W. MILLER.

Railroad-Switch.

No. 227,639. Patented May 18, 1880.

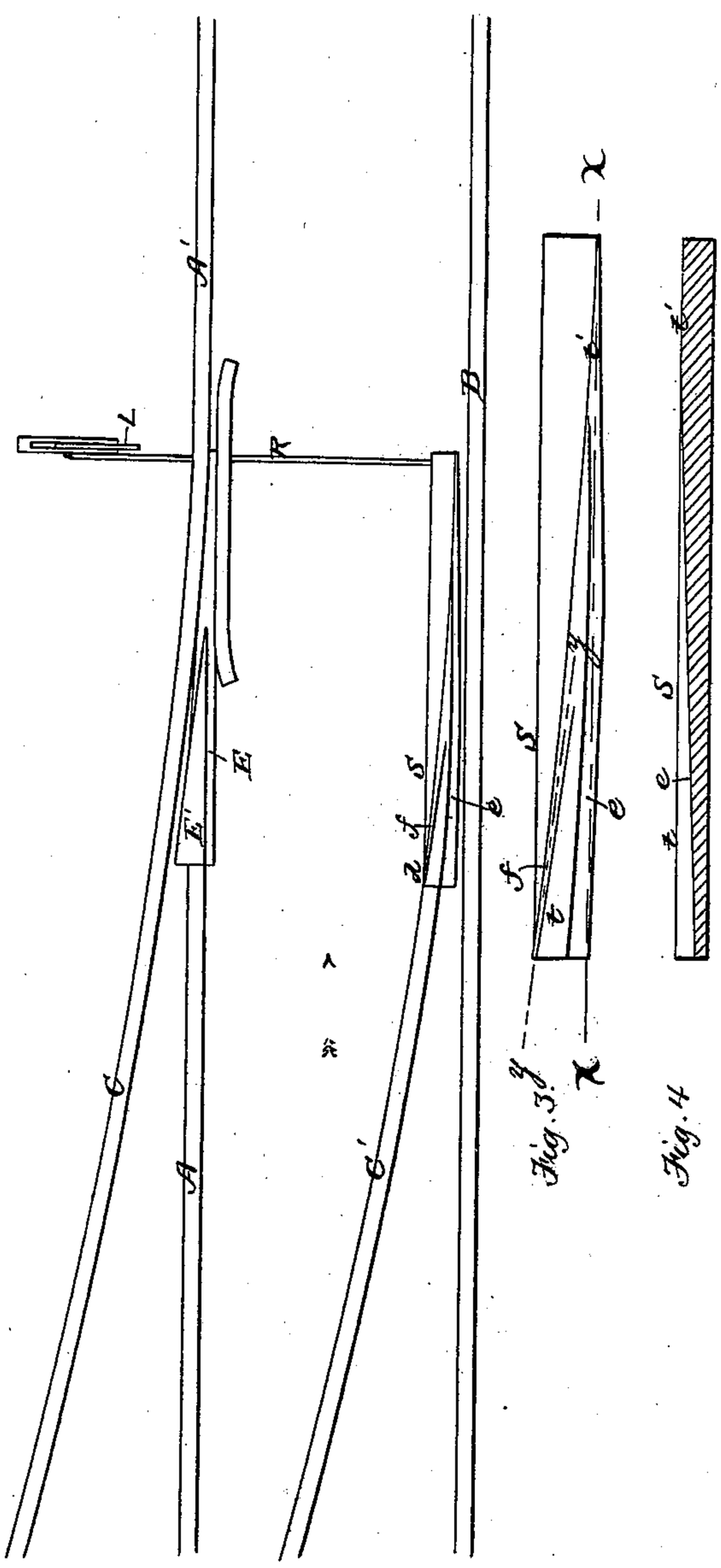

Fig. 1.

Fig. 3.

