

D. F. CAVANAUGH.

Railroad-Switch.

No. 167,743.

Patented Sept. 14, 1875.

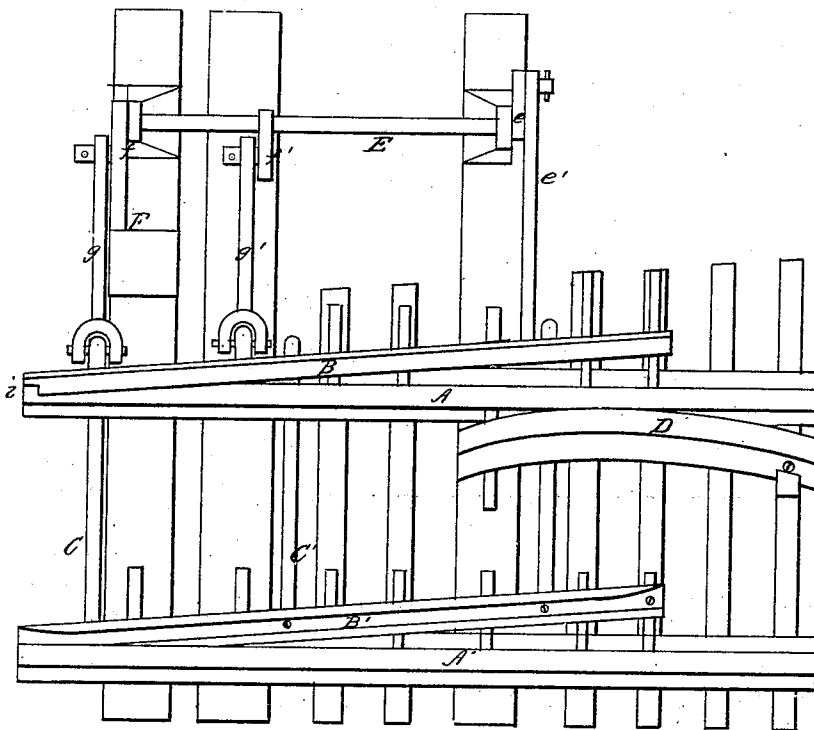


Fig. 1

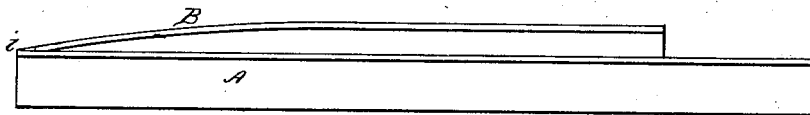


Fig. 2

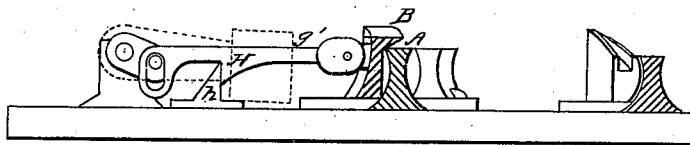


Fig. 3

Witnesses
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DENNIS F. CAVANAUGH, OF GREENSBURG, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **167,743**, dated September 14, 1875; application filed July 28, 1875.

To all whom it may concern:

Be it known that I, DENNIS F. CAVANAUGH, of Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a plan, Fig. 2 is a detail, Fig. 3 an end view, of a switch embodying my improvements.

This invention has relation to that class of automatic railroad-switches represented by the patent of W. Wharton, dated January 3, 1871, and having the movable siding or switch rails connected through the medium of a crank-shaft with a trip-rail located between the direct rails; and the improvement consists in the provision of suitable stops whereby the pitmen connecting the outer switch-rail and crank-rod together are locked, when the switch is closed, and the accidental opening of the latter prevented.

Referring to the accompanying drawings, A A' designates the main or direct rails; B B', the switch or siding rails, pivoted on a line at their rear ends, and connected together for joint operation by means of the connecting-bars C C', and D the trip or guide rail pivoted at its rear end between the direct rails and at the rear of the rails B B'. E represents a horizontal crank-shaft connected to the guide-rail D by means of crank *e* and pitman *e'*, and to the siding-rail B by means of cranks *f f'* and pitmen *g g'*. F is a weighted lever, by means of which the shaft E is turned; and

the switch operated by hand. The weight serves to give momentum to the shaft and connections when the same is moved through the medium of the wheels of an engine or car coming in contact with the trip or guide rail, and to thereby insure a rapid and complete opening of the switch. The weight is also effectual in keeping the switch open. H is a shoulder formed on the under side of the pitman *g'*, which, when the switch is closed, impinges against block *h*, attached to the ties, and so locks the switch as to prevent the same from being opened by the lateral impact of the wheels passing over the switch-rails, the force in such case being directly lengthwise of the shouldered pitman *g'*, and, consequently against the block *h*.

The siding or switch rail B, it will be observed, is elevated above the level of the direct rail A, while its surface declines on a gradual curve toward its point, which is adapted to rest upon the direct rail by being notched or recessed, as shown at *i*.

Under these conditions the rolling-stock will be safely guided from the switch or siding across the direct rail, and all tendency to run off the track avoided.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with the crank-shaft and switch or siding rail B, of the shouldered pitman *g* and stops *h*, as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of July, 1875.

DENNIS F. CAVANAUGH.

Witnesses:

THOS. A. CONNOLLY,
JOS. B. CONNOLLY.