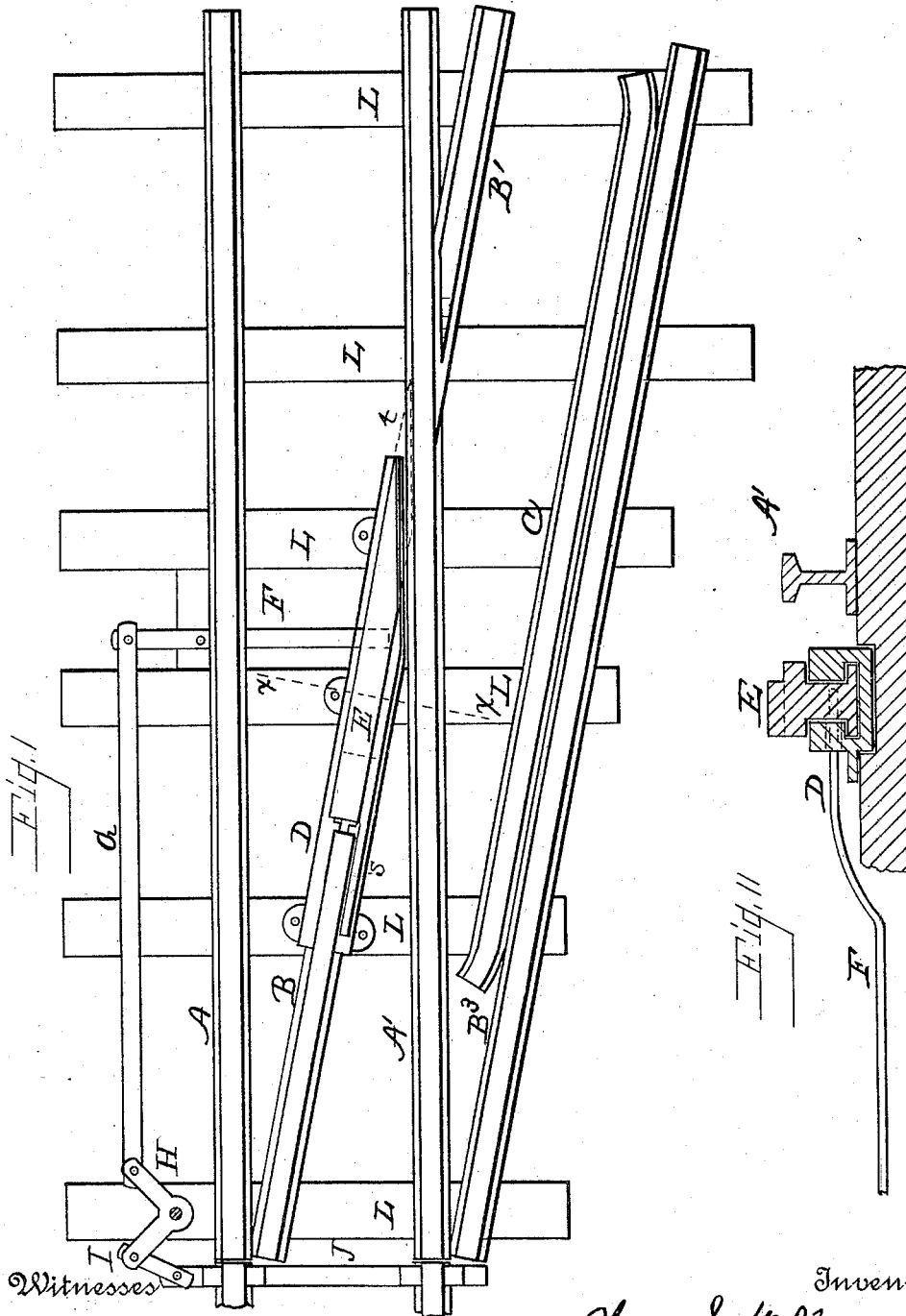


(No Model.)

T. S. McKINNELL.  
RAILWAY SWITCH.

No. 457,004.

Patented Aug. 4, 1891.



Witnesses

L. C. Adams  
R. Schmidt

Inventor  
Thomas S. McKinnell  
By His Attorney B. Pickering

# UNITED STATES PATENT OFFICE.

THOMAS S. MCKINNELL, OF NATIONAL MILITARY HOME, OHIO.

## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 457,004, dated August 4, 1891.

Application filed April 20, 1891. Serial No. 389,553. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS S. MCKINNELL, a citizen of the United States, residing at National Military Home, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Railway-Switches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in railway-switches, the features of which will be fully hereinafter described and claimed.

The object of my invention is the displacement of the ordinary frog by carrying the truck-wheels on the switch side over the rail of the main line, and thereby preserving an unbroken rail on the side next to the side track. I accomplish this object by the construction illustrated in the accompanying drawings, in which—

Figure I is a plan of the railway-switch. Fig. II is a transverse section of the intersecting rails on line *x*, Fig. I.

Like letters designate like parts in the two views.

A A' are the usual form of T-rails, secured to the cross-ties by spikes, and are a section of the main line. All the rails and their attachments are secured to the cross-ties L. At the left end is an abutting switch, the left ends of which are held abutting the main tracks. The right ends are joined by the bar J, by which the two rails are held in a proper relation. This bar is connected to the bell-crank H by the plate I. The shaft of the bell-crank is secured in bearings fastened to the cross-tie, and to which is attached an arm for turning, and on the top of which is the usual form of signals.

The manner of securing the switch-rails and the appliances for turning the same are identical with those long in use.

B is the inner rail of the switch, and B' the extension of the track beyond the main track, and B<sup>3</sup> is the external track of the switch.

C is an abutting guide-rail of the outer track.

D is a cast-iron sustaining-plate, having ears or flanges by which the same is securely

attached to the cross-ties. It is provided with an orifice throughout its entire length, the left portion being in form to receive the end of the rail B and the other part to receive the under part of the track-plate E, which freely moves therein. A transverse section of this track-plate is shown at Fig. II, the flange part corresponding to the flange of the rail. The body is broader, and the top has a plane surface, with a notch for the flange of the truck-wheel. It is provided with a slot which engages the end of lever F, and by which it is thrown forward, abutting the rail A, as indicated by dotted lines at *t*, Fig. I. A rear extension *s* of the track-plate serves as a bearing for the flange of the wheel as the same passes over the space between the end of the rail and said track-plate when the same is thrown forward.

G is a bar connecting the lever F with one arm of the bell-crank lever. The track-plate is so elevated at its junction with the main track that the flange of the truck-wheel runs from said track-plate over the main rail onto the track B'.

The operation is thus: The free ends of the rails are thrown to abut the switch-rails. This movement throws the track-plate forward against the outer rail of the main track, so that the wheels of the farther side are carried over the main rail, the guide serving to hold the trucks in proper position during this passage.

What I claim, and desire to secure by Letters Patent, is—

1. In a railway-switch, the combination of the movable switch-rails, the main-track rails, the rails B B', the sustaining-plate D, movable track-plate E, lever F, and guide C, and connections to the usual shifting devices, substantially as described.

2. The combination of the rails B B', the sustaining-plate D, the movable track-plate E, with the rear extension *s*, the rail A' of main track, and rail B<sup>3</sup> to carry a truck-wheel over said rail of the main track, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOMAS S. MCKINNELL.

Witnesses:

B. PICKERING,  
CHARLES W. DALE.