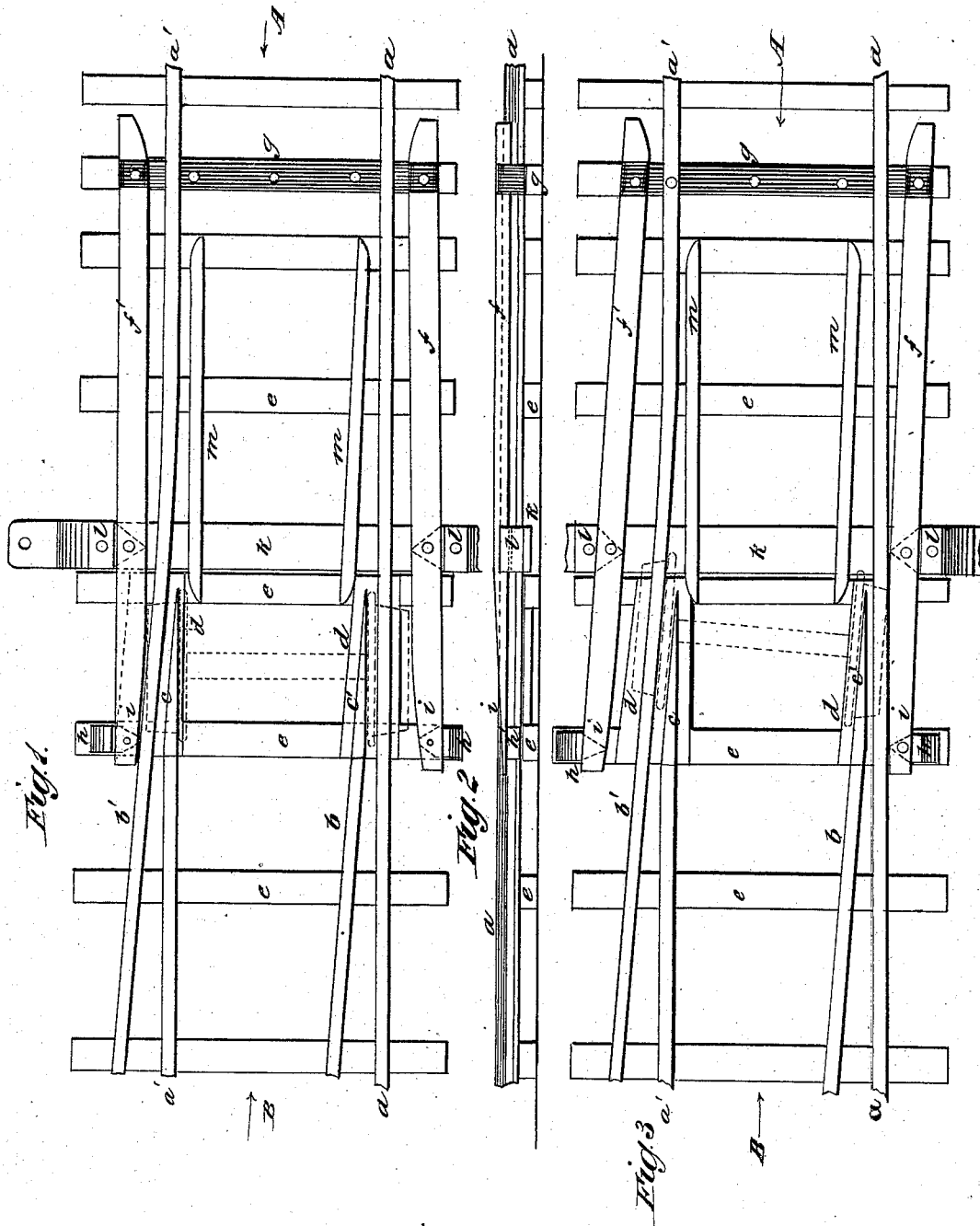


W. L. POTTER.
Railroad-Switch.

No. 217,402.

Patented July 8, 1879.



WITNESSES:
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WILLIAM L. POTTER, OF MECHANICSVILLE, NEW YORK.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **217,402**, dated July 8, 1879; application filed October 19, 1878.

To all whom it may concern:

Be it known that I, WILLIAM L. POTTER, of Mechanicsville, in the county of Saratoga and State of New York, have invented a new and Improved Railroad-Switch, of which the following is a specification.

