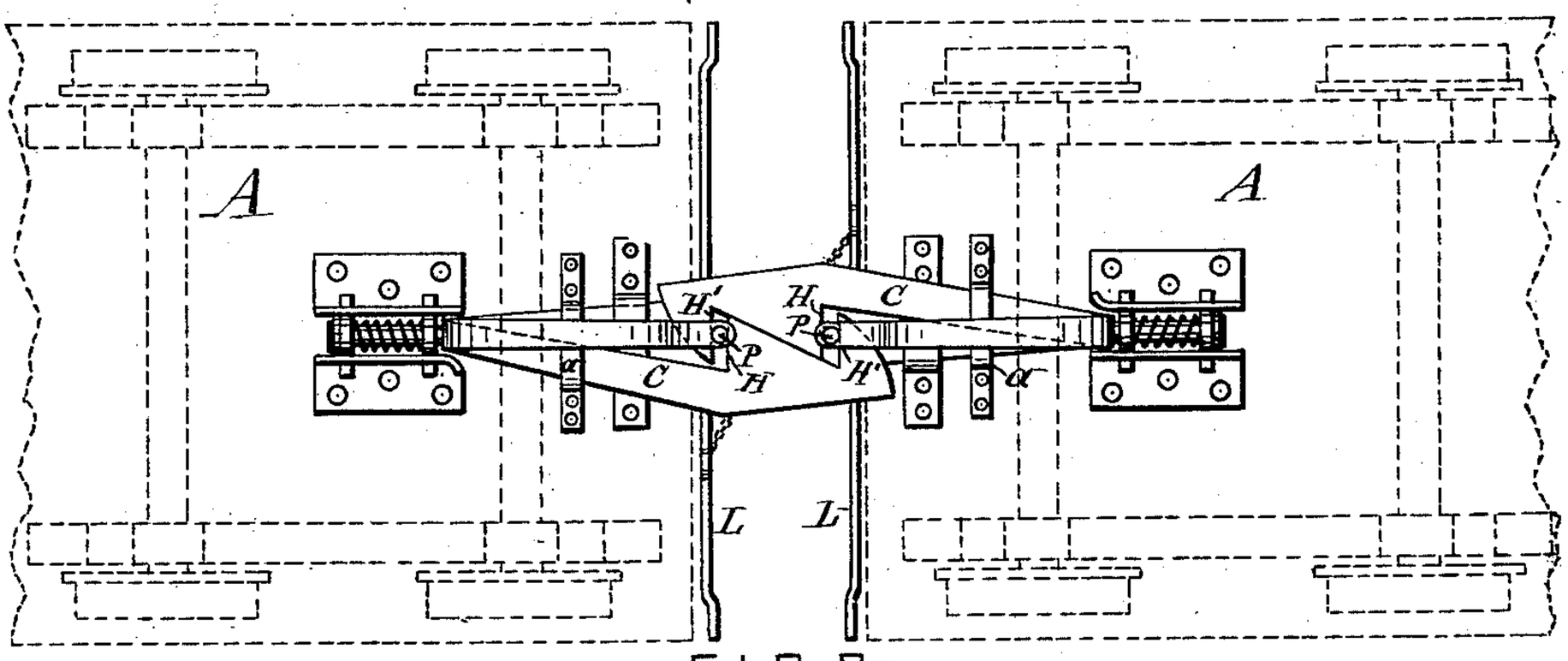

FIG-2-

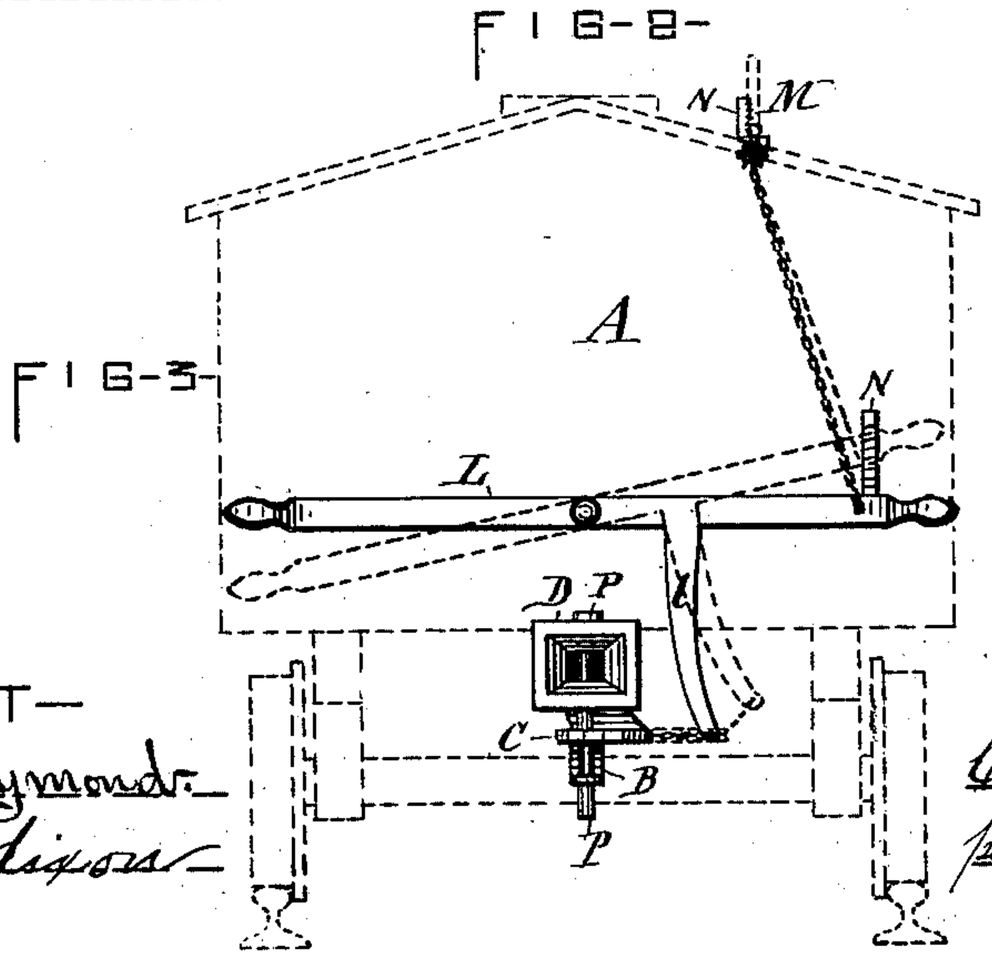

FIG-3-

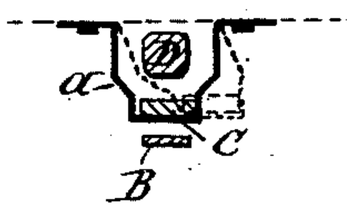

FIG-4-

ATTEST—

Wm. E. Raymond.

C. Bendigon

INVENTOR—

Charles Oscar Barnes

per Munn, Lacey & Hoy

his Attys

UNITED STATES PATENT OFFICE.

CHARLES O. BARNES, OF BALDWINSVILLE, NEW YORK, ASSIGNOR OF ONE-HALF TO LUCIEN BARNES, SR., OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 297,053, dated April 15, 1884.

Application filed March 6, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES O. BARNES, of Baldwinsville, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Car-Couplers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of car-couplings in which the coupling is effected by the interlocking of hooked arms connected to the two cars to be coupled.

The invention consists in a novel construction of hooked coupling-arms adapted to be used in connection with the ordinary bumper or draw-head and coupling-pin, and to automatically effect the coupling without endangering the life or limbs of the operator, and which, when coupled, is perfectly secure against accidental uncoupling.

