No. 620,146. Patented Feb. 28, 1899.

# R. W. KING.

## RAILWAY SWITCH.

(Application filed Apr. 26, 1898.)

(No Model.) 2 Sheets—Sheet 1.

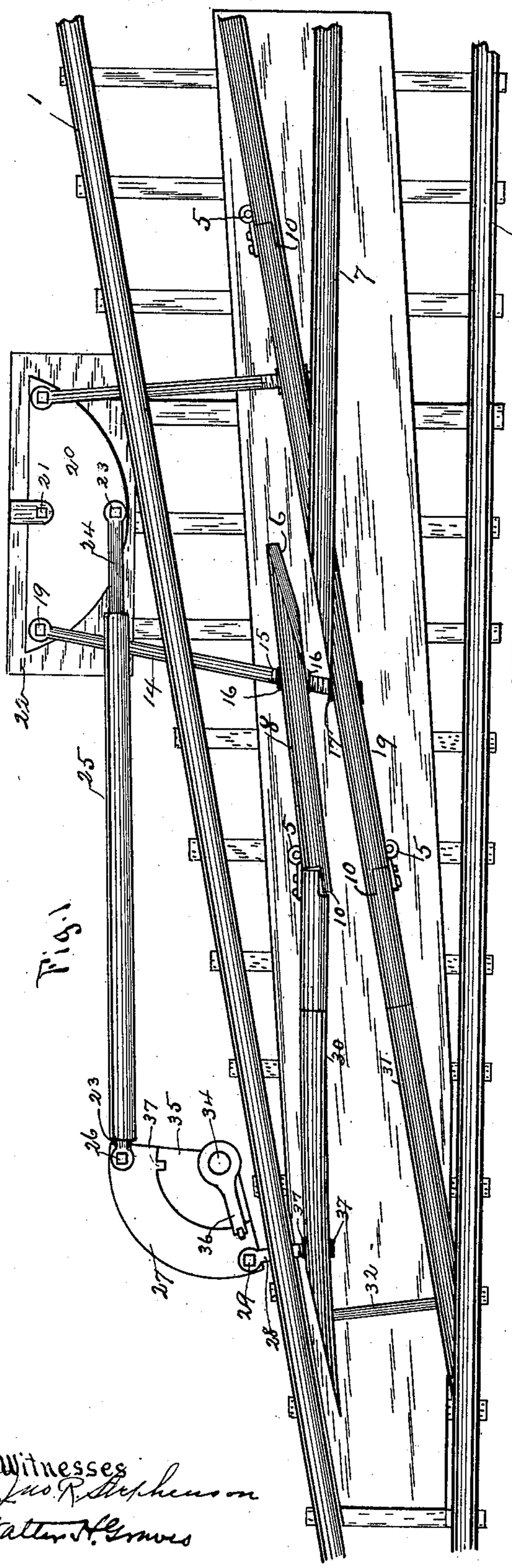

Fig. 1.

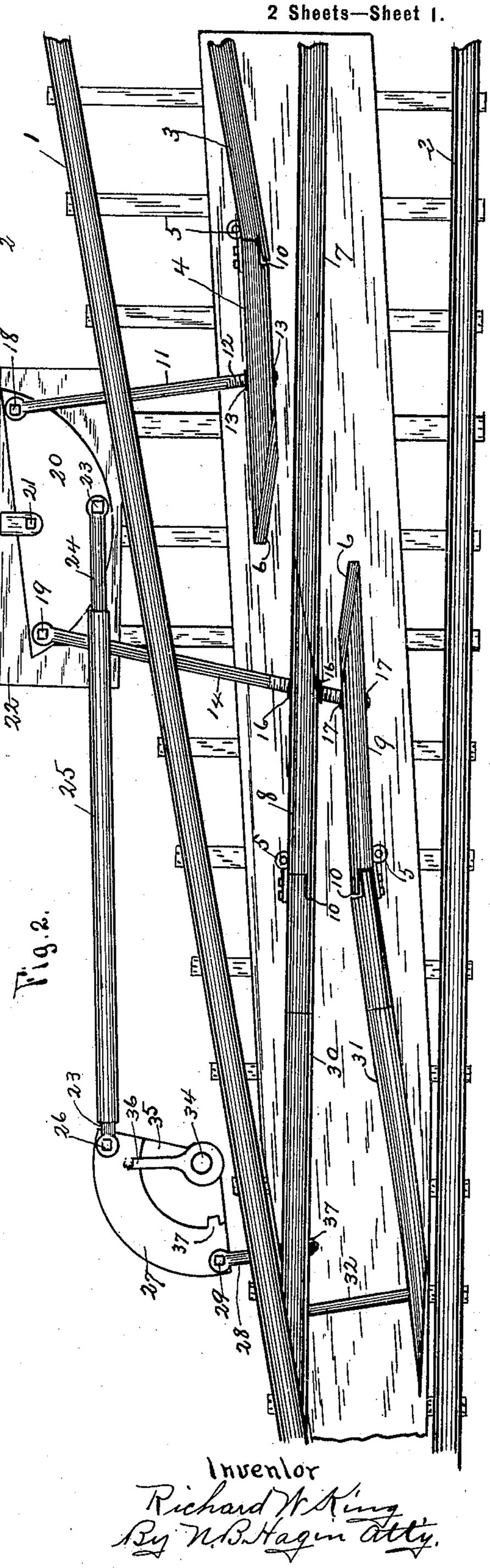

Fig. 2.

