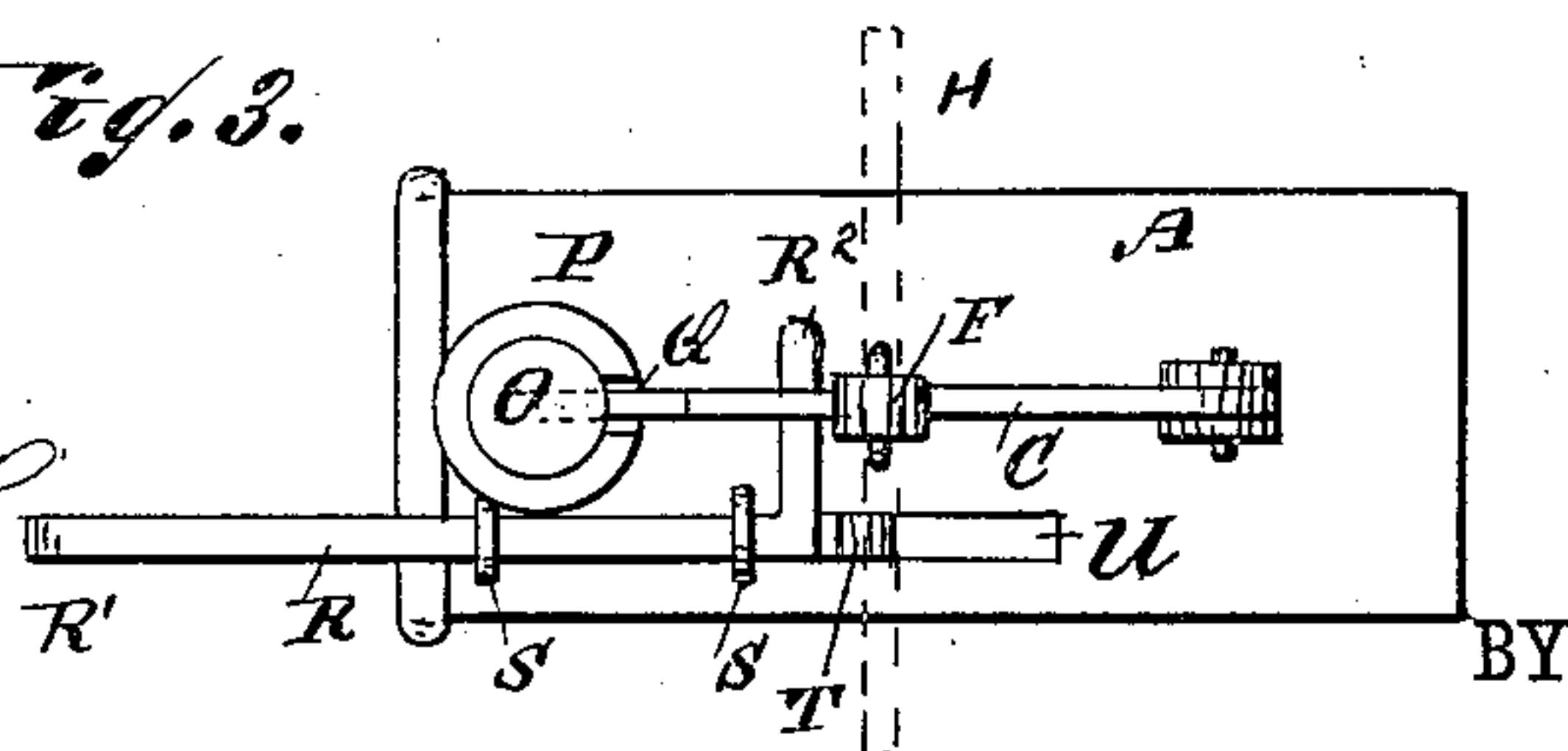


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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 253,801, dated February 14, 1882.

Application filed December 29, 1881. (Model.)

To all whom it may concern:

Be it known that I, MICHAEL WINTER, Sr., of Union City, in the county of Randolph and State of Indiana, have invented a new and useful Improvement in Car-Couplers, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for coupling cars automatically.

The invention consists in a draw-head containing a vertically-movable coupling-pin, into the upper end of which the outer end of a lever passes, pivoted on the top of the draw-head, and provided on its lower edge with a cam-projection, which lever is suspended from a link, through which a bar passes, sliding horizontally on the end of the car, and provided on its upper edge with a beveled projection adapted to raise the pivoted cam-lever and the coupling-pin. A sliding rod is pressed forward to project from the end of the draw-head by a spring-arm, and when the opposite draw-head containing the link strikes this projecting rod the inner end of this rod presses against the cam-projection of the lever, raises the pin sufficiently to admit the link into the aperture of the draw-head, and then permits the pin to drop back and through the link.

