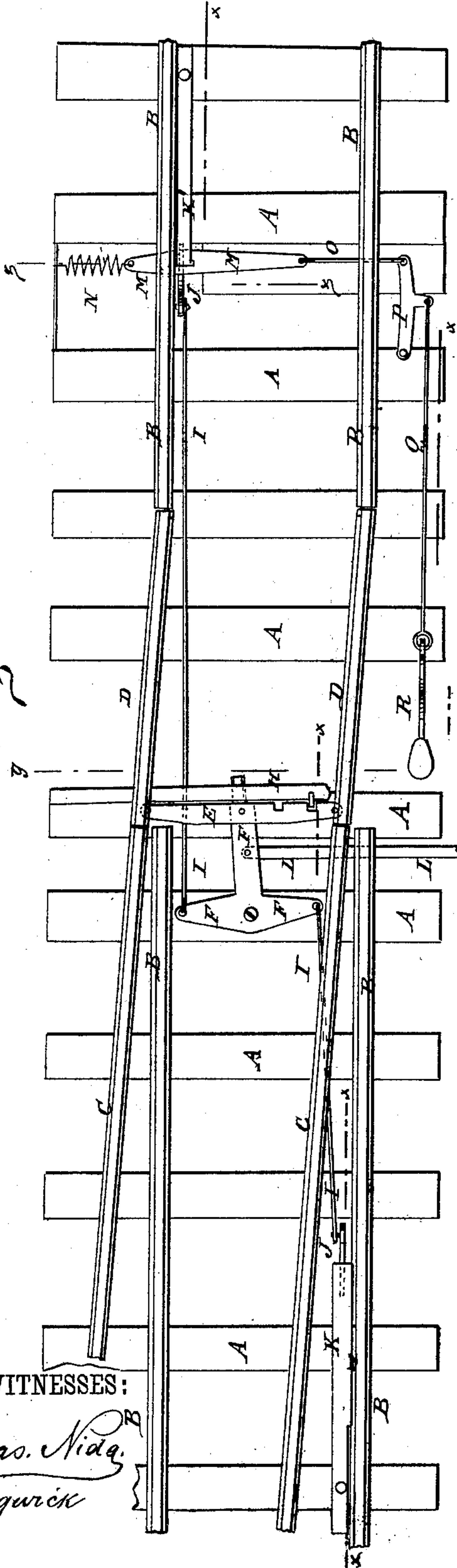


C. S. BASTRIGHT. Railroad-Switch.

No. 223,096.

Patented Dec. 30, 1879.

Fig: 1.



WITNESSES:

Chas. Nida
C. Selgwick

Fig: 2.

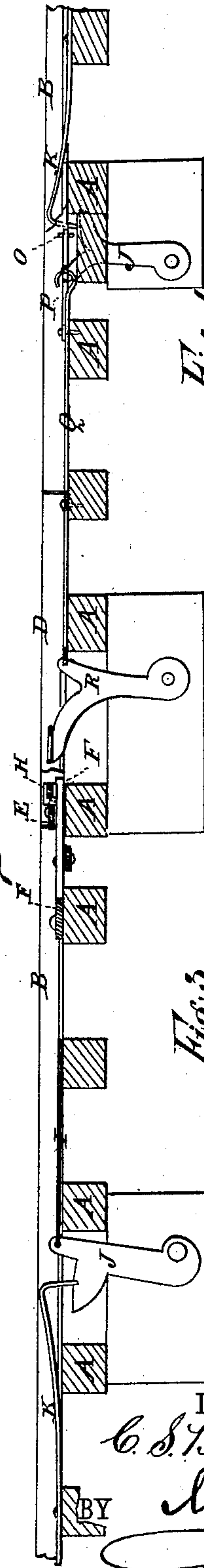


Fig: 3.

