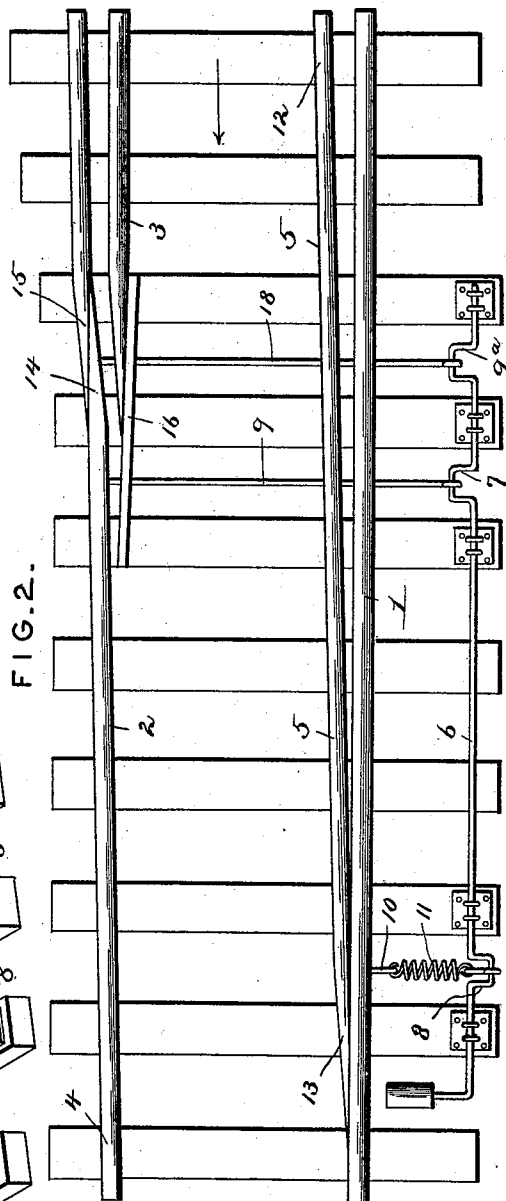
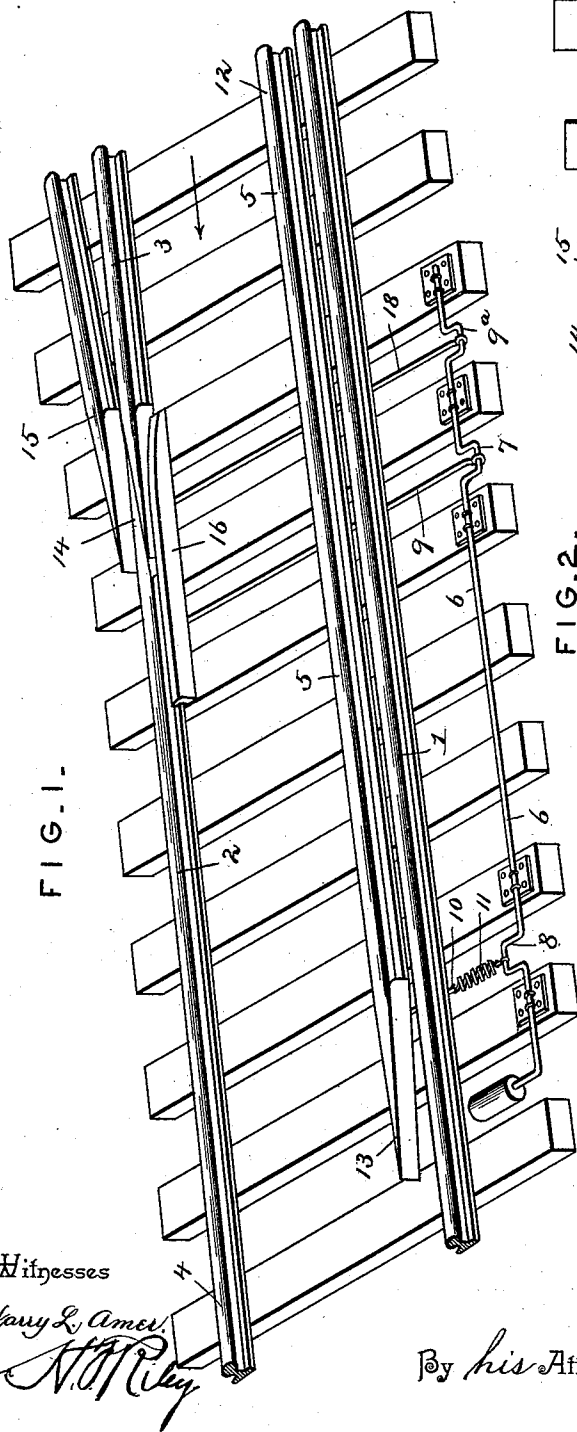


(No Model.)

