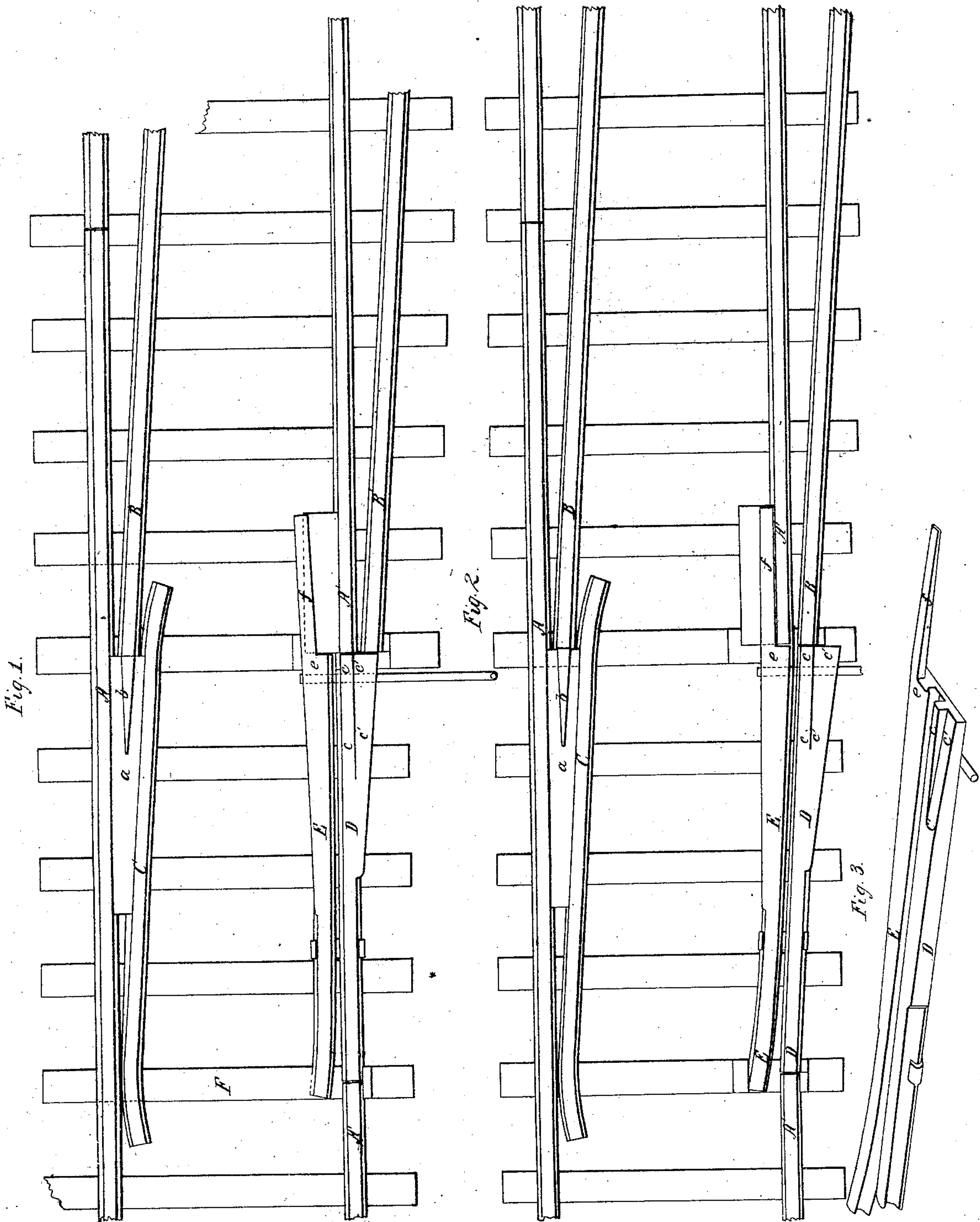


W. J. Stowell.
Railroad Switch.

N^o 55,736.

Patented Jun. 19, 1866



Witnesses;
R. T. Campbell
John Schuyler

Inventor;
Wm. J. Stowell
by his attys.
Mason, Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

WILLIAM J. STOWELL, OF BALTIMORE, MARYLAND.

IMPROVED RAILROAD-SWITCH.

Specification forming part of Letters Patent No. 55,736, dated June 19, 1866.

To all whom it may concern:

Be it known that I, WILLIAM J. STOWELL, of Baltimore, in the county of Baltimore and State of Maryland, have invented an Improved Railroad Safety-Switch; 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 plan view of my safety-switch applied at the junction of the main track with a siding, showing the switch-rail adjusted for the main track. Fig. 2 is a similar view, showing the switch-rail adjusted for the siding. Fig. 3 is a perspective view of the switch-rail only.

