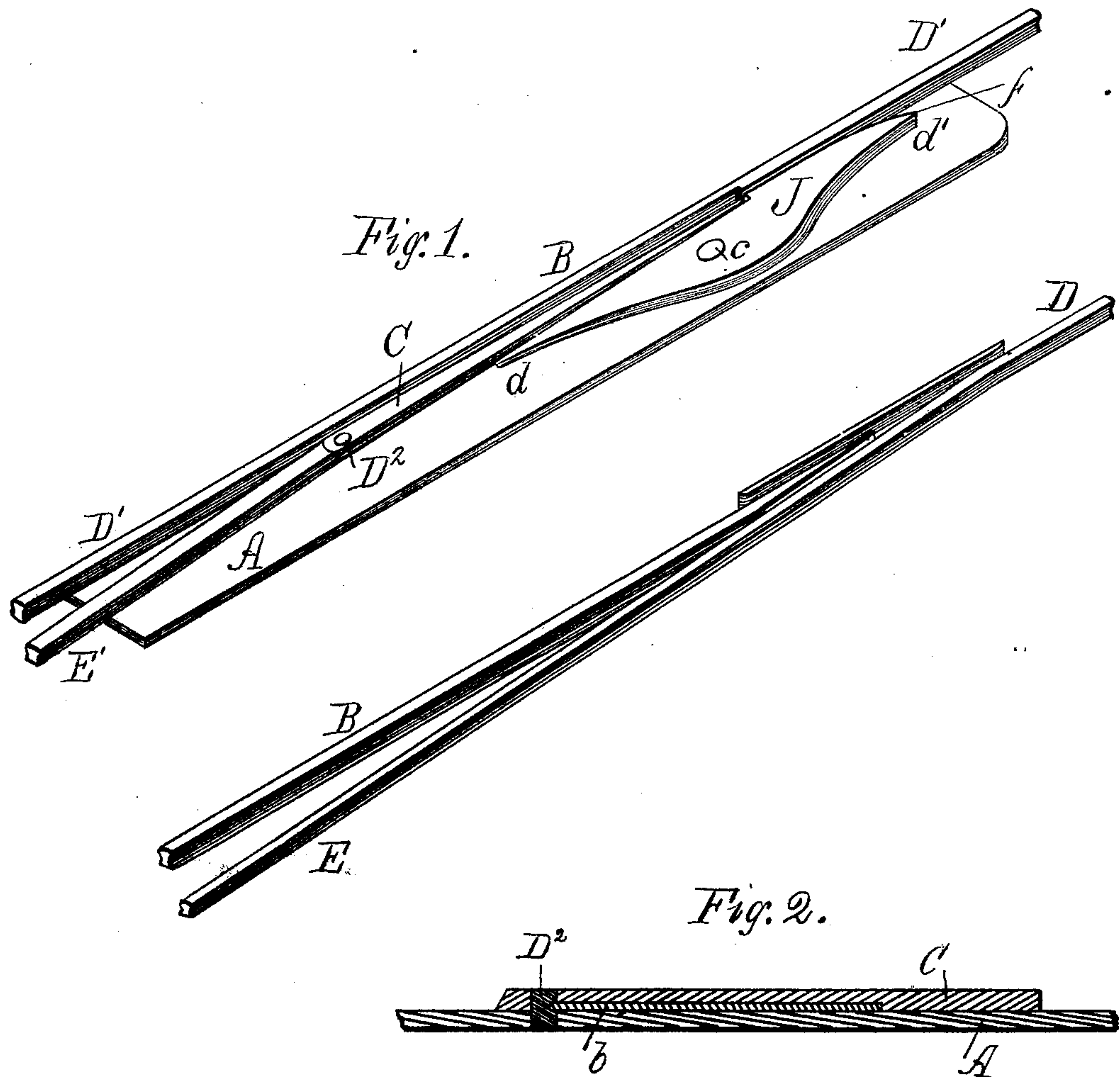


(No Model.)

J. B. CAREY.
Railway Switch.

No. 229,671.

Patented July 6, 1880.



Witnesses.
F. L. Simpson.
Wm. T. Andrews

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UNITED STATES PATENT OFFICE.

JOHN B. CAREY, OF BOSTON, MASSACHUSETTS.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 229,671, dated July 6, 1880.

