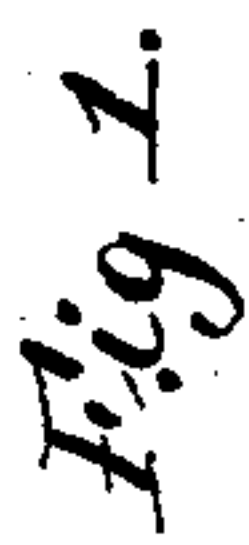


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## RAILROAD-SWITCH.

943,269.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that we, CHARLES W. REINOEHL and BENT L. WEAVER, citizens of the United States, and residents of Steelton, Dauphin county, State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to railroad switches, our object being to provide a switch of simple and efficient construction, having provision whereby the rails at the heel end of the switch may be held in place upon their support and maintained in proper working position with relation to each other, as will be hereinafter fully described and particularly claimed.

In the drawings:—Figure 1 is a plan view of a railroad switch embodying our invention. Fig. 2 is a plan view of the heel end of the switch enlarged. Fig. 3 is a transverse section on the line 3—3 of Fig. 2. Fig. 4 is a plan view of the plate for supporting the rails at the heel end of the switch.

2 designates the main rail, 4, the lead rail, and 5, the tapering switch rail forming a continuation of the lead rail and having its free or point end movable toward and from the main rail 2 to close and open the switch.

Extending between the heel end of the switch rail 5 and the adjacent end of the lead rail 4, is an inner splice bar 6 and an outer splice bar 7, the lower portion of the outer splice bar 7 being provided with a flange 8 which extends outwardly of the bases of the rails 4 and 5. The splice bars 6 and 7 are held in place by bolts 9 extending there-through and through the webs of the rails 4 and 5.

The heel end of the switch rail 5 and the adjacent end of the lead rail 4 are held in spaced relation to the main rail 2 by a heel block 10 extending between the meeting ends of the rails 4 and 5 and interposed between said ends and the main rail, the rails 2, 4, and 5, the splice bars 6 and 7 and the heel block 10 being held together by bolts 11 extending therethrough. The slight lost motion between the bolts 9 and 11 and the parts engaged therewith, and the natural limited springiness of the parts at the heel end of the switch permits the very slight movement of the heel end of the switch rail during the greater movement of the point thereof when

the switch is opened and closed in the usual well known manner.

The rails 2, 4, and 5 rest upon and are supported by a plate 12, which in turn rests upon underlying cross-ties or supports 13. The plate 12 preferably extends between two adjacent cross-ties, and said plate extends outwardly of the main rail and inwardly of the lead rail 4 and switch rail 5. The outer portion of the plate 12 is provided with spike holes 14, which are provided with spike-engaging surfaces 15, arranged at different distances from the center of the main rail 2, and driven into the underlying cross-ties 13 through each spike hole 14 and between one of its surfaces 15 and the outer edge of the base of the main rail 2, is a spike 16, as a means for securing the main rail 2 to the plate 12 and the plate 12 to the underlying supports or cross-ties 13. The inner portion of the plate 12 is provided with an upwardly projecting part or rib 17, which is adapted to engage the outer edge of the flange 8 of the splice bar 6 to prevent inward displacement of the rails 4 and 5. The rib 17 has a portion 18 which extends substantially parallel to the rails 4 and 5, when the switch rail 5 is in the closed position, and the rib 17 has another portion 19 which extends substantially parallel to the switch rail 5 when the switch rail is in the open position. Thus the rib 17 serves to prevent inward displacement of the rails 4 and 5, and permit the opening and closing of the switch.

It will be observed that the spikes 16 engaging the cross-ties 13 and the outer portion of the base of the main rail 2, prevent outward displacement of the rails 2, 4, and 5, and that the surfaces 15 of the spike holes 14 engaging the spikes 16 prevent inward displacement of the plate 12 while the rib 17 of the plate 12 prevents inward displacement of the rails 2, 4, and 5. Thus the rails at the heel end of the switch are held in place upon the underlying supports or cross-ties and maintained in proper working position with relation to each other.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:—

1. In a railroad switch, the combination of the main rail, the switch rail, the lead rail, means for holding the heel end of the switch rail adjacent the end of the lead rail and in spaced relation to the main rail, a



plate supporting said rails and having an upwardly-projecting part preventing inward displacement of the switch and lead rails, the outer portion of said plate being  
5 provided with a spike hole having an outer wall arranged outwardly of and substantially parallel to the outer portion of the base of the main rail, a support for said plate, and a spike driven into said opening  
10 between said wall and the base of the main rail.

2. In a railroad switch, the combination of the main rail, the switch rail, the lead rail, means for holding the heel end of the  
15 switch rail adjacent the end of the lead rail and in spaced relation to the main rail, a plate supporting said rails and having an

upwardly projecting part preventing inward displacement of the switch and lead rails, the outer portion of said plate being pro- 20  
vided with spike engaging surfaces arranged at different distances from the center of the main rail, a support for said plate, and a spike driven into said support between one  
25 of said surfaces and the outer portion of the base of the main rail, substantially as described.

In testimony whereof, we have hereunto affixed our signatures.

CHARLES W. REINOEHL.  
BENT L. WEAVER.

Witnesses:

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WM. R. MILLER.