

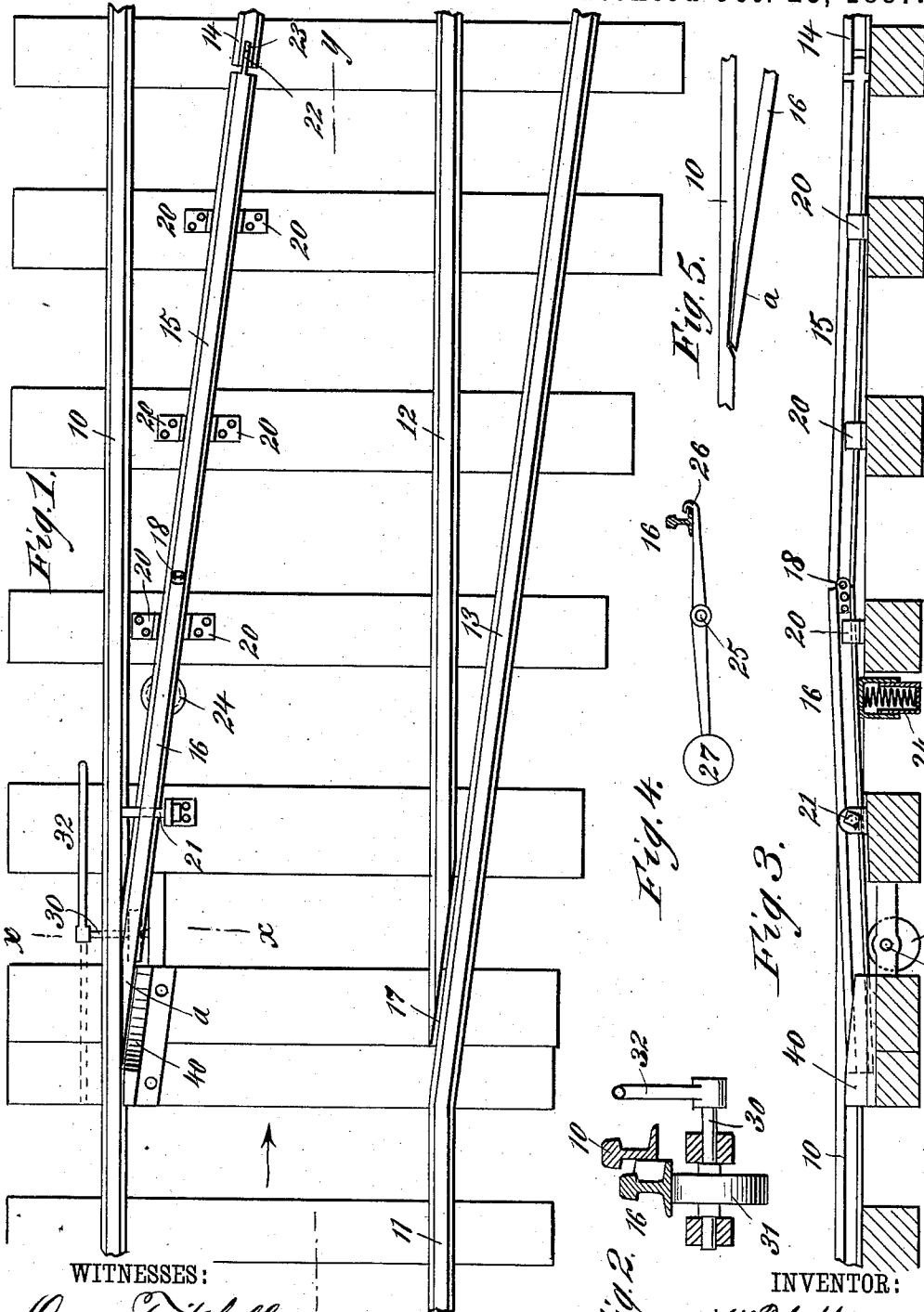
(No Model.)

# W. R. COPPEDGE.

## RAILROAD SWITCH.

No. 372,122.

Patented Oct. 25, 1887.



WITNESSES:  
*Down Twitchell*  
*Co. Sedgwick*

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 BY *Munn & Co.*  
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# UNITED STATES PATENT OFFICE.

WALTER R. COPPEDGE, OF FLOYD COURT-HOUSE, VIRGINIA.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 372,122, dated October 25, 1887.

Application filed March 23, 1887. Serial No. 232,098. (No model.)

*To all whom it may concern:*

Be it known that I, Rev. WALTER R. COPPEDGE, of Floyd Court-House, in the county of Floyd and State of Virginia, have invented a new and Improved Railroad-Switch, of which the following is a full, clear, and exact description.

This invention relates to a novel form of switch wherein the parts are so arranged that when in their normal position a train passing up the track toward the switch will pass over the switching-rail and continue on its way up the main track; but if it is desired that the train should pass upon the siding a switching-rail may be set to so guide the train. When trains are passing from the siding to the main track, the switching-rail will be automatically set so as to properly guide the treads of the wheels to the main track, all as will be hereinafter described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a railroad-switch constructed in accordance with the terms of my invention. Fig. 2 is a cross-sectional view taken on a line corresponding with the line  $x$  of Fig. 1. Fig. 3 is a longitudinal sectional view taken on line  $yy$  of Fig. 1. Fig. 4 is a detail view illustrating a modified attachment for holding the switching-rail in its normal position, and Fig. 5 is a view of a modified arrangement of the main-line and switching rails.

