

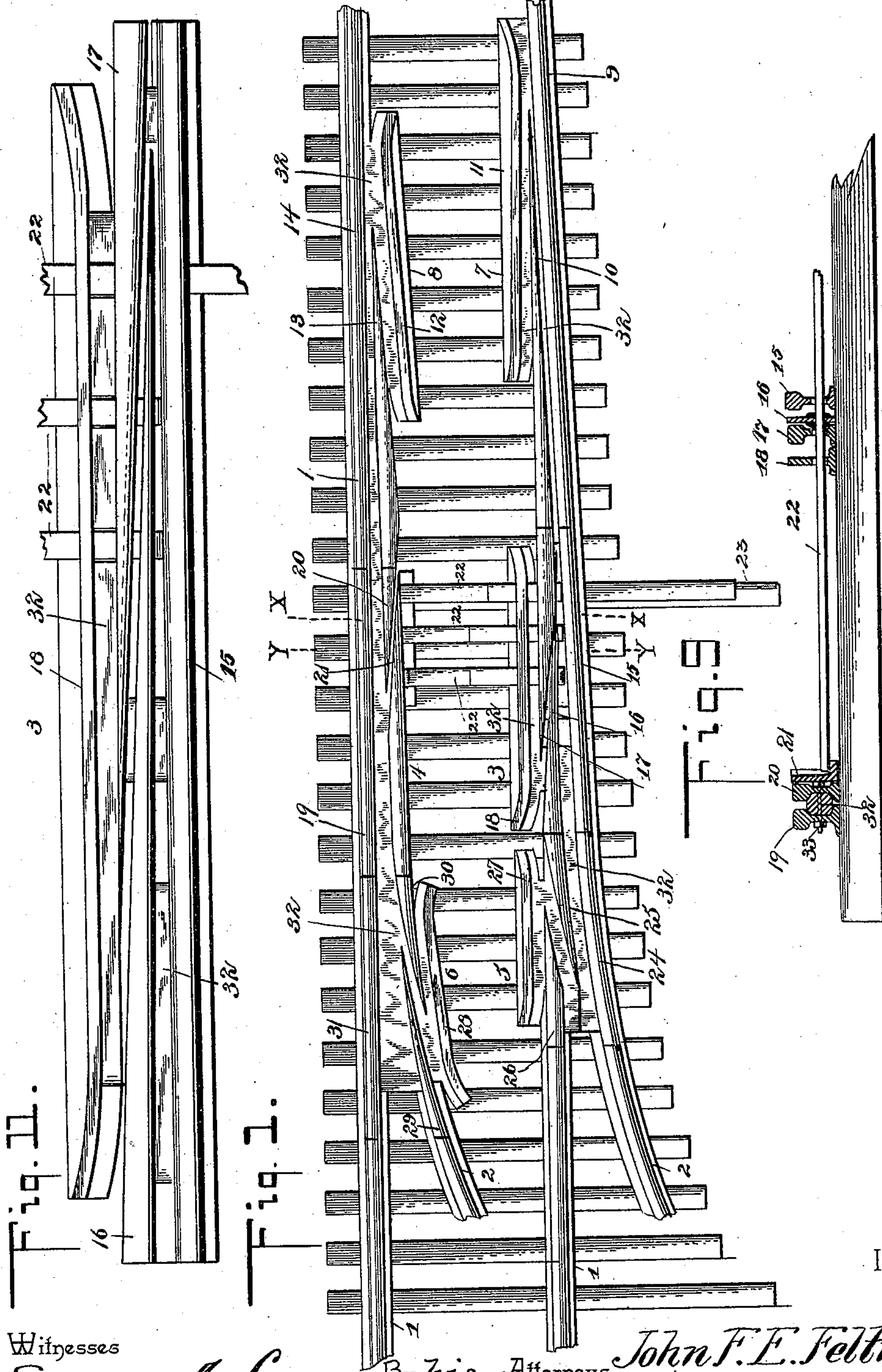
(No Model.)

3 Sheets—Sheet 1.

J. F. E. FELTNER.  
RAILROAD SWITCH.

No. 577,242.

Patented Feb. 16, 1897.



Witnesses

Edmund A. Spaulding.  
V. B. Tillyard.

By his Attorneys,

*John F. E. Feltner*

Chas. Snow Geo.