This invention relates to safety-switches, which permit the passage of cars and retain the wheels on the rails when the switch is incorrectly placed. Such switches have heretofore been made, the wheels of the train passing over the top of guide-rails when the switch was wrong and dropping down upon the main rails again; but such switches are objectionable on account of the damage likely to result to the flanges of the wheels and the concussion caused by the dropping of the wheels.

My invention consists in such an arrangement of movable guide-bars as shall cause the wheels to take the track for which the switch is set and permit the passage of a train from either direction or upon either track without danger of the wheels leaving the rails and without jolt.

In the accompanying drawings, Figure 1 is a plan of my improved switch as set for the main line. Fig. 2 is a side elevation; and Fig. 3 is a plan, showing the switch set for the side track.

Similar letters of reference indicate corresponding parts.

a a' are the rails of the main track, and *b b'* the rails of the side track. The rail *b'* of the siding forms a continuous line with one rail, *a'*, of the main track, while the other rail, *a*, terminates in a frog and point, *c*, where the curve of the siding commences. The rail *b* of the siding is parallel with *b'*, and terminates in a point, *c'*, which is in line with *c*.

The points *c c'* are formed with or connected to the plates *d* in any desired manner, and the plates *d* are to be spiked down to the ties *e*.

f f' are movable guide-rails fitted outside the track, one at each side, supported at their fixed end upon sills *g*, to which they are pivoted in any desired manner. The moving ends of rails *f* extend a short distance beyond the points *c c'*, and rest upon supporting-blocks *h*, that slide on ties *e*.

The upper side of each rail *f* is somewhat

higher than the rails *a b*, except at the moving ends, where the rails *f* are sloped to a thin edge, as seen at *i*, which is slightly below the top of rails *a b*. The sides of rails *f f'*, at the moving end next to the rails of the track, are chamfered, so that they will lie against rails *a* and *b'* at the point *i*.

k is a plate, upon which the rails *f* are firmly attached by a block, *l*, that is beneath and outside of each rail *f*. The plate *k* will be connected, in any desired manner, with a switch-rod moved by a crank or gear as usual.

The blocks *h* and *l* and the support for the fixed ends of rails *f f'* are of such height that the under surface of each rail *f* stands above the ties of the track far enough to permit a passing train to depress them to the level of the main track, for the purposes hereinafter described.

The switch above described operates as follows: Referring to Fig. 1, if a train be coming in the direction of arrow B upon the main track, it will pass the switch and be retained upon the rails by the flanges of its wheels. If it comes in the direction of the arrow A, the outer edge of the wheels on rail *a'* will come in contact with the edge of guide-rail *f'*, which will prevent the flanges from going upon the rail *b* of the siding, and compel them to take the point *c*, as shown by dotted lines in Fig. 1. If, however, the guide-rails be shifted, as shown in Fig. 3, the train coming in the direction of arrow A will be acted upon by guide-rail *f*, the wheel on *a'* running upon *b'*, and the wheel on *a* taking point *c* to rail *b*.

Now, supposing a train to be coming in direction of arrow B from the siding, with the switch in position as in Fig. 1, or in the same direction on the main track, with the switch in position as shown in Fig. 3, the tread of the wheel in the first instance will run upon the guide-rail *f'* and spring it downward, crossing it diagonally until the wheel rests entirely on *a'*, when *f'* will spring upward again, and the train will have passed the switch in safety. In the second instance the same operation takes place in connection with guide-rail *f*, and there will be no jolt or concussion caused by dropping of the wheels.

The inner fixed guide-rails, *m*, serve as a

means of additional security, as they prevent side movement of the trucks while passing the switch.

The edge of rails *ff'* next to the tracks will be flared outwardly, so that the wheels will touch only at the lower side of the guide-rails.

The ends of blocks *h l* next to the tracks are made pointed, as shown in dotted lines, so that in case of snow or dirt being between the track and guide rails the sharp point will cut through and permit the guide to come up to place.

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

1. In a railway-switch, the guide-rails applied on the outside of the main rails, and made depressible to allow the wheels to remain on the track-rails while passing over the guide-rails, as described.

2. In a railway-switch having movable guide-rails, substantially as described, the supporting-blocks *h l* of the guide-rails, having their inner ends pointed, substantially as and for the purposes set forth.

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Witnesses:

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GEO. D. WALKER.