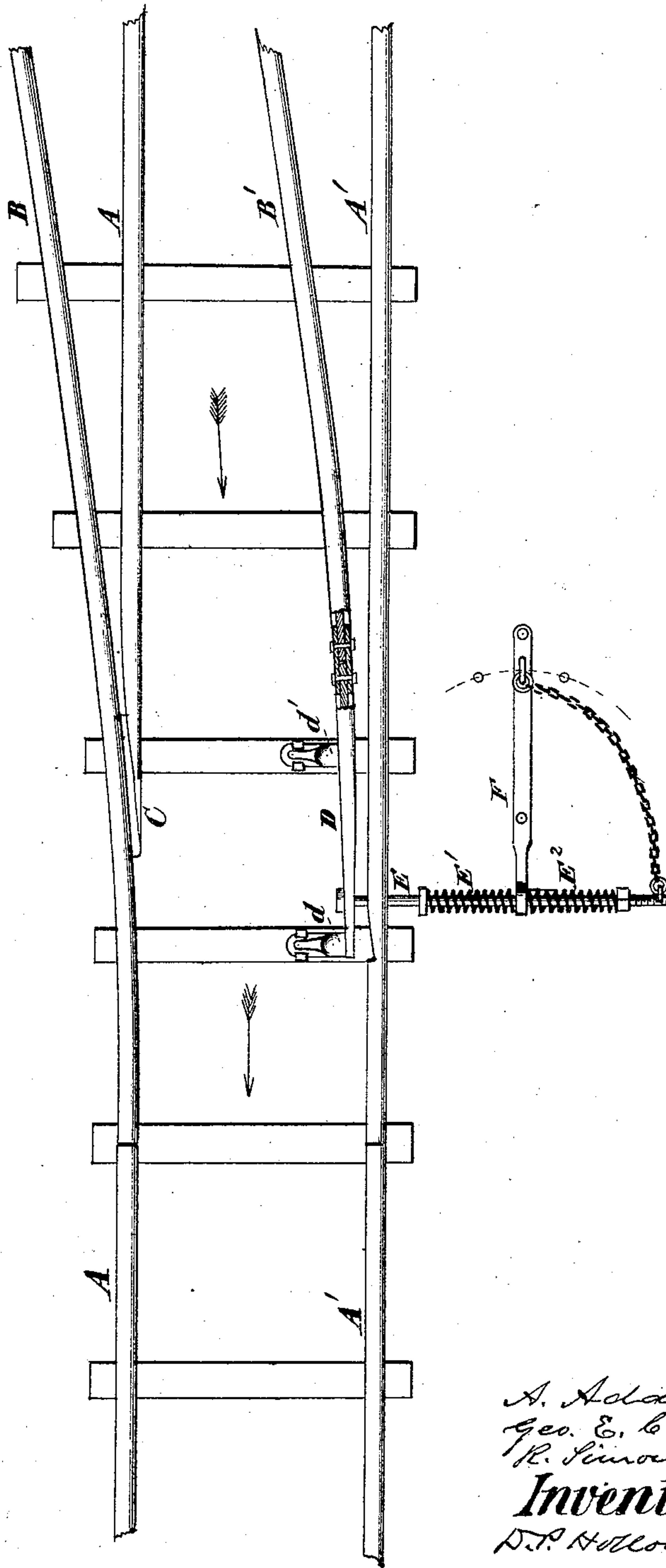


A. B. ADAMS, G. E. CAIN & R. SIMONTON.

Railroad-Switches.

No. 153,032.

Patented July 14, 1874.



*Witnesses.*  
*A. Ruppert.*  
*H. E. Quinn*

*A. Adams*  
*Geo. E. Cain*  
*R. Simonton*  
**Inventors.**  
*D. P. Holloway & Co*  
*Atty*

# UNITED STATES PATENT OFFICE.

ALEXANDER B. ADAMS, GEORGE E. CAIN, AND ROBERT SIMONTON, OF  
HUNTINGTON, INDIANA.

## IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **153,032**, dated July 14, 1874; application filed  
May 28, 1874.

*To all whom it may concern:*

Be it known that we, ALEXANDER B. ADAMS, GEORGE E. CAIN, and ROBERT SIMONTON, all of Huntington, in the county of Huntington and State of Indiana, have invented a certain Improvement in Railway-Switches, of which the following is a specification:

This invention relates to that class of railway-switches in which a single throw-rail is employed, so combined with a spring or springs that a train can safely pass the switch even though the throw-rail be misplaced, the yielding character of the throw-rail permitting the flanges of the car-wheels to push the said rail over, so as to obtain a continuous track for the passing train. Heretofore the throw-rail of this kind of switches has been placed in the main track, which is found to be objectionable for several reasons, but more particularly because the constant passing of trains over it very soon wears its reduced end, and affects its joint to such an extent that it becomes rickety and unsafe. Our improvement, designed to obviate these and other objections, consists in arranging the throw-rail in the side track, thus providing a fixed continuous main track with a switch, the throw-rail of which is used only in side tracking, and, consequently, subjected to comparatively little wear and tear.

The annexed drawing represents a plan view of our improved switch, the throw-rail occupying its normal open position.

A and A' refer to the rails of the main track, and B and B' to the rails of the siding, all spiked to the cross-ties in the usual manner. At the point where the rail B branches off from the rail A, a frog, C, is secured, adapted to permit the wheel to pass either onto the rail B or continue on the rail A. The section of the rail A within the side track is somewhat pointed where it meets the frog C, as clearly shown. The throw-rail D is hinged in any approved manner to the rail B' of the siding, so as to reach some distance beyond the pointed end of the frog C. The free end of this rail is reduced in width, so that it may enter a recess, *a*, formed in the adjacent side of the rail A' in closing it against the latter. Supports

*d* and *d'* limit the motion of the throw-rail from the rail A'. The throw-rail is controlled by a rod, E, fixed to it, and sliding in suitable bearings outside of the tracks. The rod also passes through the eye of a lever, F, and is encircled by spiral springs E<sup>1</sup> and E<sup>2</sup> between the respective sides of the lever and collars or nuts on the rod, as clearly shown. The springs are sufficiently stiff, so that the rod may be slid in either direction to shift the throw-rail by the lever through the medium of the springs. The normal position of the throw-rail is that shown in the drawings. There being no break in the main track at the switch at any time, trains will always pass it in safety over this track. A train coming from the side track toward the switch will push the throw-rail over against the rail A' in opposition to the spring E<sup>1</sup>, and thus be guided safely onto the main track, after which the recoil of the spring E<sup>1</sup> will return the throw-rail to the position shown. For side tracking the throw-rail is drawn over against rail A'; should it be accidentally left in this position, the flanges of the wheels of a train moving over the main track in the direction of the arrow will successively push the throw-rail away from the rail A' against the force of the spring E<sup>2</sup>, and the train pass the switch safely, notwithstanding the displacement of the throw-rail.

What we claim as our invention, and desire to secure by Letters Patent, is—

In an automatic safety-switch of the character stated, the yielding throw-rail D constituting the terminal section of the interior rail of the side track, in combination with the rod E, springs E<sup>1</sup> E<sup>2</sup>, and lever F, substantially as and for the purpose specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ALEXANDER B. ADAMS.  
GEORGE E. CAIN.  
ROBERT SIMONTON.

Witnesses:

C. W. WATKINS,  
J. F. BEAM.