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

This invention is intended for preventing railroad-cars from running off the track at the junction of sidings with the main track in consequence of an improper adjustment of the switch-rails.

The invention contemplates effecting all that I have set forth in my patent of March 20, 1866, but in a much more simple and substantial manner, by having only one side of the switch-junction movable, and so constructing this movable portion that it will prevent a train of cars from running off the track whether such train passes from the main track upon the siding or from the siding upon the main track, or whether it passes from one section to another of the main track across a misplaced switch, 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. These rails are spiked down upon cross-ties, as represented in Figs. 1 and 2. A short guard-rail, C, extends from the termination of the rail-section B onward and toward the section A, for the purpose of assisting in guiding the car-wheels from the siding onto the main track, and also from the main track onto the siding. This guard-rail is spiked down firmly, and between it and the main-track section A is a web or plate, *a*, and also a point, *b*, which are suitably secured in their places. The steel or iron point terminates the

end of the section of rail B and serves to guide the flanges of the wheels on one side of the track when the train passes from one track to another.

The horizontal web *a*, into which the point *b* is secured, may be made of cast-iron, of the exact form to fit the rails A and C, between which it is secured, so as to serve as a bridge-support for the flanges of the wheels when a train passes from the main track onto the siding, or vice versa.

The main-track rail-section A is spiked down, so that it will break joints with the stationary portion of the switch, as shown in Figs. 1 and 2, thus affording great strength and safety from any accidental springing of said rail.

D E represent the movable sections of rails, which are secured together by means of bolts or clamps, or both, so that they shall move together and not be liable to separate. The section D is constructed with an enlarged head, *e*, on one end and with an inclined plane, *c'*, which terminates at its highest point in a plane with the surface of its rail-head, as shown in Fig. 3. The section E, which is secured on the inside of this section D, is also constructed with a laterally-swelled head, *e*, and a projecting inclined plane, *f*, on one end, the other end being slightly curved inward, as shown in Figs. 1, 2, and 3. The enlargements on the ends of the switch-rail sections D and E may be equal in width to double the width of a rail-head.

The inside edge of the head of the rail-section D is straight, and the opposite or outside edge of the section E is also straight for a portion of its length. These two sections D and E are suitably pivoted to a cross-tie, F, at their smallest ends, so that the rail-section D will always be either in a line with the main-track rails A' or in a line with the siding-rail B' and main-track rail, as shown in Figs. 1 and 2.

When the rail D is adjusted in a line with the main-track rails A', as shown in Fig. 1, a train of cars can pass safely in either direction over the switch-rails on the main track, or a train can pass on the main track from the siding, in which latter case the wheels on one side of the track are guided by the guide-rail C and point *b*, and on the opposite side of the track the flanges of the wheels roll up the inclined plane *c'* and pass obliquely over the

top of the enlargement *e* of the rail-section D, and then drop down between this section D and the guard-section E.

When the rails D and E are adjusted, as shown in Fig. 2, for passing a train of cars on the siding from the main track or on the main track from the siding, the swelled end of the rail E will be brought opposite the end of the main-track rail A', and the projecting inclined tongue *f* will be brought up alongside of this rail A', so as to elevate the wheels of a passing train upon the top of the section E, over which they will be guided by the main-track rail A on the opposite side of the track and caused to drop down between the two sections D and E.

When the switch is adjusted for the siding, as shown above, and carelessly left in this position, a train of cars approaching the switch from one direction on the main track will be guided safely upon the siding, and thus give the engineer time to brake up and stop the train. When the train on the main track is approaching the switch in an opposite direction the wheels on one side of the track will pass diagonally over the top of the inner movable section, E, and on the main-track rails again.

Thus it will be seen that in whatever direction the train may pass over the switch it will not be liable to run off.

The most essential feature of my invention is to effect the switching of the train from one track to another by means of a single side switch, instead of having the rails on both sides of the track to move, as heretofore done.

By my improved switch I am enabled to secure the rail-section on one side of the track down rigidly to the cross-ties and make a more permanent switch, and one which will not be liable to derangement from long use.

The movable sections E D are firmly united together and held down upon the cross-ties, so that their enlarged ends can be moved laterally and brought opposite the ends of the rails A' B' by means of switch-levers, which levers can be constructed in any of the well-known modes.

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

1. The construction of the movable guard E, with a projecting tongue, *f*, in combination with the swelled head *e* of this guard and the two rail-sections A D, arranged to operate substantially as described.

2. The combination of the rail-section D, which is constructed with an enlarged head, *e*, and inclined plane *e'*, with the guard C and the web or bridge *a*, substantially as described.

3. The movable switch-rails D E, when constructed substantially as described and combined with stationary guide-rails on the opposite side of the track, substantially in the manner and for the purposes specified.

W. J. STOWELL.

Witnesses:

MARION W. KAUFFMAN,

HENRY H. DURKEE.