Witnesses
Jno. R. Stephenson
Walter H. Groves

Inventor
Richard W. King
By N. B. Hagen Atty.

No. 620,146. Patented Feb. 28, 1899.

# R. W. KING.

## RAILWAY SWITCH.

(Application filed Apr. 26, 1898.)

(No Model.) 2 Sheets—Sheet 2.

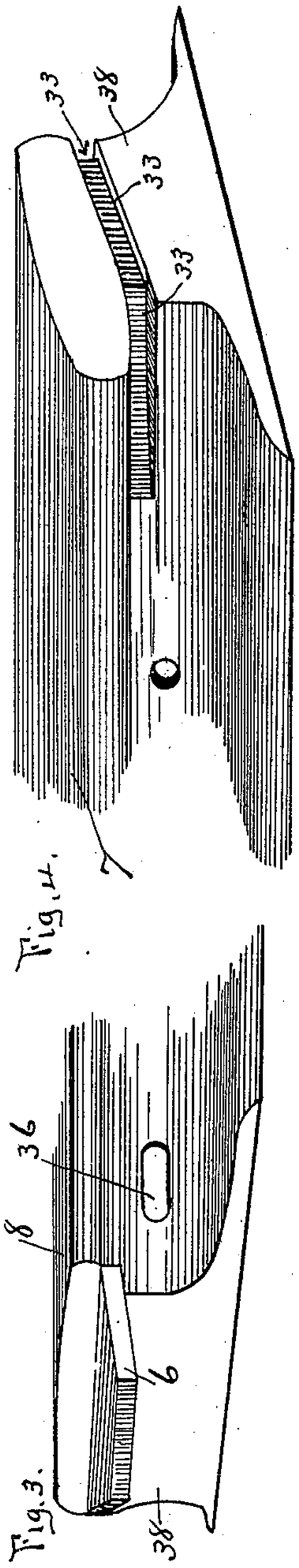


Fig. 4.

Fig. 3.

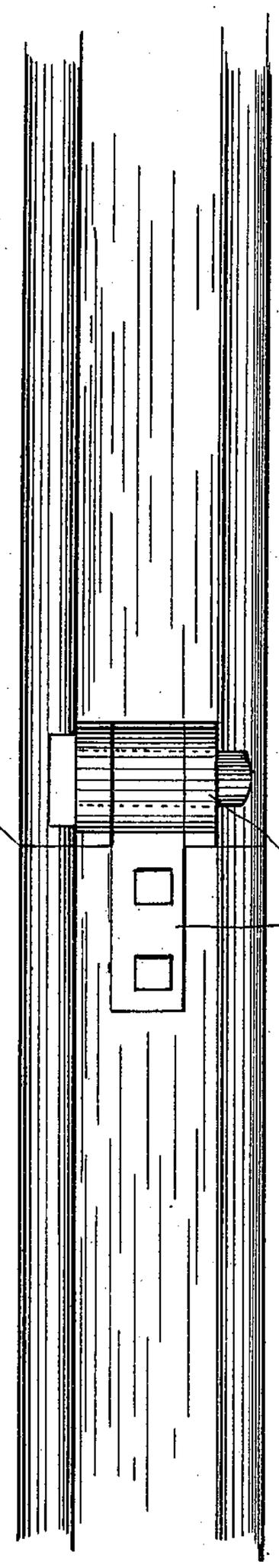


Fig 5

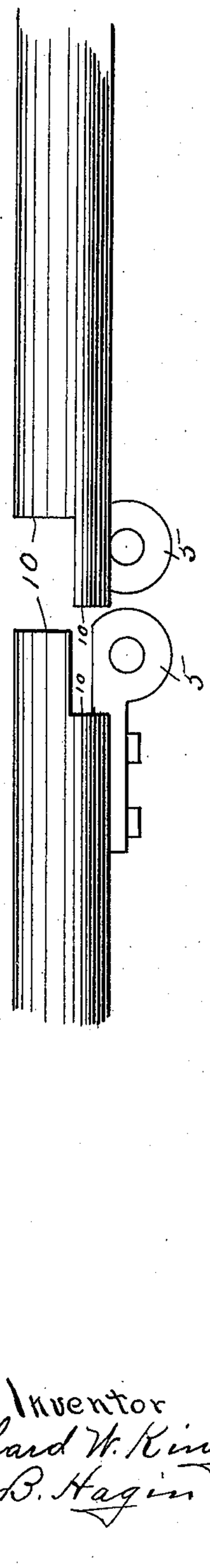


Fig. 6.

Witnesses
Jno. R. Stephenson
Walter H. Graves

Inventor
Richard W. King
By N. B. Hagin atty.

# UNITED STATES PATENT OFFICE.

RICHARD W. KING, OF WICHITA, KANSAS.

## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 620,146, dated February 28, 1899.

Application filed April 26, 1898. Serial No. 678,872. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD W. KING, a citizen of the United States of America, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification, reference being had therein to the accompanying drawings, and the figures of reference thereon, forming a part of this specification, in which—

Figure 1 is a top plan of my improved railway-switch, showing the same set for the side track. Fig. 2 is a like view of the same, showing said switch set for the main line. Fig. 3 is a perspective view of a tapered end rail in said switch, showing a tongue on said tapered end. Fig. 4 is a like view of the corresponding rail, showing the grooves in said rail. Fig. 5 is a side view of two rails joined with a hinge; and Fig. 6 is a top plan of said rails separated, showing said hinge and manner of lapping the ends of said rails.

This invention relates to certain improvements in railway-switches; and it consists in the construction of the rails, switch mechanism, and the manner of operating the same; and the object of my invention is safety, durability, and simplicity of operation.

Referring to the drawings, 1 represents the outside switch-track rail.

2 represents the outside main-line rail.

3 represents the inside stationary side-track rail, to which is hinged the swinging rail 4. 5 represents said hinge. 6 represents a tongue on the tapering end of said rails, adapted to enter the grooves 33. 7 represents the permanently-secured tapered end of the inner rail of the main line, having said grooves 33, as shown in Fig. 4, one groove on either side and one across the tapered end to receive the tongues 6 of the swinging rails 4, 8, and 9.

10 represents a lapping hinge-joint at one end of the rails 4, 8, and 9. 11 represents a rod, one end having the screw-threads 12 to receive the nuts 13. Said rod passes through a slot in the rail 1, and also said rail 4, where it is adjustably held. 14 represents a like rod passing through a like slot in said rail 1. Said rod has screw-threads 15. The rails 8 and 9 are adjustably held on said rod through the medium of the nuts 16 and 17. 18 and 19 represent bolts securing the opposite end of said rods 11 and 14 to the swinging plate 20. Said swinging switch-plate 20 is held to swing by the bolt 21 passing through said switch-plate 20 and down through the stationary platform 22. 23 represents a bolt securing one end of the switch-rod 24 to said swinging plate 20. 25 represents a loose covering sleeved on said switch-rod 24. 26 represents the opposite end of said rod 23, secured to the swinging switch-plate 27. 28 represents a short rod, with one end secured to said plate 27 at 29 and the opposite end adjustably secured to the rail 30 by the nuts 37. Said rod passes through a slot in said rail 1. Said rail 30 is secured to the rail 31 by the bar 32.

34 represents the switch-stand shaft, to which is keyed the swinging plate 27 and the operating arm or lever 36. 35 represents the switch-stand loosely sleeved on said shaft 34. Said switch-stand is provided with the notches 37.

38 represents the tapered end of the rails blocked out on one side, as shown in Figs. 3 and 4.

36 represents a slot in the rails 8 to allow the rod 14 to pass through.

This switch is operated as follows: When the switch is closed on the main line, as shown in Fig. 2, the rails 7 and 8 join, as shown, making a smooth joint equal to a solid rail, the tongue on said rail 8 fitting in the groove of said tapered end of the rail 7. Said rail 8 is held snug against said rail 7 by the rod 14 passing through the slot 36, the rails 4, 9, and 31 being held back by the rods 11, 14, and 32. Said rods 11, 14, and 28 are provided with nuts on each side of the rails 4, 8, 9, and 30, so the rails may be adjusted to fit snug against the corresponding rail. To throw the switch, the lever 36 is raised from the notch 37 and swung around on the plate 34 to the other notch 37, as shown in Fig. 1, which will cause the shaft 34 to rotate, which will carry with it the swinging plate 27. The rod 28 will force the rail 30 away from the rail 1, which in turn forces the rail 31 snug against the rail 2 through the medium of the bar 32. The rod 23 24, joining said swinging plate 27 to the swinging switch-plate 20, will swing said plate 20 around, which will carry with it the rods 11 and 14. Said rod 11

will force said rail 4 up against the rail 7. At the same time said rod 14 will pull the rail 8 away from said rail 7 and pull the rail 9 up against the rail 7, said rails 4, 8, and 9 swinging on their respective hinges 5 and the rails 30 and 31 springing, the hinged end only of said rails being secured to the ties, the tongues 6 of the rails 4 and 9 fitting into the grooves 33 on either side of said rails 7, said tongue and grooves holding said rails firm and making a smooth joint, thus making the jar on the train and the wear on the rails very light.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is as follows:

1. In the herein-described split-rail switch, having fixed main-line rails, and swinging rails with tapered ends, a tongue on the free and tapered ends of two of said rails, and corresponding grooves on the fixed main-line rail, for receiving said tongues.

2. In the herein-described split-rail switch, having fixed main-line rails, and swing-rails with tapered ends, said swinging rails shouldered and hinged for holding said rails to swing, a tongue on the free and tapered end of said rails, corresponding grooves on the fixed main-line rail, for receiving said tongues.

RICHARD W. KING.

Witnesses:
J. A. CLARK,
NELSON DAVIS.