W. H. ROBBINS.
SWITCH.

No. 508,840.

Patented Nov. 14, 1893.



Witnesses

Harry L. Ames.
N. H. Key

Inventor

By his Attorneys,

William H. Robbins

Chas. Snow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM H. ROBBINS, OF MILL GROVE, INDIANA, ASSIGNOR OF ONE-HALF TO
HERMON E. ROBBINS, OF SAME PLACE.

SWITCH.

SPECIFICATION forming part of Letters Patent No. 508,840, dated November 14, 1893.

Application filed February 15, 1893. Serial No. 462,468. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ROBBINS, a citizen of the United States, residing at Mill Grove, in the county of Blackford and State of Indiana, have invented a new and useful Switch, of which the following is a specification.

The invention relates to improvements in switches.

The objects of the present invention are to simplify, improve and cheapen the construction of switches, and to enable the switch rail to serve as a guard rail when the switch is closed and the main line is free.

A further object of the invention is to provide means for carrying a train safely over the switch should such train accidentally run through the switch when the latter is open.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a switch constructed in accordance with this invention and shown closed. Fig. 2 is a plan view of the same the switch being open.

Like numerals of reference indicate corresponding parts in both the figures of the drawings.

1 designates a continuous main rail at one side of the track, and at the other side are arranged main rails 2 and 3, which have their adjacent ends beveled and adapted to fit together to form a continuous main rail when the switch is closed to leave the main rail 3. The main rail 2 is pivoted at its end 4 and is shifted simultaneously with a switch rail 5 by a rock-shaft 6, which is provided with oppositely disposed crank bends 7 and 8, forming arms and having connected with them a rod 9 and a rod and spring 10 and 11. The rod 9 extends from the arm 7 to the main rail 2, and the rod and spring 10 and 11 form the connection between the switch rail 5 and the arm 8. The switch rail 5 is pivoted at its end 12 and has its other end 13 beveled and adapted to fit against the adjacent main rail 1. The bevel of the switch rail and its slope are such that it forms a perfect guard rail when the switch

is open and the main line is clear. The main rail 2 has its beveled end 14 arranged between the beveled end of the main rail 3 and a beveled immovable siding rail 15. When the rock shaft is turned the switch rail 5 is brought in contact with the main rail 1 and the main rail 2 is moved from the main rail 3 to the immovable siding rail 15, or the switch rail 5 is carried away from the main rail 1 and the main rail 2 is brought in contact with the main rail 3. The spring 11 may or may not be employed to provide either a spring or solid throw; and the rock-shaft is provided with a supplemental bend 9^a to form an arm which is connected with the point of the main rail 2 by a rod 18 to produce a more positive connection and to maintain the point rigidly in position.

When the switch is open as illustrated in Fig. 2 of the accompanying drawings, a train approaching in the direction of the arrow may pass with safety over the switch by means of a longitudinally disposed plate 16 and the spring 11. The spring 11 allows the flanges of the wheels at that side of the track to force the switch rail 5 away from the main rail 1; and the plate 16 receives the flanges of the wheels at that side of the track and carries them safely until the treads reach the main rail 2. The plate 16 is extended laterally at its top toward the adjacent rails, and when the rail 2 is in contact with the rail 3, this projecting portion fits in the space between the head and bottom flange of the rail 2 to permit such operation of the latter. The upper face of the plate 16 is located sufficiently below the tread of the rails to enable the wheel flanges to pass readily over it without jars; and both ends of the plate may if desired be beveled.

It will be seen that the switch is simple and comparatively inexpensive in construction, and that when the switch is open and the main line is clear the switch rail 5 forms a guard rail.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a switch, the combination of a continuous main rail 1, the main rails 2 and 3 having their adjacent ends beveled, the main rail 2 being pivoted at its other end, a switch
5 rail 5 having one end pivoted and its other end beveled and arranged adjacent to the main rail 1, an immovable siding rail 15 having a beveled end arranged adjacent to the beveled end of the switch rail 2, and means
10 for operating the switch rail 5 and the main rail 2, substantially as described.

2. In a switch, the combination of a main rail 1, the main rails 2 and 3 having their adjacent ends beveled, the main rail 2 being
15 pivoted at its other end, a pivoted switch rail 5 having one end beveled and arranged adjacent to the main rail 1, the immovable siding

rail 15 arranged adjacent to the beveled end of the main rail 2, a longitudinal plate arranged adjacent to the beveled end of the
20 main rail 3 and extending beyond the beveled end of the main rail 2, a rock-shaft provided with arms, a rod connecting the main rail 2 with one arm of the rock-shaft, and a rod and
25 a spring forming the connection between the switch rail 5 and the other arm of the rock-shaft, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. ROBBINS.

Witnesses:

H. E. ROBBINS,
L. V. LUDY.