Inventor

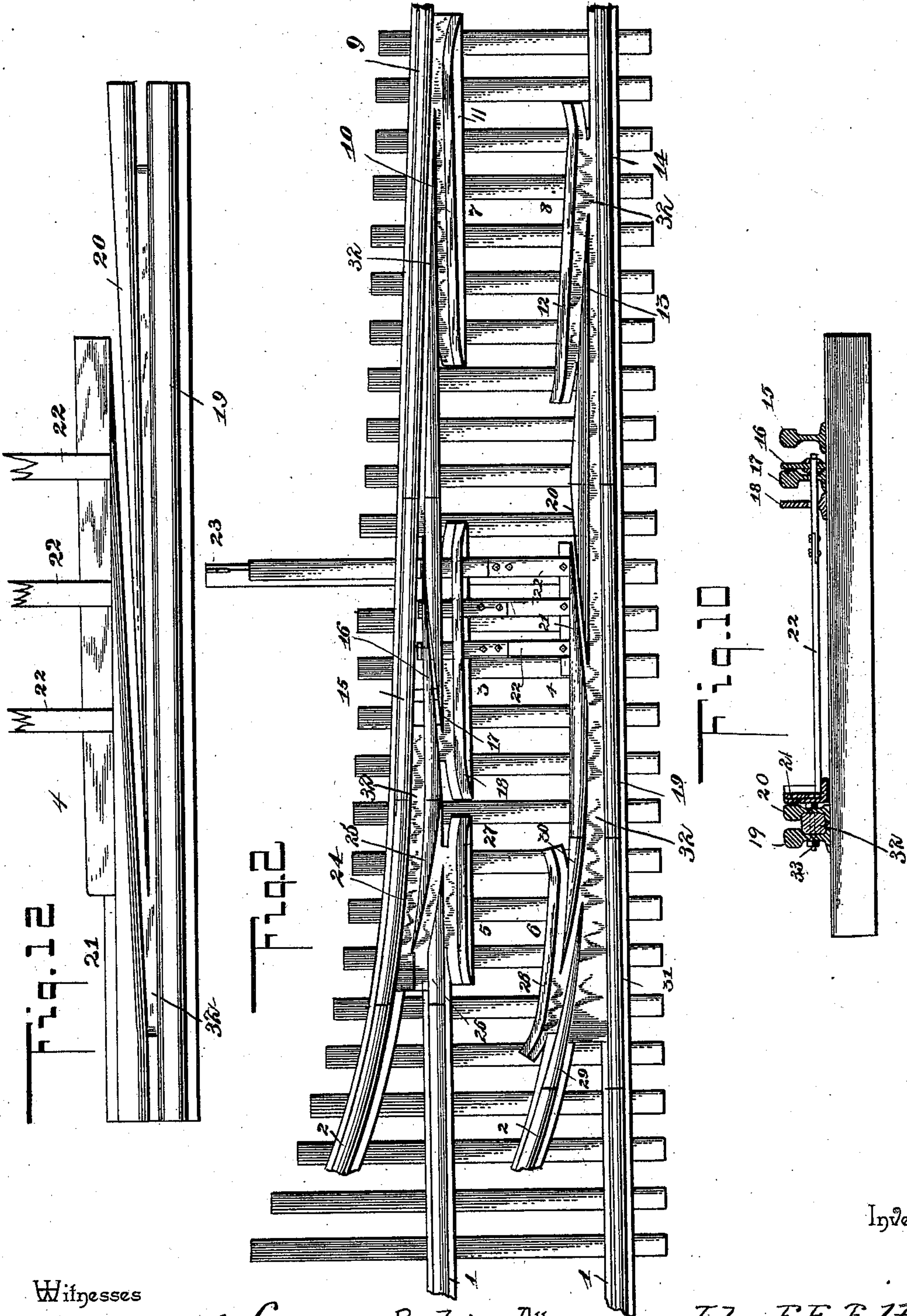
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Inventor

Witnesses  
Edmund A. Shaw.  
V. B. Hillyard.

By his Attorneys, John F. E. Feltner.  
C. A. Snow & Co.



