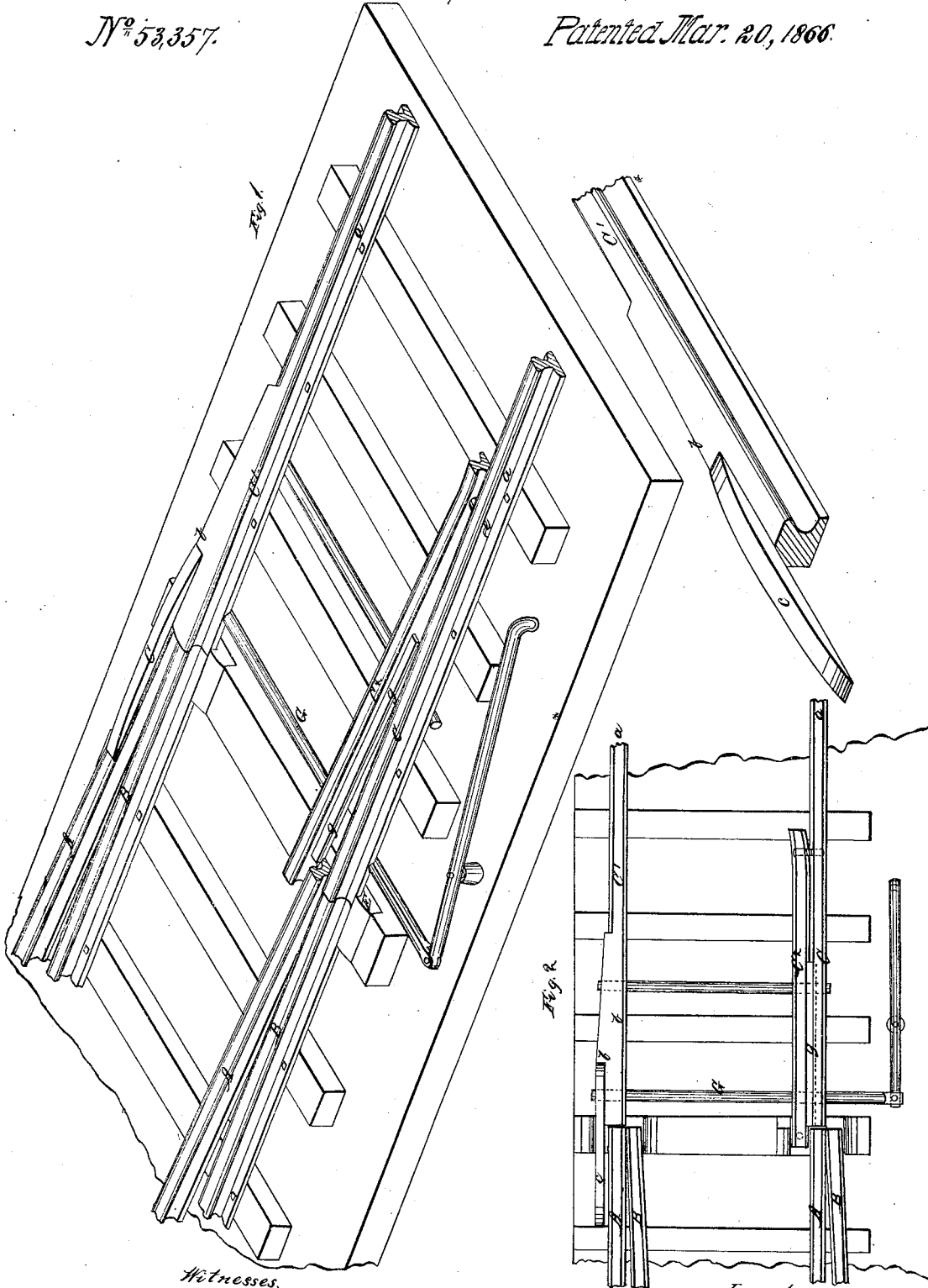


*W. J. Stowell.*

*Railroad Switch.*

*N<sup>o</sup> 53,357.*

*Patented Mar. 20, 1866.*



*Witnesses.*  
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# UNITED STATES PATENT OFFICE.

WILLIAM J. STOWELL, OF BALTIMORE, MARYLAND.

## IMPROVED RAILWAY-SWITCH.

Specification forming part of Letters Patent No. 53,357, dated March 20, 1866.

