

(No Model.)

DE ELBERT A. REYNOLDS.

CAR COUPLING.

No. 263,221.

Patented Aug. 22, 1882.

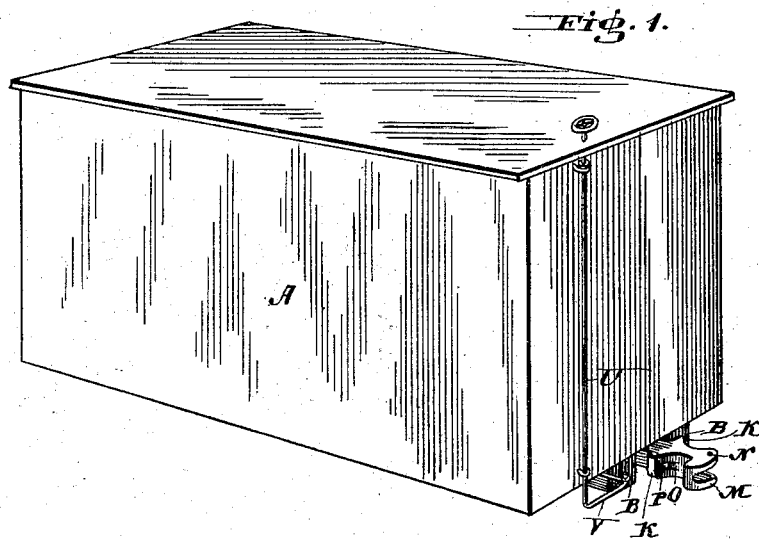


Fig. 2.

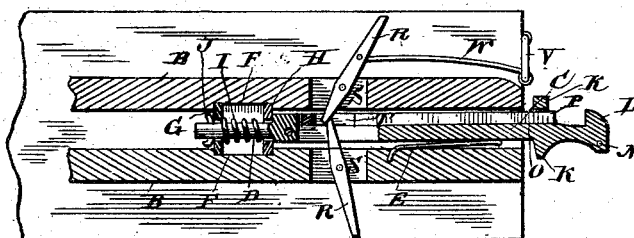
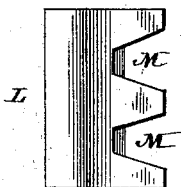


Fig. 3.



WITNESSES

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 263,221, dated August 22, 1882.

Application filed December 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, DE ELBERT A. REYNOLDS, of Lyons, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a perspective view, showing the end of a car equipped with my improved coupler. - Fig. 2 is a horizontal sectional view, and Fig. 3 is a front view illustrating a modification.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to automatic couplings for railroad-cars; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A represents the car, which is provided on its under side with longitudinal guide-beams B B for the draw-bar C. The latter is provided at its rear end with a hinged stem, D, enabling it to swing in a horizontal plane between the said guide-beams, between one of which and the side of the draw-bar a spring, E, is interposed, which forces it over toward the other guide-beam B. The guide-beams B B are provided near their rear ends with recesses F to accommodate the plates G H, which are adjusted upon the stem D, a spring, I, coiled upon said stem being interposed between the plates or washers G H, which are retained in position upon the stem by a pin, J. Spring I, which forms the buffer-spring, acts, owing to the construction just described, equally well, whether the cars are pulled or pushed. At its front end the draw-bar D is provided with shoulders K, in front of which the beveled draw-head or coupling-hook L is formed. The back of said hook or draw-head has a horizontal recess, M, the flanges of which are provided with a vertical opening or perforation, N, to receive an ordinary coupling-pin in case it should be desirable or necessary to couple my improved coup-

ling with cars having the ordinary pin and link. The draw-bar C is provided with a longitudinal slot or recess, O, in which slides a rod or bar, P, which may be slid forward through an opening, Q, in one of the shoulders K to the front end or catch of the coupling-hook. Rod or bar P is operated by means of levers R, pivoted in slots S in the guide-beams B, their inner ends working in a slot, T, in bar P, while their outer ends extend to the sides of the car or slightly beyond, so as to be conveniently manipulated. The slot T must be of sufficient length to allow the buffer-stem or draw-bar to work freely without affecting the rod P. The rod P may also be operated by means of a crank-shaft, U, arranged vertically at the end of the car, so as to be conveniently operated from the platform or from the top of the car. The crank V at the lower end of said shaft is connected by a pivoted rod, W, with one of the levers R, through the medium of which the rod P may thus be operated.

For the purpose of enabling cars of different height to be readily coupled, I avail myself of the modified construction illustrated in Fig. 3 of the drawings. In this construction the draw-head or coupling-hook is made of twice the usual height or more, and provided with a series of two or more recesses, M, for the reception of a coupling-link, thus enabling the coupling—the construction of which is in other respects unchanged—to engage with cars of more or less than the usual height.

The operation of my invention will be readily understood. When the cars come together the draw heads and bars move or swing laterally against the tension of the springs E, thus causing the coupling-hooks to engage and remain coupled. To uncouple it is only necessary to push the bar or rod P forward by the mechanism above described, when, striking the beveled draw-head of the opposite car, it will force the draw-heads or coupling-hooks apart, thus enabling the cars to separate. By allowing the rod P to remain in this position the cars may come together without coupling, which is sometimes desirable. When the concussion of the cars coming together is very forcible the shoulders K, by striking or abutting against the timbers of the car, prevent injury to the buffer-spring.

My improved car-coupling is simple, inexpensive, automatic in its operation, capable of being operated (in uncoupling) from either side or from the top of the car, and it may be set
5 so as to prevent coupling. In case of accident, as of a car jumping the track, it becomes automatically and instantly uncoupled.

Having thus described my invention, I claim and desire to secure by Letters Patent of the
10 United States—

1. In a car-coupling, the combination of the draw-bar C, having head or coupling-hook L and longitudinally slot or recess O, with the longitudinally-sliding rod or bar P and suitable operating mechanism, substantially as and for
15 the purpose set forth.

2. The combination of the guide-beams B, having recesses F, the draw-bar C, having shoulders K and hinged stem D, and the washers G H and spring I, substantially as and for
20 the purpose set forth.

3. The combination of the draw-bar C, hav-

ing shoulders K and coupling-hook L, the spring E, the sliding rod or bar P, and the levers R, crank-shaft U, and connecting-rod W, substantially as and for the purpose set forth. 25

4. The combination of the draw-bar C, having hinged stem D, coupling-hook L, and recess or slot O, the buffer-spring I, arranged as herein described, the rod P, having slot T, and
30 the operating-levers R, substantially as and for the purpose set forth.

5. In a car-coupling constructed as herein described, the coupling-hook L, having one or more recesses, M, and vertical perforations N, 35 substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

DE ELBERT A. REYNOLDS.

Witnesses:

D. KELLEY,

GEORGE W. CADWELL.