

(No Model.)

W. FORBES.
CAR COUPLING.

No. 325,830.

Patented Sept. 8, 1885.

Fig. 1.

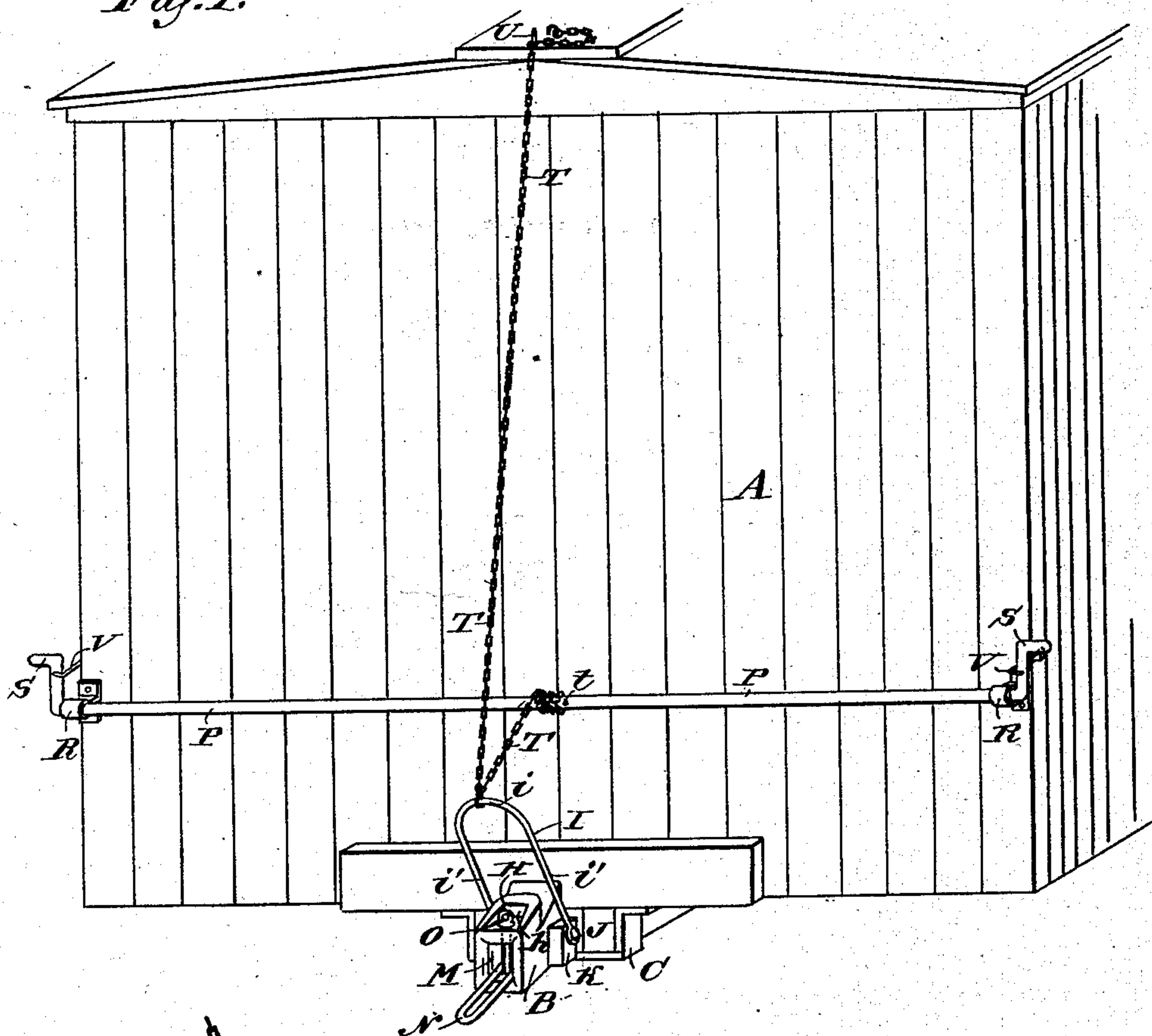
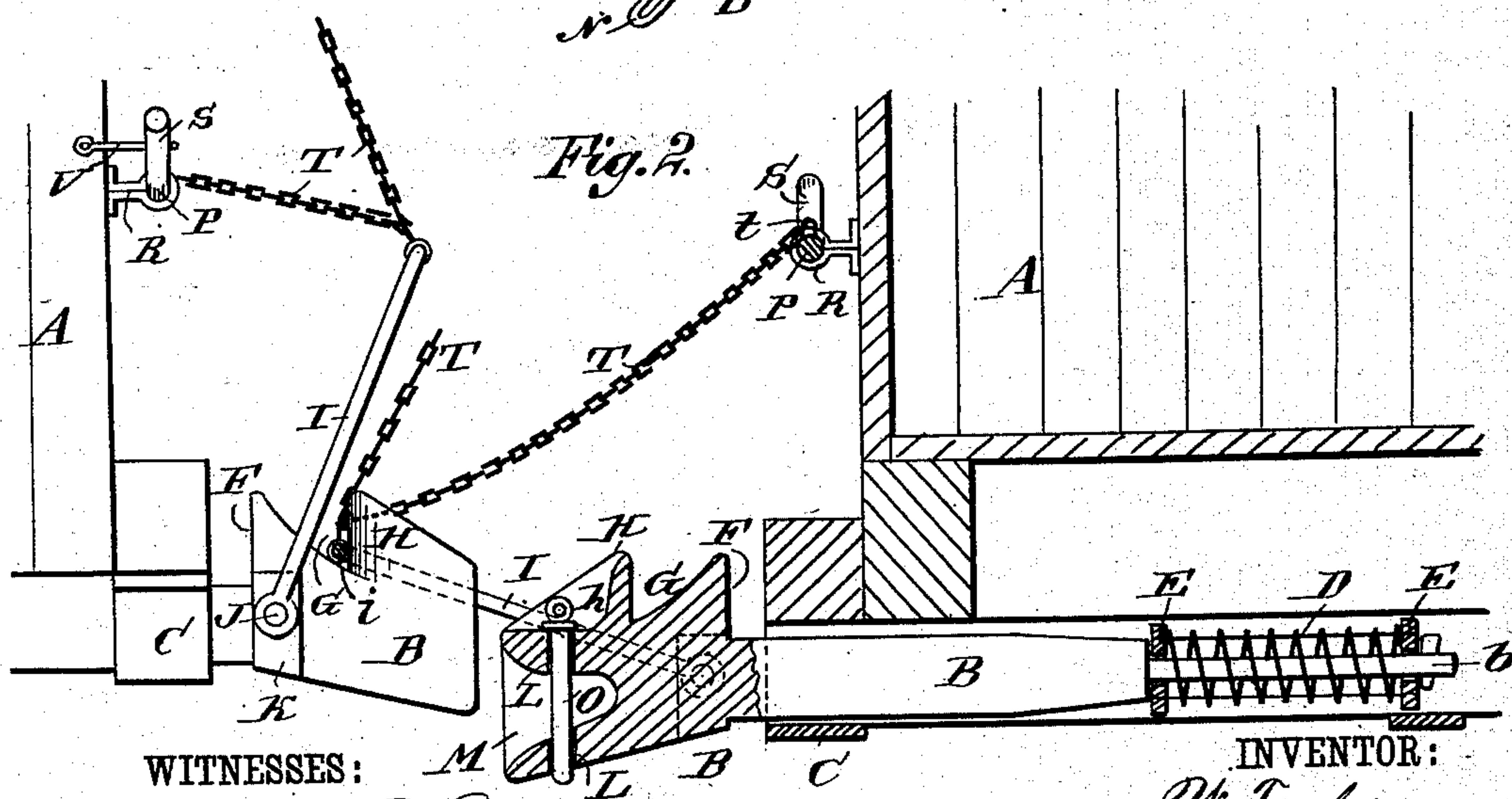


