E. GORDON & J. A. DUYGAN.

Railway-Switch.

No. 205,480. Patented July 2, 1878.

FIG 1.

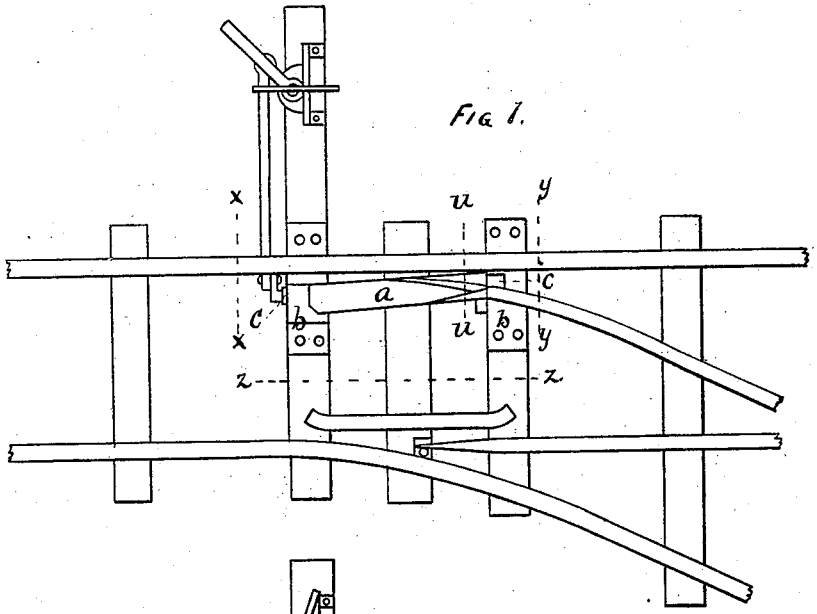


FIG 2

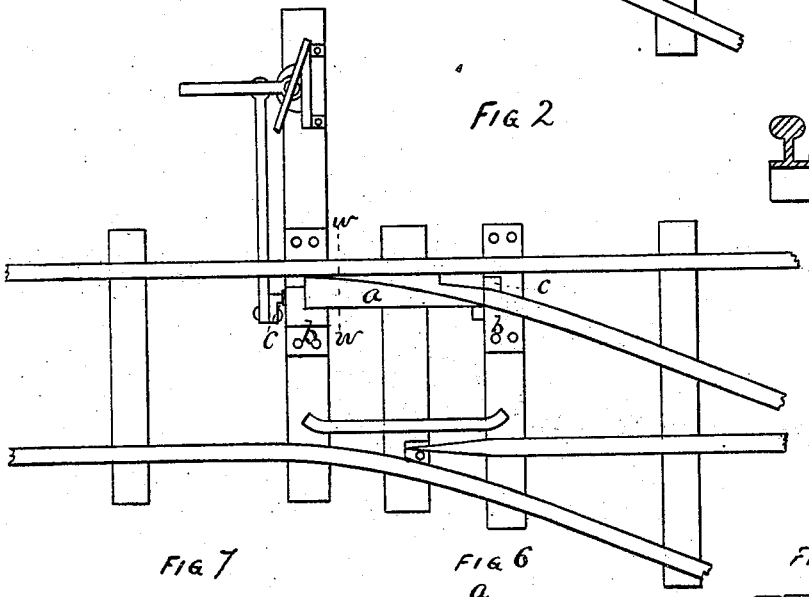


FIG 3

FIG 4.

FIG 7

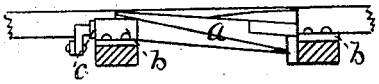


FIG 6

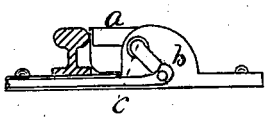
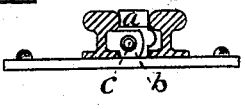


FIG. 5.



WITNESSES.

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EDWIN GORDON, OF HYDE PARK, AND JOHN A. DUYGAN, OF QUINCY, MASSACHUSETTS.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. **205,480**, dated July 2, 1878; application filed March 15, 1878.

To all whom it may concern:

Be it known that we, EDWIN GORDON, of Hyde Park, in the State of Massachusetts, and JOHN A. DUYGAN, of Quincy, in said State, have invented certain Improvements in Railroad-Switches, of which the following is a specification:

Our invention consists in the use of a combined switch-rail and guard-rail, so constructed that when turned against a main-track rail a complete track is formed, diverging from the main track. In this position a train moving along the main track in one direction will be turned, by means of this switch, onto a siding or branch track while a train moving from the opposite direction on the main track will pass the switch safely, so that, with our switch in the position mentioned, in one direction it will offer no impediment to the safe passage of trains on the main track; in the other, trains will safely pass from the main track to a siding or branch track, or from a siding or branch track to the main track. When our switch is turned away from the main track this main track is a perfect track, with rails fixed and immovable. With the switch thus turned away from the main rail it forms a secure guard for trains passing along the main track, and a train can pass safely over it from a siding or branch track to the main line.

Our combined switch-rail and guard-rail is about six feet in length, (more or less,) of the form shown in the drawing, Figures 1 and 2, (*a*,) having on one of its surfaces a raised surface along its whole length, and diagonal, as shown in Fig. 2, (*a*,) so that when this surface is uppermost a train passing from the left to the right will pass onto this switch-rail, and so onto the branch or siding, being the position first above described; and a train moving from the opposite direction on the main line will, by means of the switch-rail *a*, (which in this position forms an inclined plane,) pass over the switch-rail onto main rail; and having on its uppermost surface, when turned away from the main line, a shorter raised surface in line with the branch or siding, but not extending to the main track, a train will pass from the branch or siding to the main line, but not contrariwise, being the position shown in Fig. 1, and the second of the positions first mentioned.

This combined switch-rail and guard-rail is hung so as to turn eccentrically (which is the way we prefer, but both ends may turn on a common axis) in and upon boxes *c c*, which are firmly secured to the sleepers, and which boxes form secure bed-pieces for the switch, in either position described, to rest upon.

In the drawing, Figs. 1 and 2 are plans of a track, with branch track or siding and our switch. In Fig. 1 the switch-rail is turned so as to permit a train to pass from the branch to the main line, but not the other way. In Fig. 2 it is so turned as to permit the passing of trains from the main line, as explained above.

a a is our switch, hung eccentrically in boxes *b b* by means of pins *c c*, upon which it turns, but so adjusted that the weight of passing trains will bear upon the boxes, and not upon the pins. One of the pins *c c* is of sufficient length to receive a crank, and is so connected with the switch-frame that the switch can be conveniently turned by a switch-tender.

Figs. 3, 4, 5, 6, and 7 are sectional views, respectively, on lines *u u*, *w w*, *y y*, *x x*, and *z z*.

What we claim, and desire to secure by Letters Patent, is—

A combined rotating switch-rail and guard-rail, *a*, hung and rotating upon pins *c c*, bearing upon and turning in boxes *b b*, substantially as described.

EDWIN GORDON.
JOHN A. DUYGAN.

Witnesses:
H. E. COOPER,
CHAS. H. DREW.