Application filed May 7, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CAREY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Railway-Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My present invention is an improvement upon that shown and described in Letters Patent of the United States issued to myself on the 2d day of December, 1879, for railway-switches, which consists in the employment, in combination with the pivoted tongue of a switch, of a lever pivoted to the bed-plate of the switch at a point adjacent to the free end of the tongue and operating with the latter to close it against the stress of a suitable spring, which is combined with the tongue to hold it open, the nose or forward end of the lever being actuated by pulling the forward wheels of the car laterally of the track.

In my patented switch above named the lever serves only to actuate the tongue of the switch in the act of opening the switch to the turnout, a stop independent of the lever being employed to arrest the inward movement of the tongue when released from the pressure of the lever, while the lever itself is actuated by a presser-foot depending from the under side of the car.

In my present switch I employ the pivoted tongue and the lever; but I have dispensed with the stop and the presser-foot and changed the relative positions of the tongue and lever, so that the latter, in addition to its function of actuating the tongue, also constitutes the stop to determine the inward movement of the tongue, while the lever, in lieu of being actuated by the presser-foot, is actuated by the forward wheels of the car as the latter is pulled to one side by the draft-animals.

Figure 1 of the drawings accompanying this specification represents, in isometric elevation, a railway-track turnout, and with tongue and

lever embodying my improvements, while Fig. 2 is a vertical section through the tongue.

In these drawings the base-plate of the switch is shown at A, its main-track-rail portion at B, and its swinging tongue at C, the pivot of this tongue being shown at D². D D' represent the rails of the main track, and E E' those of the siding.

The tongue C is recessed on its under side to contain a plate-spring, *b*, such spring being secured at one end to the pivot D², and exerting the stress of its free end against the tongue to crowd the free end of the latter inward and permit the main track to remain in-tact or open.

J in the drawings represents a lever disposed upon the top of the switch-plate A, and pivoted at its center, or thereabout, to the base-plate by a vertical pivot, *c*, such pivot being situated near the free end of the tongue, but at a point between such free end of the tongue and the pivot of the latter, the rear end or tail, *d*, of the lever lying alongside of and abutting against the inner edge of the tongue at about the center of the latter or approximating thereto. The opposite end or nose, *d'*, of the lever J is situated alongside of the rail D of the main track, and is sloping or obliquely disposed with respect to such rail, as shown at *f*, to permit of entrance of the flanges of the wheels upon one side the car, between the nose of the lever and the rail.

The operation of this switch as applied to horse or street railways is as follows: As a car approaches a siding or turnout onto which it is to be switched, and as the front wheels of the car arrive opposite the flaring nose of the lever J, the car is pulled by the draft-animals toward the side of the track opposite the lever, the result being that the nose of the lever is forced inward toward the center of the track, thereby crowding its tail *d* and the free end of the switch-tongue in the opposite direction, and by so doing closes or isolates the main track and opens the turnout, the tail *d* of the lever being of less height than the portion of the switch against which it abuts, in order that it may present no obstruction to the flanges of the wheels as the latter pass along the tongue. When the lever and tongue are in their normal position—that is, when the main track is open—

their meeting faces are parallel; hence the pivot of the lever constitutes a stop to the inward movement of the tongue and to determine the extent to which it is moved by the flexure of its spring. When the car returns from the turnout to the main track the "dummy," so called, upon the side of the track opposite the tongue and lever before explained, diverts the car toward and upon the main track, the wheels of the car upon the switch side crowding the tongue C outward against the main rail and permitting of passage of the flanges of the wheels between such tongue and the lever J. The length of the free end or nose of the lever J is equal to or somewhat greater than the distance between the axles of the cars, in order that the front wheels of the car in running from the main track to the turnout shall not pass by the pivot of the lever until the rear car-wheel has entered between the lever and rail.

I claim—

In combination with the main rails D D', turnout-rails E E', and pivoted tongue C, the pivoted lever J, arranged in relation to the tongue as described—that is, with the free end of the tongue lapped against the outer edge of the lever to a point somewhat outside of or in advance of the pivot of the lever—whereby such lever not only operates to actuate the tongue, but to constitute a stop to the inward movement of such tongue, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN B. CAREY.

Witnesses:

WM. T. ANDREWS,
H. E. LODGE.