In the drawings above referred to, 10, 11, and 12 represent the rails employed to form the main-line track, while 13, 14, 15, and 16 represent the rails employed in forming the track to the siding, the rail 13 abutting closely against the rail 11, the rail 12 being cut off diagonally, so as to form a groove, 17, within which the flanges of the wheels may ride when the train is passing to the siding.

The rails 15 and 16 are united by a hinged joint, 18, and are guided by blocks 20, the end of the rail 16 being cut upon a diagonal line, so that it will fit closely against the side of the rail 10, and this rail 16 is pivotally mounted upon a bolt or pivot-pin, 21. The end of the

rail 15 is formed with a tongue, 22, which fits in a slot, 23, that is formed in the rail 14.

The end  $a$  of the rail 16 is normally held depressed by a spiral spring, 24, that is mounted beneath the rail 16, as is best shown in Fig. 3; or, if preferred, a weighted lever, such as that shown in Fig. 4, could be employed to hold the end  $a$  depressed, the lever being mounted upon a pivot pin or bolt, 25, and being provided with a hooked arm, 26, which rests against the under face of the base of the rail, the hook overlapping the rail-flange, while the opposite end of the lever is provided with a weight, 27. Instead of one, a number of these levers might be employed, in which case I would prefer that the levers should decrease in length as their positions recede from the hinge-connection of the rails 15 and 16, and that the weights arranged in connection with the levers should correspondingly decrease.

Beneath the end  $a$  of the rail 16 I mount a shaft, 30, to which there is eccentrically connected a circular disk, 31, the rail resting upon the peripheral face of this disk.

To the extending end of the lever 30 I connect a lever-arm, 32, the arrangement being such that by throwing the lever-arm to the position in which it is shown in dotted lines in Fig. 1 the tread of the rail 16 will be raised so that it will be level with the tread of the rail 10.

Such being the general construction and arrangement of my improved form of switch, the operation is as follows: If it is desired that a train moving in the direction of the arrow shown in Fig. 1 shall pass on up the main track, the parts are left in the position in which they are shown in Fig. 1, and when in this position it will be seen that owing to the fact that the end  $a$  of the rail 16 is depressed the flanges of the wheels of the train will pass over said rail and the train will not be deflected from its course; but if it is desired that the train should pass to the siding the lever 32 is thrown to the position in which it is shown in dotted lines, and the rail 16 will be thereby moved to a position so that its tread will be level with the tread of the rail 10, in which case the wheel-flanges of the train will strike against the rail 16 and the train will be directed to the siding, the flange of the wheel

resting on the rail 11 passing at this time through the groove 17. When cars are moving from the siding to the main track, the weight of the train will depress the rails 15 and 16 at their point of contact, and the end *a* of the rail 16 will be consequently raised, in which position it will be held until the wheels of the last truck have passed beyond the fulcrum of the rail 16, when, of course, the end *a* of said rail will be depressed; but in order that there may not be any excessive bump or jar, I provide an inclined face or block, 40, located in a proper position to receive the flanges of the wheels of said last truck, and as the flanges of said wheels ride up the incline of the block the treads of the wheels will be raised slightly above the level of the tread of the rail 10, upon which they are to ride. Instead of using guiding-blocks 20, I might form the rails 15 and 16 with downwardly-extending spurs and provide properly-located apertures for these spurs to ride in; or, for the purpose of additional safety, both the spurs and the blocks might be employed.

With such a switch as has been described, the main line is always open, and when a train is moving from the siding to the main line no manipulation whatever of the switching-lever is necessary, whereby many dangers and vexatious delays are avoided.

In Fig. 5 I illustrate the rail 10 as being formed with a doubly-inclined recess, within which the end of the rail 16 fits, and by this construction I avoid the necessity of making the end *a* as thin as it is represented in Fig. 1.

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

1. The combination, with the main-line rails, of switching-rails, the switching-rail at one side being formed in sections that are hinged together, one of said hinged sections being mounted on a pivot bolt or pin and normally held so that its end that is adjacent to the rail of the main line shall be in a plane below that occupied by the said main-line rail, substantially as described.

2. The combination, with the main-line rails, of rails 15 and 16, connected by a hinged joint and properly guided against lateral displacement, the rail 16 being mounted on a pivot pin or bolt, a mechanism, substantially as described, for elevating the rails 15 and 16 at the point of their hinged connection, and a means, substantially as described, for raising the depressed end of the rail 16, as and for the purpose stated.

3. The combination, with the main-line rails, of a pivotally-mounted rail, 16, a switch-rail, 15, hinged to the switch-rail 16, and formed with a tongue, 22, adapted to enter a recess formed in the abutting siding-rail, a spring or springs arranged beneath the rail 16, a shaft, 30, an eccentric, 31, upon the peripheral face of which the rail 16 rests, and an operating-lever connected to the shaft 30, substantially as described.

4. The combination, with the main-line rails, of a pivotally-mounted switching-rail, 16, a switching-rail, 15, hinged to the rail 16, guiding-blocks, and an inclined faced block, 40, substantially as described.

W. R. COPPEDGE.

Witnesses:

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L. J. COPPEDGE.