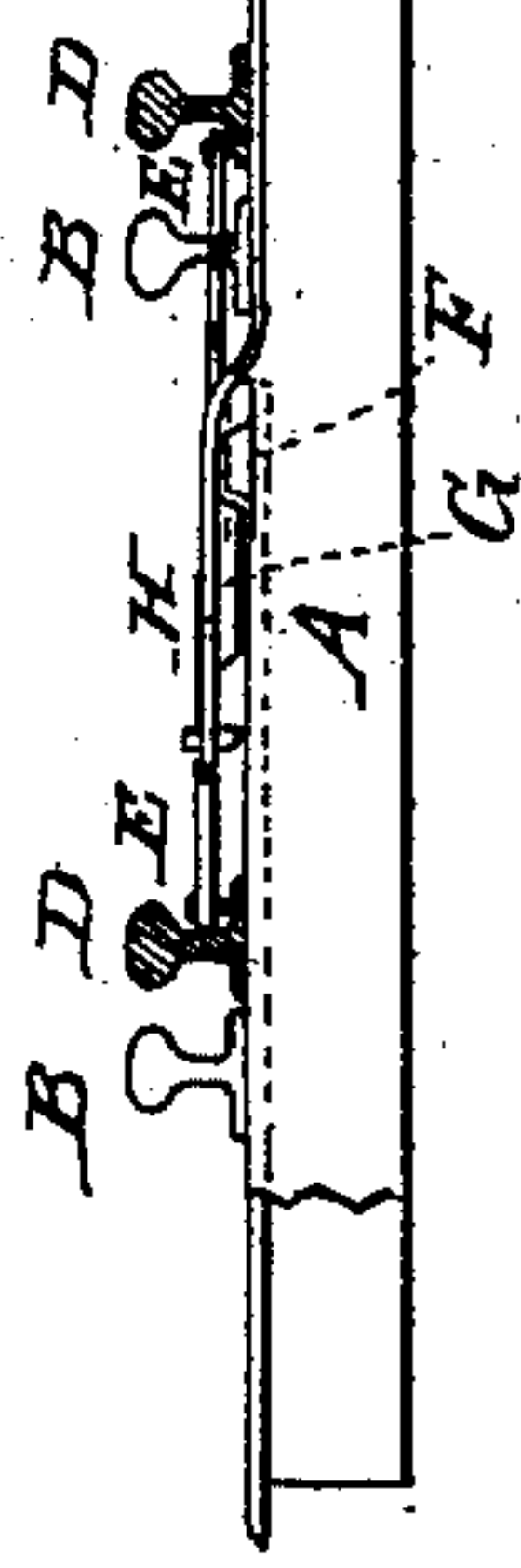


Fig: 4.



Fig: 5.



INVENTOR:

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UNITED STATES PATENT OFFICE

CONZAC S. BASTRIGHT, OF LEBANON, NEW HAMPSHIRE.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **223,096**, dated December 30, 1879; application filed August 25, 1879.

To all whom it may concern:

Be it known that I, CONZAC S. BASTRIGHT, of Lebanon, county of Grafton, and State of New Hampshire, United States of America, have invented a new and Improved Railroad-Switch, of which the following is a specification.

Figure 1 is a plan view of my improved switch. Fig. 2 is a detail section of the same, taken through the broken line *x x x x x*, Fig. 1. Fig. 3 is a detail section of the same, taken through the line *y y*, Fig. 1. Fig. 4 is a detail section taken through the line *z z*, Fig. 1. Fig. 5 is a detail view, showing a modification of the same.

The object of this invention is to furnish railroad-switches which shall be so constructed that the wheels of a train of cars advancing from either direction will bring the switch-rails into line with the rails of the main track should they be in line with the side track, so that a train cannot run from the main track to the side track unless the switch-rails be purposely arranged to produce that result.

A represents the ties. B are the rails of the main track. C are the rails of the side track, and D are the movable or switch rails. To the movable ends of the switch-rails D are pivoted the ends of a cross-bar, E, which is pivoted at its center to the middle arm of the three-armed plate or lever F. The arms of the lever F are at right angles with each other, and the said lever is pivoted at its center to a tie, A, or other suitable support. The end of the middle arm of the lever F projects beyond the cross-bar E, and has the upper corners of its side edges beveled, so that as the said lever is vibrated upon its pivot it may pass beneath the double incline G, formed upon or attached to the lower side of the catch-bar H, and raise its catch out of the notches in the edge of the connecting-bar E, unlocking the said bar E and allowing the switch-rails D to be moved.