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

Figure 1 is an end elevation of a box-car provided with my improved coupling device. Fig. 2 is a longitudinal elevation of a draw-head provided with my improved coupling device, part being shown in section. Fig. 3 is a plan view of the same.

On the draw-head A, provided with a longitudinal end aperture, B, like the ordinary draw-heads, a lever, C, is pivoted to swing vertically, in such a manner that its free end is at the front of the draw-head, which lever is provided with a longitudinal slot, D, and with a cam-projection, E, at the lower edge. This lever C is suspended from a lengthened or longitudinal link, F, by a ring, G, passing through the slot D. This lever C is provided with a notch or recess, C', in its lower edge, at

the rear of the cam-projection, into which notch the inner angular arm, R², of the sliding arm R can pass when this rod R is pushed inward.

A bar, H, provided with a check stud or stop, b, is held loosely and in a horizontal position directly above the draw-head on the end of the car or its platform by guides I, in which this bar can slide horizontally or parallel with the end of the car. At or near the middle of its upper edge this bar H is provided with a projection, J, beveled upward from one end to the other. The bar is also provided with handles or equivalents, K, at the ends. A lever, L, reaching to the top of the car, is pivoted to the end of the same, and has a longitudinal slot, M, at its lower end, through which slot a pintle, N, passes into the higher end of the projection J of the bar H, or into the bar itself. This bar H passes through the link F, as shown in Figs. 1 and 2. There is a notch, J', in the upper end of the inclined edge J of the bar H, for the purpose of holding the link F when the pin O is raised. The outer or free end of the lever C passes into a slot or recess in the head of the coupling-pin O, adapted to pass through a vertical aperture in the outer end of the draw-head, which pin is guided by a vertical collar, P, projecting from the top of the draw-head, and provided in its inner or rear side with a recess, Q, for the end of the lever C.

A sliding rod or bar, R, provided at its outer end with a head, R', and at its inner end with a rectangular arm, R², is held on the top of the draw-head by two guide-loops, S, in such a manner that the rod R projects from the end of the draw-head parallel with the longitudinal axis of this draw-head. An arm, T, passes vertically through a slot, U, of the draw-head, and is pivoted to the draw-head near its lower end. A spring, V, is attached to the lower projecting end of the arm T, and is attached to the bottom of the draw-head behind this projecting end of the arm T.

The operation is as follows: If the parts are in the position shown, the cars can be coupled. The draw-head A', holding the link W, strikes the head R' of the rod R, and pushes this rod toward the inner end of its draw-head A. The inner arm, R², of this rod presses against the

cam-projection E of the lever C, thereby raising this lever and the pin O, and at the same time presses the upper end of the arm T toward the inner end of the draw-head. By this movement of the rod R the pin O is raised sufficiently to admit the link W into the aperture B, and then the pin drops into its former position and through the link W, the arm R² of the rod R being at the inner end of the cam-projection E in notch C'. The cars are thus coupled automatically. If the cars are to be uncoupled, the bar H is moved in the direction of the arrow a', either from the sides of the car by handles K, or from the top of the same by means of the lever L. By this movement of the bar H the link F is caused to slide up the inclination J, whereby the link F and the lever C and the coupling-pin O will be raised, permitting the link W to be withdrawn. If during the time that the parts are in this position the draw-head A' is moved from the draw-head A, the upper end of the arm T will be thrown toward the front end of the draw-head A by the action of the spring V, and will force the rod or bar R outward.

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 the draw-head, of a lever pivoted on the top of the draw-head and provided with a cam-projection, of the coupling-pin adapted to be acted upon by the front end of this lever, and of a projecting sliding rod on the top of the draw-head, adapted to raise the cam-lever, thereby raising the coupling-pin, substantially as herein shown and described.

2. In a car-coupling, the combination, with the draw-head A, of the coupling-pin O, the lever C, pivoted on the top of the draw-head and provided with a cam-projection, E, and of

the projecting sliding rod R, 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 coupling-pin O, the pivoted cam-lever C, projecting sliding rod R, the lever T, and the spring V, substantially as herein shown and described, and for the purpose set forth.

4. In a car-coupling, the combination, with the draw-head A, provided with a vertical guide-collar, P, of the coupling-pin O, the pivoted cam-lever C, and the projecting sliding rod R, 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 coupling-pin O, the pivoted cam-lever C, the link F, and the sliding bar H, passing through this link and provided with a beveled projection, J, 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 coupling-pin O, the pivoted cam-lever C, the link F, the sliding bar H, provided with a beveled projection, J, and the lever L, pivoted to the end of the car and to the bar H, 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 coupling-pin O, the pivoted cam-lever C, the link F, the sliding bar H, provided with a beveled projection, J, the projecting sliding rod R, the pivoted arm T, and the spring V, substantially as herein shown and described, and for the purpose set forth.

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Witnesses:

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