

(No Model.)

D. BELLON.
CAR COUPLING.

No. 502,650.

Patented Aug. 1, 1893.

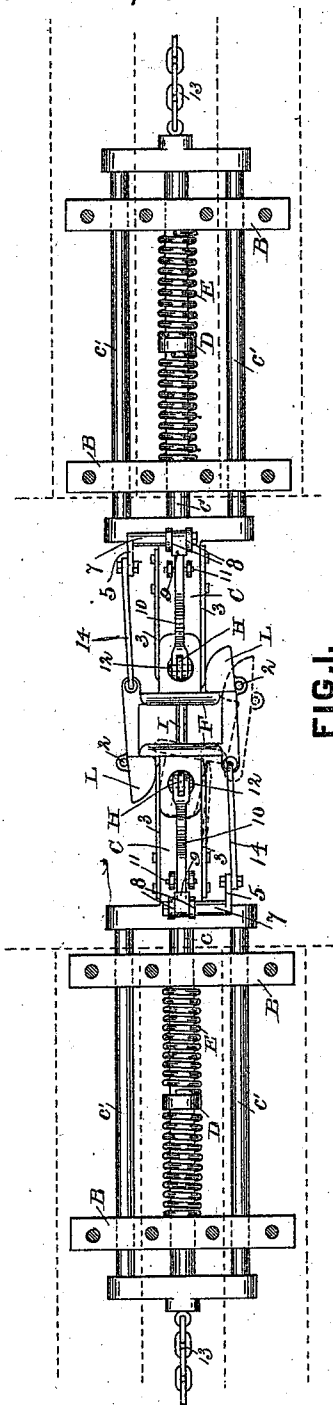


FIG. 1.

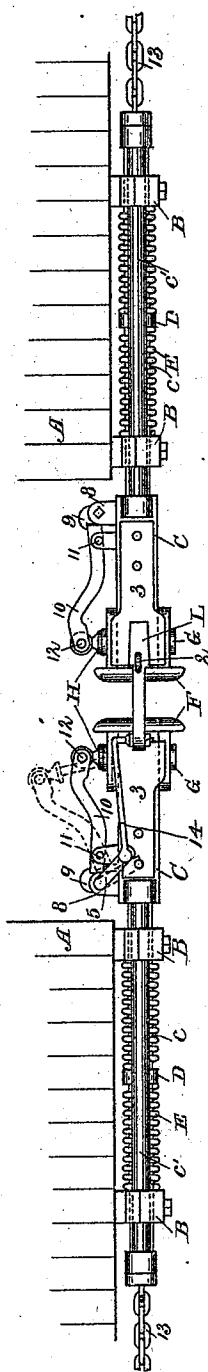


FIG. 2.

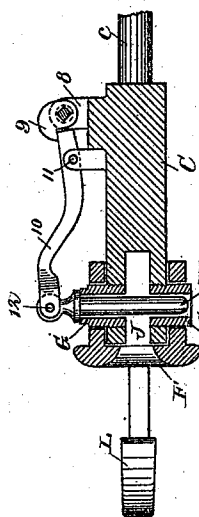


FIG. 3.

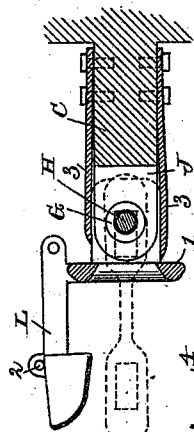


FIG. 4.

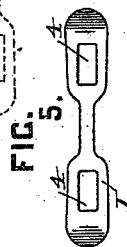


FIG. 5.



FIG. 6.

WITNESSES

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 502,650, dated August 1, 1893.

Application filed May 1, 1893. Serial No. 472,526. (No model.)

To all whom it may concern:

Be it known that I, DAVID BELLON, of McKownville, in the county of Albany and State of New York, have invented new and useful
5 Improvements in Car-Couplers, of which the following is a specification.

This invention relates to improvements on the car-coupler for which Letters Patent of the United States, No. 390,944, were granted
10 to me October 9, 1888; and the object of my improvement is to render my said coupler more effective in its operation. This object I attain by the means illustrated in the accompanying drawings, which are herein referred to and form part of this specification.
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In said drawings, Figure 1 is a plan view of two of my couplers connected together. Fig. 2 is a side elevation of the same, showing portions of the adjacent ends of two cars connected by my improved couplers. Fig. 3 is an enlarged longitudinal section of the head of the draw-bar, the coupling-pin and its operating mechanism being shown in side elevation. Fig. 4 is a horizontal section of the
20 same, with a coupling-link indicated by dotted lines; and Figs. 5 and 6 are, respectively, a detached plan view and a detached side elevation of the coupling-link for my coupler.