The invention is fully illustrated in the annexed drawings, wherein Figure 1 is a side elevation of two cars coupled by my improved coupler. Fig. 2 is an inverted plan view of the same. Fig. 3 is an end view of one of said cars, and Fig. 4 is a transverse section on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the body of a car, and D the ordinary bumper or draw-bar, connected to the car in the usual manner, and adapted to receive the common coupling link and pin, P.

Beneath the bumper D is a brace, B, firmly secured to the rear end of the bumper, and having its free end provided with an eye for the reception of the lower end of the coupling-pin P, which is extended in length for that purpose.

C represents my improved coupling-arm arranged between the bumper D and brace B, and secured to the rear end of the bumper or draw-bar D in such a manner as to allow said coupling-arm to oscillate laterally. A flexible laterally-yielding stirrup, *a*, attached to the under side of the car, supports the free end of the coupling-arm C, and serves to normally hold the same in position for interlocking with the coupling-pin P of the approaching car. The free end of the coupling-arm C is formed with two hooks, H and H′, the first of which rests against the front of the pin P, which is held by the bumper D and subjacent brace B, and the second hook, H′, is adapted to engage with the pin P of the approaching car, as shown in Figs. 1 and 2 of the drawings. The front or face of the forward portions of the hooks are beveled, so that the encounter thereof with the coupling-arm C and pin P of the approaching car causes the two coupling-arms to be crowded laterally, and then spring back and engage by their outer hook, H′, the two coupling-pins P P. When thus interlocked, the pins P P are braced by the bearing of the first hooks H against the front of the pins, as illustrated in Fig. 2 of the drawings.

The vertical extension of the coupling-pins adapts the described coupling devices to be used on cars of different heights.

It will be observed that in my improved car-coupler each coupling-arm has a hold on the car to be coupled independent of the coupling-arm connected to said car; hence when two cars provided with my improved coupler are connected with each other, a duplex, and consequently a more secure, coupling is effected.

In case a car provided with my improved coupler is to be connected to a car provided merely with the old style of bumper or draw-head D, the common coupling-link can be used in connection with the pins P P, as indicated by dotted lines in Fig. 1 of the drawings.

L represents a lever pivoted to the end of the car and extended across the same, so as to be convenient of access from the outside of the car. Said lever is provided with a rigid pendent arm, *l*, the free end of which is connected with the coupling-arm C, so that by swinging the said lever vertically on its pivot the arm *l* is caused to draw the coupling-arm laterally out of its engagement with the coupling-pin P of another car, thus allowing the trainman to uncouple the cars without going between the cars, as is required with the ordinary car-couplings.

On box-cars and stock-cars I employ an additional lever, M, pivoted to the top of said

cars, and connected with the lever L by a chain or rod, so that the uncoupling of the cars can be accomplished from the top of the car.

Ratchets N may be attached to the car to engage and hold the levers L M in a position to prevent the cars from coupling when desired, as is the case when a running switch is to be made.

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

1. In combination with the bumper D and its pin P, the lateral vibratory hook H, adapted to engage with the pin of the approaching car, beneath the draw-head thereof, substantially as shown and described.

2. In combination with the bumper D, the brace B, beneath said draw-bar, the pin P, extended through the brace, and the lateral vibratory coupling-bar C, having two hooks, H H′, adapted to simultaneously engage, respectively, the two pins of the cars to be coupled, substantially in the manner set forth and shown.

3. In combination with the bumper D, the brace B, underneath said bumper, the coupling-pin P, extended through the brace, the lateral vibratory coupling-arm C, arranged between the bumper and brace, and provided with the brace-hook H and coupling-hook H′, the flexible stirrup *a*, supporting and actuating the coupling-arm C, and the lever L, extended across the car, and having the arm *l* connected with the aforesaid coupling-arm, substantially as described and shown.

4. In combination with the lateral vibratory coupling-arm C and lever L, connected therewith, the supplemental lever M, connected to the top of the car and with the lever L, substantially as and for the purpose shown and set forth.

CHARLES O. BARNES.

Witnesses:
AARON J. BACH,
ISAAC BACH.