Fig. 4

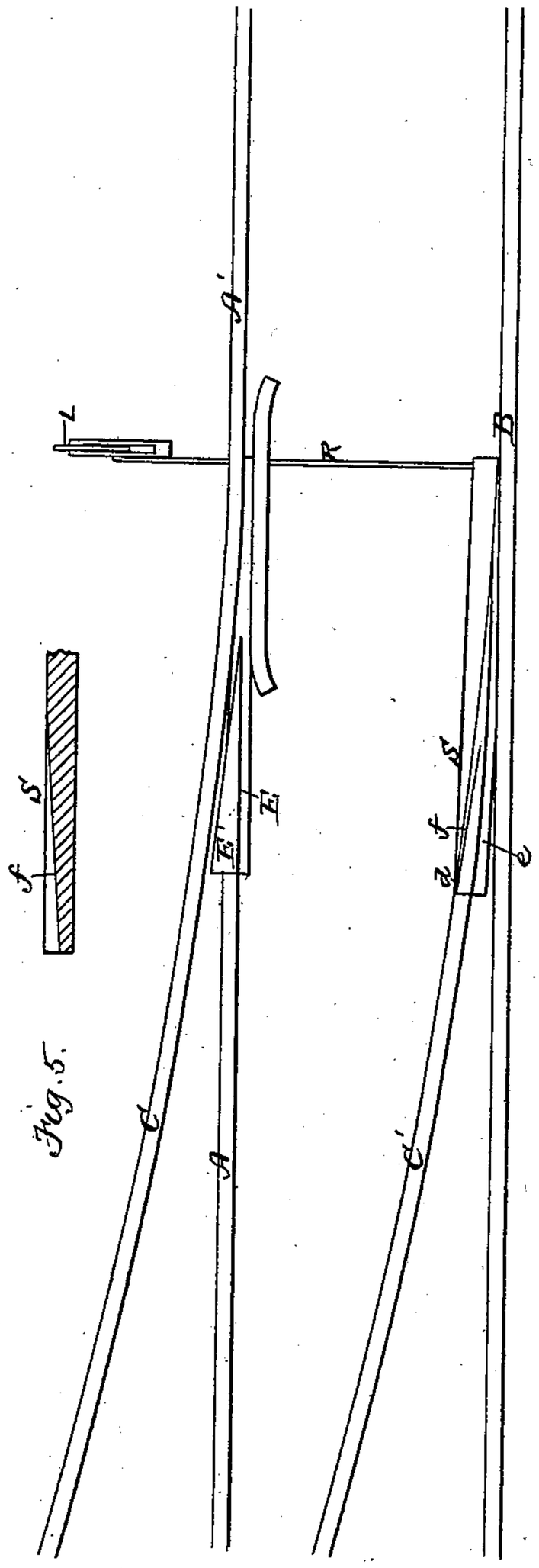

Fig. 5.

Witnesses:
E. B. Fairchild,
Geo. W. Pierce.

Inventor:
W. Miller
by Wright Brown,
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM MILLER, OF BOSTON, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO CHARLES C. SANDERSON, OF DEDHAM, MASSACHUSETTS.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 227,639, dated May 18, 1880.

Application filed February 28, 1880.

To all whom it may concern:

Be it known that I, WILLIAM MILLER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Railroad-Switches, of which the following is a specification.

This invention involves the employment of a single movable or pivoted switch-rail, and has for its object to provide simple and efficient means, in a railroad-switch, whereby cars can pass safely from the side to the main track when the main track is open, and along the main track when the side track is open.

To these ends my invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a plan view of a portion of a railroad-track embodying my invention, showing the main track open. Fig. 2 represents a similar view, showing the side track open. Fig. 3 represents a plan view of the pivoted switch-rail. Fig. 4 represents a section through the pivoted switch-rail on line *x x*, Fig. 3. Fig. 5 represents a section on line *y y*, Fig. 3.

The same letters indicate the same parts in all the figures.

In the drawings, A A′ represent the fixed rails, forming one side of a main track at a point where it is joined by a side track.

C represents the fixed rail, forming one side of the side track, said rail C being continuous with the main track-rail A′. The main-track rail A is therefore not continuous with the rail A′, but is made practically continuous with the latter by a fixed plate, E, having a triangular projection or tread, E′, one side of which is a continuation of the inner side of the rail A, while the other side is parallel with and acts as a guard for the side-track rail C, near the point where it joins the main-track rail A′.

The surface of the plate E below the projection E′ forms a support for the flanges of car-wheels on the main track passing over the space between the projection E′ and the rail A′.

B represents the rail forming the other side of the main track, which is continuous or uninterrupted at the junction of the main and side tracks.

C′ represents the fixed rail, forming the other side of the side track, said rail terminating at a little distance from the rail B, as shown.

S represents the movable switch-rail, which is pivoted at *d*, and is adapted to be moved at its opposite end toward and from the main-track rail B. This switch-rail, which constitutes the chief feature of my invention, is formed with a tread, *t t′*, which gradually decreases in width from the pivoted to the free end, the latter being pointed and fitting snugly against the rail B when the switch-rail is in the position shown in Fig. 2, so that the inner side of the tread *t t′* connects the inner side of the rail C′ with the inner side of the rail B, and thus opens the side track, the rails C and A′ being permanently connected, so that only the movement of the switch-rail is required to open the side track.

The switch-rail is provided with two inclines, *e f*, which commence at the pivoted end of the rail below the tread and terminate at the surface of the tread at or near the pointed end of the switch-rail.

The incline *e* is on the side of the switch-rail nearest the main-track rail B, and its function is to support and raise the flanges of car-wheels moving in the direction of the arrow on the main track when the side track is open, as shown in Fig. 2. The flanges of the wheels strike the incline *e*, and move along and up the same until they pass over the pointed end of the switch-rail, when the wheels drop into place on the rail B. The other incline, *f*, is on the opposite side of the switch-rail, and it supports and raises the flanges of car-wheels approaching the main track upon the side track when the main track is open, as shown in Fig. 1, the flanges riding up the incline *f* and across the tread of the switch-rail, and dropping into the space between the switch-rail and the main-track rail B, the treads of the wheels dropping upon the tread of the rail B.

It will be seen, therefore, that should the switch be misplaced there is no liability of accident to a train approaching the switch in one direction on either the side or the main track.

The switch-rail is simple, inexpensive, and not liable to get out of order. It is operated

in the present instance by a lever, L, and a connecting-rod, R.

I claim—

In a railroad-switch, the combination, with the fixed main and side track rails, of the pivoted switch-rail S, having the incline *e*, whereby the approaching car-wheels on the main track are carried over the switch-rail when the side track is open, and the incline *f*, whereby car-wheels on the side track are carried over the switch-rail when the main track is open, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 25th day of February, A. D. 1880.

WILLIAM MILLER.

Witnesses:

CHARLES C. SANDERSON,

C. F. BROWN.