As represented in the drawings, A designates the adjacent ends of cars provided with my improved couplers; B the abutment-blocks secured to the under side of said cars.

C is the draw-bar provided with a rearwardly-extending center-bar, *c*, fitted to slide in said abutment-blocks. The side-bars, *c'*, of said draw-bar also slide in said abutment-blocks and are arranged to keep said draw-bar in a proper position; D a collar secured to the center-bar to form an abutment for
30 springs, E, that are interposed between said collar and the two abutment-blocks B for keeping said draw-bar in its normal position.

A bumper-head, F, is pivoted to the outer end of each draw-bar C by means of sleeves, G, through whose opening a coupling-pin, H, can pass to engage in a corresponding opening of a coupling-link, I, when the couplers are to be connected together. The coupling-link I is arranged to enter a longitudinal mortise, J, formed in the draw-bar C, and through the opening formed in the bumper-head F to enter said mortise. Each of the bumper-
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heads F is provided with a forwardly extending hook, L, arranged to engage with a flange 1, of a conjoining coupler, as set forth in my former patent above referred to. The hook L is provided with an eye, 2, to which may be attached a chain or rope for the purpose of deflecting the bumper-head F sidewise when it is required to disengage the coupler. 60 Springs, 3, are arranged to bear against the opposite sides of the bumper-head, so as to normally maintain the latter in a central position, as shown by full lines in Fig. 1.

As far as above described, my car-coupler 65 is substantially the same as the one shown and described in the Letters Patent hereinbefore referred to, the essential differences between the two being that in my present device the draw-bar C is provided with a longitudinal mortise, J, formed in its outer end and fitted to receive a coupling-link, I, together with a few minor differences hereinafter described. The coupling-link I has, at each end, an opening, 4, for receiving the corresponding coupling-pin H. The hook L of each coupler is provided with a rod, 14, which connects said hook with a crank, 5, of a transverse shaft, 7, journaled in bearings, 8, on the corresponding draw-bar C; said shaft is provided with an arm, 9, which takes upon the corresponding end of a lever, 10, which is fulcrumed, as at 11, to the upper side of said draw-bar. The opposite end of said lever is jointed by a pivot, 12, to the head of the 85 coupling-pin H in such manner that an oscillation of the lever 10—produced by swinging the hook L laterally—will effect a lifting movement of said coupling-pin that will free it from its engagement with the coupling-link I. 90

The rearward extension of each draw-bar C has a chain, 13, or other suitable means, secured to it to form a connection between the two draw-bars of the same car, so that, 95 when a train of cars is equipped with my couplers, a continuous connection between all of the cars of the train will be effected.

My invention operates in the following manner: Let it be supposed that two adjacent cars of a train are disconnected—the coupling-link I of one car projecting from the bumper-head F. Then, if one of said cars is pushed toward the other, or both of said

cars are put in motion toward each other, with sufficient force to enter the projecting coupling-link into the empty mortise of the draw-bar with which the connection is to be made, the coupling of said cars will be automatically effected. In accomplishing said movements the hook L—attached to the free coupler—will take against the flange 1 of the coupler to which connection is to be made, and thereby deflect said hook laterally. The last named movement will raise the coupling-pin H clear from the path of the incoming coupling-link I, so as to allow the latter to enter the empty mortise of the draw-bar to which the connection is to be made; simultaneously the hooks L of the two couplers will become engaged with the flanges 1 of the respective bumper-heads, and the coupling-pin H—which has been automatically raised—will be allowed to drop into the opening of the entering end of the coupling-link I, and effect the coupling of the two cars.

What I claim as my invention, and desire to secure by Letters Patent, is—

25 The combination of a draw-bar provided

with a longitudinal mortise in its outer end; said mortise being arranged to receive a coupling-link, a bumper-head, jointed to said draw-bar by means of screw-threaded sleeves which are arranged to afford the full height of said mortise between the adjacent ends of said sleeves; the latter forming an opening for receiving a coupling-pin; each of said bumper-heads being provided with a forwardly-projecting hook that is arranged to move laterally with the bumper-head to which it belongs and is fitted to engage with the bumper-head of a conjoining coupler, a rocker shaft journaled on said draw-bar and connected to the corresponding hook; said rocker-shaft having an arm arranged to automatically lift said coupling-pin when said hook is moved outwardly, and a coupling-link provided with openings fitted to receive the coupling-pins of two conjoining couplers, as and for the purpose herein specified.

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Witnesses:

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