

(No Model.)

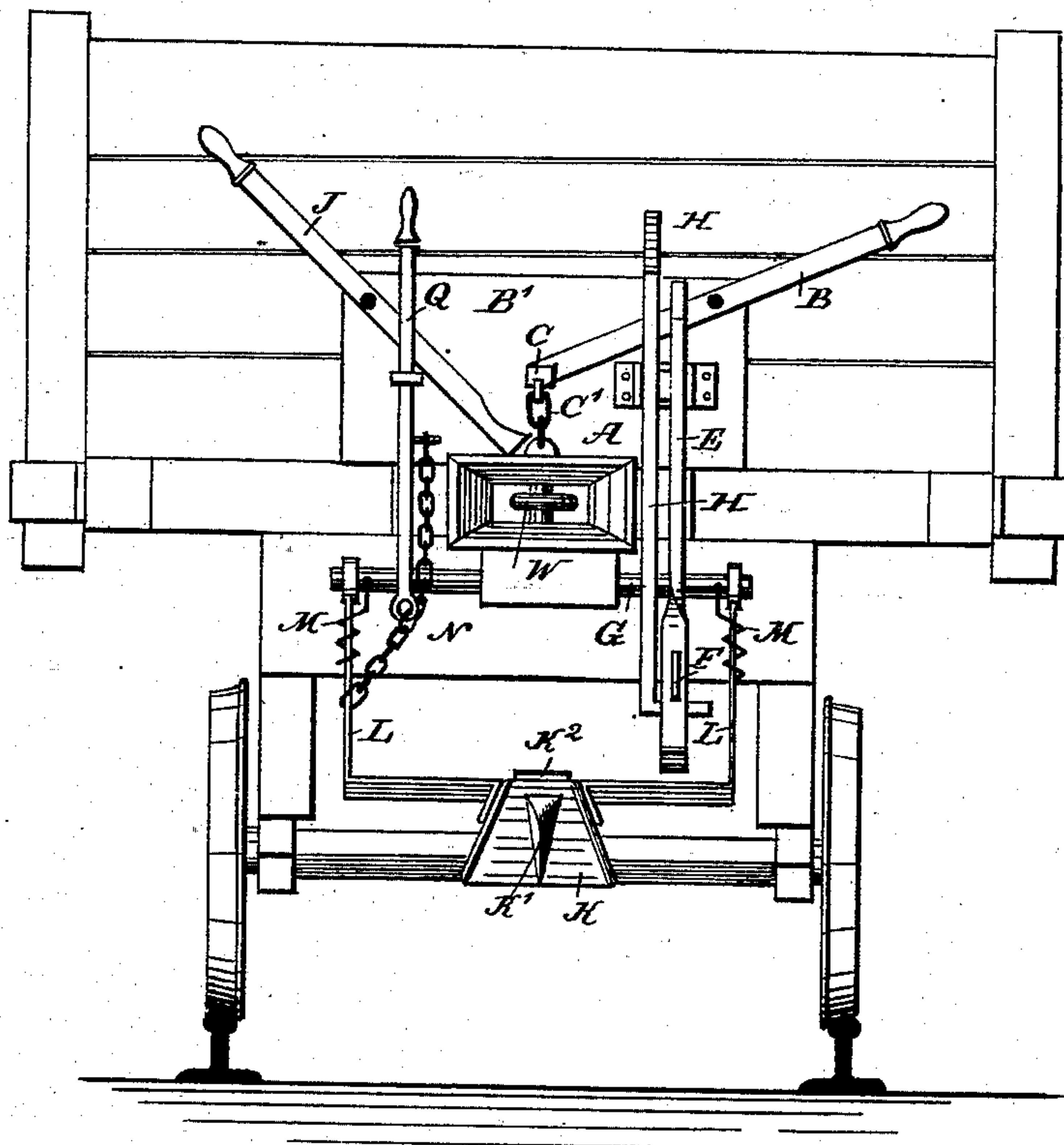
2 Sheets—Sheet 2.

J. C. LOOK.
CAR COUPLING.

No. 263,186.

Patented Aug. 22, 1882.

Fig. 2.



WITNESSES:

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JOHN C. LOOK, OF YUBA CITY, CALIFORNIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 263,186, dated August 22, 1882.

Application filed May 12, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN CALVIN LOOK, of Yuba City, in the county of Sutter and State of California, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

The invention consists in the combination, with the draw-head, of a swinging guide-plate provided with a beveled ridge and an apron, which guide-plate is attached to arms pivoted to a cross-piece of the draw-head, and drawn toward the same by springs which hold the guide-plate on the draw-head when raised. The link is suspended from a pivoted lever which is held in a raised position by means of a trigger-lever connected by means of a pivoted arm with the cross-bar of the draw-head, whereby when the cars come together the link will be guided up the guide-plate into the draw-head, and then the guide-plate drops and the trigger-lever is moved from under the raised pin-holding lever, so that the pin can drop through the aperture in the draw-head.

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 longitudinal sectional elevation of the ends of two cars provided with my improved car-coupling. Fig. 2 is an end elevation of a car provided with my improved coupling.