Fig. 2.



WITNESSES:

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WINSLOW FORBES, OF RIVERHEAD, NEW YORK, ASSIGNOR TO HIMSELF
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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 325,830, dated September 8, 1885.

Application filed December 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, WINSLOW FORBES, of Riverhead, in the county of Suffolk and State of New York, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.


My invention relates to improvements in car-couplings; and it consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a perspective view of one end of an ordinary box freight-car with my improved coupling applied, and Fig. 2 is a side view of the lower end parts of two box-cars with my improved couplings applied, and showing the cars coupled thereby, one of the cars and couplings being in section.

The letter A indicates the car-body, and B the draw-head, of my improved coupling. The draw-head is supported from the car-body by a metal strap, C, in which the draw-head has lateral play; and any approved style of buffer-springs D may be fitted between the movable plates E E and on the reduced back end or bar b of the draw-head to relieve the shocks in coupling the cars.

I make the outer end of the draw-head with a shoulder at F, which comes against the end timbers of the car in backing, and it may be in coupling the cars; and in front of the shoulder F the draw-head is cut away from the top to form a transversely-ranging recess at G, and so as to leave a shoulder and form a horn or projection, H, at the front of the draw-head to receive the draft-strain of the coupling-link or clevis I.

The coupling-link I is made in  form, or with a rounded end or cross-bar, i, and sides i' i', having eyes at the ends, through which the stout pivot-pins J pass into the opposite sides of the draw-head below and back of the recess G, or into lugs or projections K, formed on the draw-head, to hinge the link I to the draw-head, so it may be swung up and down for uncoupling and coupling the cars, as hereinafter explained.

I form a recess, h, in the top of the horn H, and make a hole, L, vertically through the draw-head at about the center of the recess h, and I form in the end of the draw-head a recess or socket, M, adapted to receive an ordinary coupling-link, N, which may be held by a coupling-pin, O, passed through the hole L and within the link.

The letter P indicates a shaft which is journaled in boxes or brackets R, fixed to the end of the car, said shaft extending transversely from side to side of the car, and having cranks S S, one at each end; and at T is indicated a chain or cord, which is made fast at one end, as at t, to the shaft P, and passes forward and is connected in any approved way to the coupling-link I, and thence the chain or cord T passes upward to the top of the car, where it may be held by engagement with a hook, U, or otherwise.

At V V are shown hooks or catches, which may be swung over in front of the cranks S of the shaft T.

By pivoting the link to the lugs on the sides of the draw-head cars out of line with each other can be coupled.

The operation is as follows: In coupling cars, both of which are provided with my improved couplings, but one of the links I will be employed, and the link of either car may be used if the draw-heads stand at about the same level; but if they stand at different heights, as in Fig. 2, the link I of the low draw-head will be used in coupling the cars, which is effected by dropping the cross-bar i of said link into the recess G and behind the horn H of the opposing draw-head as the cars come together; and by leaving the hooks V disengaged from the cranks S of the car, whose link I is used, the link, which normally is held by the winding of the chain T on the shaft P at a slight incline forward, will be dropped automatically by the shock of the cars as they come together; or the cranks S at either side of the car may be operated by a trainman, standing at the side of the track, to lower the link to the opposing draw-head, and by letting out the chain T from its fastening at U the link may be lowered for coupling the car from its top. The cars may be uncoupled by lifting on the chain T from the top of the car, or by

winding the chain onto the shaft P by turning the cranks S.

It is evident that in any case the cars may be coupled or uncoupled without requiring the trainmen to go between them and expose themselves to injury. It will also be seen that providing the link-socket and pin-hole M L cars having my improved coupling may be coupled to cars having the ordinary link and pin draw-head.

For coupling cars from the ground at the sides of the cars the lengths of the chains or cords T will be regulated so as to prevent the link from falling below a horizontal position, which always will allow the cars to be coupled, as the link I of the low draw-head will be used, and said link will not draw over the horn H, which it engages.

When the draw-heads of opposing cars are at about the same level, and with the chains T adjusted to hold the links I at or a little above a horizontal position, the cars will couple automatically as they come together, the end i of the link used riding up the inclined front face of the horn H until it drops behind it.

The weight of the link will keep it down behind the horn H, so that it will not jar out by travel of the cars over the road, and I make the draft-shoulders of the horns H rounded at the corners, so that the cross-bar i of the link may have the necessary play in rounding curves of the track, and to prevent cutting strains on the link, as will readily be understood.

When it is not desired to couple the cars as

they come together, as when shunting the cars about the yard in making up trains, or when backing cars onto sidings, the chains T may be wound on the shafts P, and the cranks S be engaged by the hooks V to hold the coupling-links raised, as in Fig. 1 or at the left-hand side of Fig. 2.

I do not limit myself to the precise arrangement shown of the chains or cords T for holding the coupling-links, as any suitable connection of the chains with the links I and transverse shafts P, allowing the links to be raised or lowered by the shafts, may be employed.

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

1. In a car-coupling, the combination, with a draw-head, B, provided with the horn H, and the side lugs, K, of the link I, pivoted to studs on the said side lugs, and means for raising and lowering the link from the top or side of the car, substantially as herein shown and described.

2. In a car-coupling, the combination, with the draw-head B, and the link I, pivoted thereto, of the shaft P, journaled on the end of the car and provided with cranks S, the chain T, wound on the shaft and connected to the link, the hook U at the top of the car, and the catches V, substantially as herein shown and described.

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Witnesses:

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