### *To all whom it may concern:*

Be it known that I, WILLIAM J. STOWELL, of the city and county of Baltimore and State of Maryland, have invented a new and Improved Safety-Switch for Railroads; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my safety-switch applied at the junction of the main track with a siding. Fig. 2 is a top view of the same. Fig. 3 is a perspective view of an elevating section applied to a switch-rail having a swelled head on one end.

Similar letters of reference indicate corresponding parts in the several figures.

This invention is intended for preventing cars from running off the track at the junction of the main track with sidings in consequence of the misplacing of the switch.

It consists in so constructing the switch-rails that without materially increasing their weight they will keep the cars upon the main track notwithstanding the ends of the switch-rails may be moved out of line from the main track, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A A represent the sections of rails forming the main track; and B B are the sections of rails forming the siding.

C C' are the two switch-rails, which are pivoted at the ends *a a*, so that their opposite ends can be brought into line with the main track or the siding, whichever may be desired.

The end of the switch-rail C' nearest the main-track-rail A is swelled laterally, so as to form an enlargement, *b*, which is equal in width to the ends of the two rails A B, including the space between these two rails. The swell in this rail extends for some distance on its outer side, and may be gradually tapered or reduced in width, as shown in the drawings. On the upper surface of this swelled end *b* of the rail-section C', and on the outside of the line of this rail is an elevation, *c*, having inclined ends and projecting from the end of the swell *b*, so as to reach well over onto the surface of

the main-track rail A, as shown in Fig. 1, when the switch-rails are in a line with the siding B B.

The thickness of the guide or section *c* should be slightly greater than the width of the car-wheel flanges, so that as the tread of the wheel moves over said guide *c* it will gently elevate the flanges of the car-wheel upon the swelled head of the switch-rail without allowing the wheels to butt against the said head.

When the switch-rails are adjusted in a line with the main-track rails the double-inclined portion will be outside of the track, as shown in Fig. 2.

To the switch-rail C a rail-section, C<sup>2</sup>, is suitably pivoted at that end which is farthest from the ends of the siding and main rails, as shown in Figs. 1 and 2. A transverse pin, *e*, may be used for this loose connection. The section C<sup>2</sup> is also pivoted to the chair E at that end which is nearest the main rail and siding. At this latter end of the rail C<sup>2</sup> it abuts against the side of the rail-base of the main rail, leaving a space between its head and that of the main rail, as shown in Figs. 1 and 2. On the outside surface of the section C<sup>2</sup>, and at a suitable point beneath the surface of this rail, is a flange, *g*, which receives upon it the flanges of the car-wheels as these wheels leave the end of the rails of the main track, when the switch is adjusted as shown in Fig. 1.

The rail-section C<sup>2</sup> is intended as a guide for compelling the car-wheels to move laterally as they roll onward, until the opposite wheels drop down from the surface of the rail C', thus bringing the flanges of the wheels between the rails of the switch.

The slight inclination which is given to the trucks or cars in consequence of the wheels on one side having their flanges mounted upon the swelled head of the section C' is rather an advantage than a disadvantage, as it will assist the slightly-oblique guide-rail C<sup>2</sup> to move the cars into proper line.

When the switch-rails are in line with the main track the movable section C<sup>2</sup> will be brought in a parallel line with its rail-section C, and will not be in the way of the flanges of wheels.

It will be seen from the above description that as soon as the treads of the car-wheels leave the ends of the rails of the main track

the switch-rails being adjusted out of line from the main track, the flanges of these wheels are supported upon the top of the rail C', and the flange *g* of the rail C<sup>2</sup>, which flange is so arranged as to cause the wheels to roll smoothly upon the switch-rails.

The transverse switch-bar G and a lever may be employed for moving the switch-rails, as shown in Figs. 1 and 2, or any other convenient plan may be adopted for this purpose.

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

1. The construction of the switch-rail C' with an enlarged head, *b*, and a projecting in-

clined plane, *c*, in combination with the guide-rail C<sup>2</sup>, having a depressed flange-support formed on it, and arranged substantially as described.

2. In combination with the pivoted rail C<sup>2</sup> and rail C and a flange-support, *g*, a device applied to the switch-rail C' which will elevate the car-wheels from the main-track rail and cause them to pass over onto the switch-rail when the switch is in a line with the siding, substantially as described.

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Witnesses:

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