The draw-head A, of the usual construction, is mounted to slide in the end of the car, and has its rear end cushioned by buffer-spring A'. A lever, B, is pivoted to the end of the car or to a block, B', at the end of the car which lever is provided at its inner end with a hook-arm, C, adapted to receive a short piece of chain, C', attached to the upper end of the coupling-pin D, which is thus suspended from this hook-arm C. An L-shaped trigger-lever, E, is pivoted to the block B' in such a manner that the lower horizontal arm of this lever, which arm is enlarged at its end, projects under the car, as shown in Fig. 2. This trigger-lever E is provided at the upper end of its inner edge with an offset, E', upon which the lower edge of the lever B is adapted to rest. An arm, F, provided in its lower longitudinal edge and near its outer end with a series of teeth, d, pointing backward, is pivoted to the

rear cross-piece, G, of the draw-head A, and passes through a vertical slot in the vertical part of the L-shaped lever E. This pivoted arm F rests upon the lower bent end of a lever, H, pivoted to the block B', adjoining the lever E. A lever, J, is pivoted to the block B' in such a manner that its inner end will be under the hook-arm C of the lever B and its outer end project toward that side of the car opposite the one toward which the lever B projects. The link-guide consists of a plate, K, attached to two arms, L, which have their inner ends slotted longitudinally and pivoted to the cross-piece G of the draw-head, which arms L are surrounded by springs M, attached to these arms and to the cross-piece G. The plate K has its upright side flanges beveled toward the end of the car, and the guide-plate is inclined downward and outward from the draw-head when raised up to the draw-head. A beveled ridge, K', is provided on the middle of the upper surface of the guide-plate K. A chain, N, is attached to one arm L and to the end of the car, which chain prevents the guide-plate K from dropping down too far, which chain can be attached to a rod, Q, at the end of the car, by means of which chain or rod and chain the guide-plate K can be raised to the draw-head. The guide-plate K is provided at its inner end with a bent tongue, K², fitting against the front lower edge of the draw-head.

The operation is as follows: If the link W is held in one draw-head, as shown in Fig. 2, the guide-plate K of the other draw-head is raised until the tongue K² rests upon the lower beveled front edge of the draw-head, as shown in Fig. 1, and will be held in this position by the springs M, which draw the plate K toward the end of the draw-head. The hooked end of the lever B is raised, and this lever is automatically locked in the raised position by the trigger-lever E, the upper end of this lever being held against the front of the block B' by the weighted horizontal arm E². The lever B, when raised, rests on the offset or shoulder E' of the trigger-lever E. The lower end of the pin D will be in the upper end of the pin-aperture in the draw-head. When the draw-heads come together in coupling the lower front edge of the draw-head, in which the link is held, strikes against the beveled ridge K' of the raised guide-plate K and presses the guide-

plate downward, so that it will be disengaged from the draw-head and can drop. The draw-head is pushed in the direction of the arrow a' , whereby the cross-piece G is moved in the same direction. The arm F is pivoted to the cross-piece G, and has teeth in the lower edge, which teeth catch on the lower edge of the slot in the lever E, and thus the lower end of this lever E will be moved in the direction of the arrow a' , and the upper end of this lever will be moved in the inverse direction of the arrow a' , and the offset or shoulder in this lever E is moved from under the raised lever B, thus permitting the lever B to drop, and the pin D drops through the aperture in the draw-head and through the link in the draw-head. To uncouple the cars the pin D can be raised from either side of the car by means of either lever B or J, or from the top of a box or freight car by means of a connected cord or chain. To secure a link in a draw-head the coupling-pin is raised, as described, and when the link has been inserted the upper end of the lever H is drawn outward, so that the lower end of this lever raises the toothed arm F, so as to liberate the lower end of the lever E to permit the upper end of the same being drawn in the direction from the end of the car, so that the lever B can be lowered, or when the pin has been inserted push on the lever E near its slot. The arm F, with the teeth, jumps through the slot, and the upper end of the lever E comes from under the lever B, letting it drop.

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

1. In a car-coupling, the combination, with the draw-head A, of the swinging guide-plate K, the arms L, pivoted to the cross-bar G of the draw-head, and the springs M, coiled around the arms L and attached to the same and to the cross-bar G, substantially as herein shown and described, and for the purpose set forth.

2. In a car-coupling, the combination, with the draw-head A, of the swinging guide-plate K, provided with a beveled ridge, K' , the arms L, pivoted to the cross-bar G of the draw-head, and the springs M, substantially as herein

shown and described, and for the purpose set forth.

3. In a car-coupling, the combination, with the draw-head A, of the swinging guide-plate K, provided with a central beveled ridge, K' , projecting above the sides of the plate K, and with a tongue, K^2 , the arms L, pivoted to the cross-bar G of the draw-head, and the springs M, substantially as herein shown and described.

4. In a car-coupling, the combination, with the draw-head A, of the swinging plate K, the arms L, the springs M, the lever B for holding the coupling-pin, the trigger-lever E, and the arm F, connecting the trigger-lever with the cross-bar G, substantially as herein shown and described, and for the purpose set forth.

5. In a car-coupling, the combination, with the draw-head A, of the pivoted lever B, from which the pin is suspended, the trigger-lever E, and the lever F, pivoted to the cross-bar G, and provided in its lower edge with teeth resting on the lower edge of a slot in the lower part of the trigger-lever E, substantially as herein shown and described, and for the purpose set forth.

6. In a car-coupling, the combination, with the draw-head A, of the levers B and J, the trigger-lever E, and the lever F, connecting the cross-bar G of the draw-head with the trigger-lever E, substantially as herein shown and described, and for the purpose set forth.

7. In a car-coupling, the combination, with the draw-head A, of the swinging guide-plate K, the arms L, slotted at the inner ends, the springs M, and the chains N for lifting the guide-plate K, substantially as herein shown and described, and for the purpose set forth.

8. In a car-coupling, the combination, with the draw-head A, of the lever B, the trigger-lever E, the lever F, and the lever H for raising the lever F to disengage the latch-lever, substantially as herein shown and described, and for the purpose set forth.

JOHN CALVIN LOOK.

Witnesses:

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