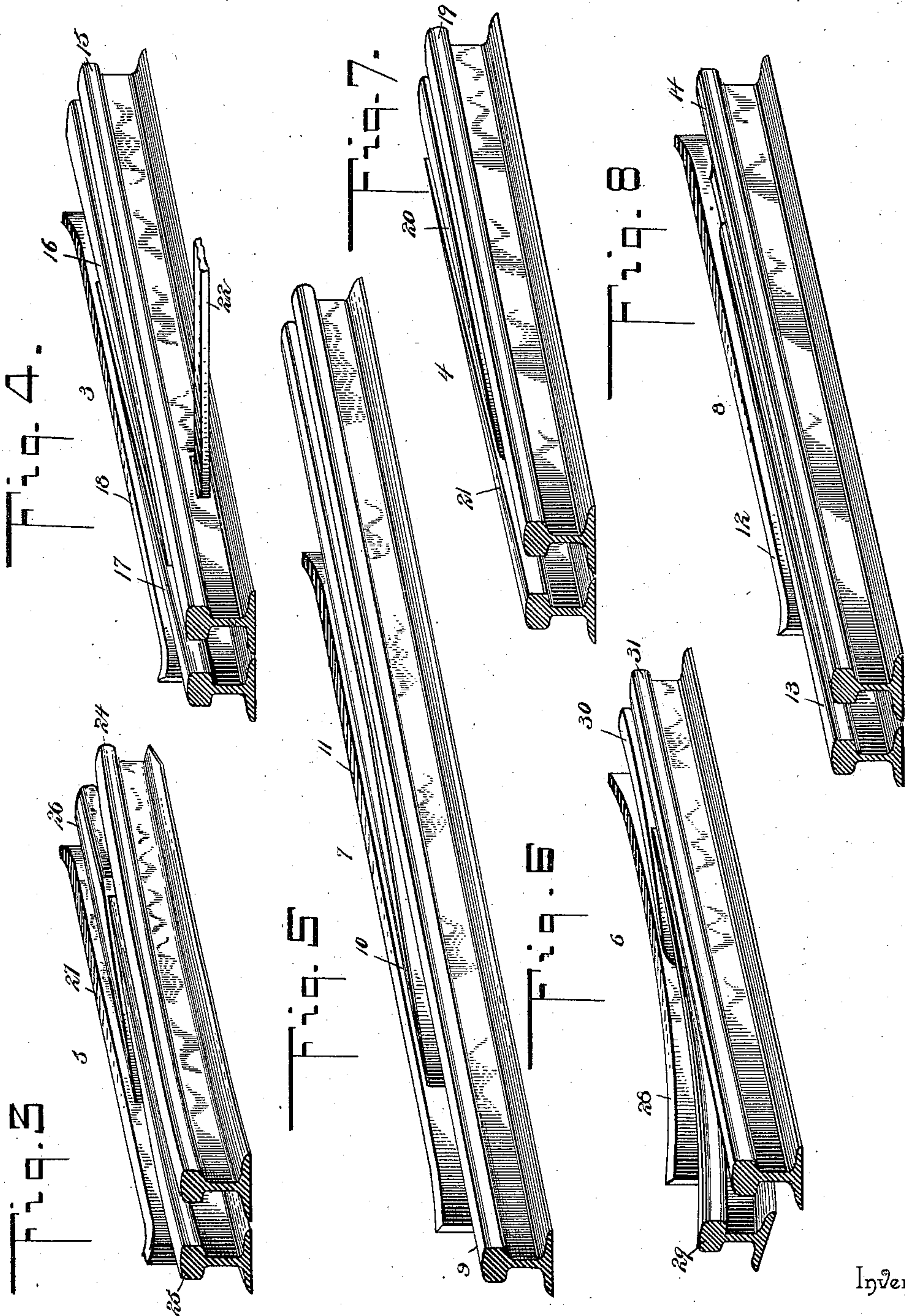
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3 Sheets—Sheet 3.

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RAILROAD SWITCH.

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Inventor

Witnesses

*Emma A. Strauss*  
*V. B. Hillyard.*

By *his* Attorneys, *John F. E. Feltner*

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

JOHN FRANZ ELOF FELTNER, OF LEADVILLE, COLORADO.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 577,242, dated February 16, 1897.

Application filed August 24, 1896. Serial No. 603,747. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN FRANZ ELOF FELTNER, a citizen of the United States, residing at Leadville, in the county of Lake and State of Colorado, have invented a new and useful Railroad-Switch, of which the following is a specification.

This invention relates to railroad-switches, and has for its object to prevent a train running into an open switch and becoming derailed, and also to enable a train to enter upon the main track when approaching the same from a siding or branch.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a plan view of a switch, showing the branch or siding curving to the left and closed to the main line. Fig. 2 is a view similar to Fig. 1, showing the branch or siding curving to the right and closed. Fig. 3 is a turnout-section. Fig. 4 is a detail view of a switch-tongue section. Fig. 5 is a detail view of a switch-point section. Figs. 6, 7, and 8 are mates corresponding to the respective sections shown in Figs. 3, 4, and 5. Fig. 9 is a transverse section on the line X X of Fig. 1. Fig. 10 is a section on the line Y Y of Fig. 1. Fig. 11 is an enlarged plan view of the switch-tongue section. Fig. 12 is a plan view of the mate for the switch-tongue section.

Corresponding and like parts are referred to in the following description and indicated in the several views of the accompanying drawings by the same reference-characters.