The cross-bar E is provided with two notches, so that the catch-bar H may lock it in either position. To the ends of the side arms of the three-armed lever F are pivoted the ends of two rods, I, which project along the alternate rails of the main track upon the opposite sides of the switch, and their outer ends are pivoted to the upper arms of the three-armed levers

J. The ends of the lower arms of the levers J are pivoted to supports below the level of the track. The side arms of the levers J project from the switch, and upon their upper sides rest the forked downwardly-bent ends of two bars, K K'. The bars K K' project along the inner sides of the rails B, and are inclined downward, and their outer ends are attached to ties A or other supports.

When the switch-rails D are in line with the rails C of the side track the inner ends of the bars K K' are raised to, or nearly to, a level with the tops of the rails B, so that they may be struck and pushed down by the flanges of the wheels, to bring the said switch-rails D into line with the rails B of the main track before the said wheels reach the said switch-rails D.

To the middle arm of the three-armed lever F is pivoted the inner end of a bar, L, the outer end of which projects beyond the track, and may be connected with a switch-lever or other device, so that the switch-rails D can be set in line with the rails C of the side track when desired.

M is a sliding bar, having a hole or slot formed through it of such a size as to receive the downwardly-bent inner end of the bar K'. To the outer end of the bar M is attached a spiral or other spring, N, to hold the bar K in place against the inner side of the rail B. To the inner end of the sliding bar M is attached the end of a short rod, O, the other end of which is attached to one arm of the three-armed lever P. The second arm of the lever P is pivoted to a tie, A, or other suitable support, and to its third arm is pivoted the end of a rod, Q. The rod Q extends along the track to, or nearly to, the switch-lever, and its end is pivoted to an arm of the three-armed lever R. The second arm of the lever R is pivoted to some suitable support set in the ground, and its third arm extends into such a position that it may be operated by the switchman with his foot or hand, as may be convenient.

With this construction, when a train is to be run upon or off the side track, C, the switchman adjusts the switch-rails in line with the rails of the side track, and at the same time he operates the lever R to draw the bar K' away from the rail B, so that it will not be struck

by the wheels. As soon as the train has passed the switchman releases the lever R, and the spring N at once draws the bar K into place, so that a train cannot pass upon the switch-rails D without first setting the said switch-rails in line with the rails of the main track.

If desired, the lever F may be made in the form shown in Fig. 5; but I prefer to make it as first described.

I am aware that it is not new to use a notched bar, a locking-lever that engages with it, and a T-shaped lever operated by a tappet on the locomotive, or to have switch-points controlled by a rock-shaft having a finger entering a hole in the switch-bar; but

What I do claim as new and of my invention is—

1. The combination of the cross-bar E, the three-armed lever F, the double incline G, the catch-bar H, the switch-bar L, and the switch-rails D D, so that the tracks may be readily changed and will be locked at each change, substantially as herein shown and described.

2. The combination, with the cross-bar E, the three-armed lever F, the double incline G, the catch-bar H, and the switch-rails D D, of the connecting-rods I I, the three-armed levers J J, and the bent bars K K', so that the rails, if out of place, will be set into right position by the wheels of the engine, and the rails be also locked in such position, substantially as herein shown and described.

3. The combination, with the switch-rails D, of the notched cross-bar E, the three-armed lever F, pivoted centrally, the double incline G, and the catch-bar H, as and for the purpose specified.

4. The combination, with a bar, K', of the slotted bar M, spring N, rod O, three-armed lever P, rod Q, and three-armed lever R, as and for the purpose specified.

CONZAC S. BASTRIGHT.

Witnesses:

F. CHASE,

C. A. WHIPPLE.