The rails of the main track or stem are indicated by the numeral 1 and the rails of the siding or branch by the numeral 2. The switch proper comprises a switch-tongue section 3 and its mate 4, a turnout-section 5 and its mate 6, and a switch-point section 7 and its mate 8.

The switch-point section 7 comprises a length of rail 9, forming a portion of the siding and merging into the rail of the main track, and a beveled point 10, forming a portion of the main track, a guard-rail 11 being located opposite the beveled point 10 to give proper direction to the flange of the wheel when the truck is entering upon the switch-point section. The mate 8 of the switch-point section is of corresponding construction and comprises a guard-rail 12, a beveled point 13, and a length of rail 14, forming a part of the main track. The extremities of the beveled points 10 and 13 are not in transverse alinement, the terminal of the point 10 being at a greater distance from the switch-tongue section than the terminal of the point 13, which is of vital importance to the successful operation of the switch.

The switch-tongue section 3 comprises a length of rail 15, forming a part of the branch or siding, a movable tongue 16, a beveled point 17, and a guard-rail 18, the point 17 being interposed in the length of the main track and having its beveled side corresponding with the beveled side of the tongue 16. The mate 4 of the switch-tongue section 3 is composed of a rail 19, a point 20, and a tongue 21, the latter being movable and connected with the tongue 16 by tie-bars 22, the latter operating freely through openings in the guard-rail 18. One of the tie-bars is extended and has connection with a switch-lever 23 at one side of the road-bed to be operated in the usual way for throwing the switch so as to open and close it as required.

The switch-tongues 16 and 21 operate in unison by reason of the interposed connections 22. Hence when the lever 23 is moved so as to throw the tongue 16 against the rail 15 the tongue 21 will be moved away from the point 20, thereby permitting the flanges of the wheels to pass through the throats formed between the tongues 16 and 21 and the corresponding points 17 and 20.

The turnout-section 5 is formed of a rail 24, oppositely-disposed beveled points 25 and 26, and a guard-rail 27, and the mate 6 of the turnout-section is of corresponding formation and comprises a guard-rail 28, oppositely-disposed beveled points 29 and 30, and a rail 31.



By operating the switch-lever 23 the train may be caused to pass from the main track onto the siding or by the latter, as required.

The several rails forming the respective sections are spaced apart by interposed filling-pieces 32 of proper shape, the rails and filling-pieces being secured together by bolts 33 or in any convenient way.

Both of the views Figs. 1 and 2 show the siding closed with respect to the main line, so that a train approaching the switch from the right will pass from the main line onto the siding, and likewise a train approaching the switch from the branch will pass onto the main line. The points 10 and 13 are stationary, and, the point 10 being longer than the point 13 and spaced from the rail 9, the wheel-flanges will enter between the point 10 and the rail 9 on one side and cause the wheel-flanges on the other side to pass between the point 13 and the guard-rail 12. Hence the train approaching from the right will travel upon the rail 9 and point 13, and, the tongues 16 and 21 occupying the position shown in Figs. 1 and 2, the train will pass by the switch onto the branch or siding. If it be required to direct the train onto the main track after leaving the switch, the tongues 16 and 21 are moved away from the corresponding points 17 and 20, thereby causing the wheel-flanges to pass between the parts 16 and 17 and 20 and 21, as will be readily understood.

Having thus described the invention, what is claimed as new is—

1. In a railroad-switch, the combination of a turnout-section, and its mate, both being of similar construction and comprising a rail, a

guard, and intermediate oppositely-disposed beveled points, substantially as shown and described.

2. In a railroad-switch, the combination of a switch-point section, a turnout-section, and an intermediate switch-tongue section, the latter comprising a beveled point and a movable switch-tongue, substantially as and for the purpose set forth.

3. In a railroad-switch, the combination of a switch-tongue section comprising a rail, a guard, a beveled point, and a movable tongue, and a mate comprising a rail, a beveled point, and a movable tongue, the latter being connected with the movable tongue first mentioned, substantially as set forth.

4. The herein shown and described railroad-switch, comprising a switch-point section and its mate, each having a rail, a guard, and an intermediate beveled point, a turnout-section and its mate, each formed of a rail, a guard, and intermediate oppositely-disposed beveled points, a switch-tongue section having a rail, a guard, a point, and a movable tongue, a mate for the switch-tongue section comprising a rail, a beveled point, and a movable tongue, tie-bars connecting the movable tongues of the switch-tongue section and its mate, and an operating-lever for throwing the switch, substantially in the manner set forth.

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

JOHN FRANZ ELOF FELTNER.

Witnesses:

CHARLES G. EICK,  
GUS. A. NELSON.