G. A. ROBINSON.

SWITCH FROG.

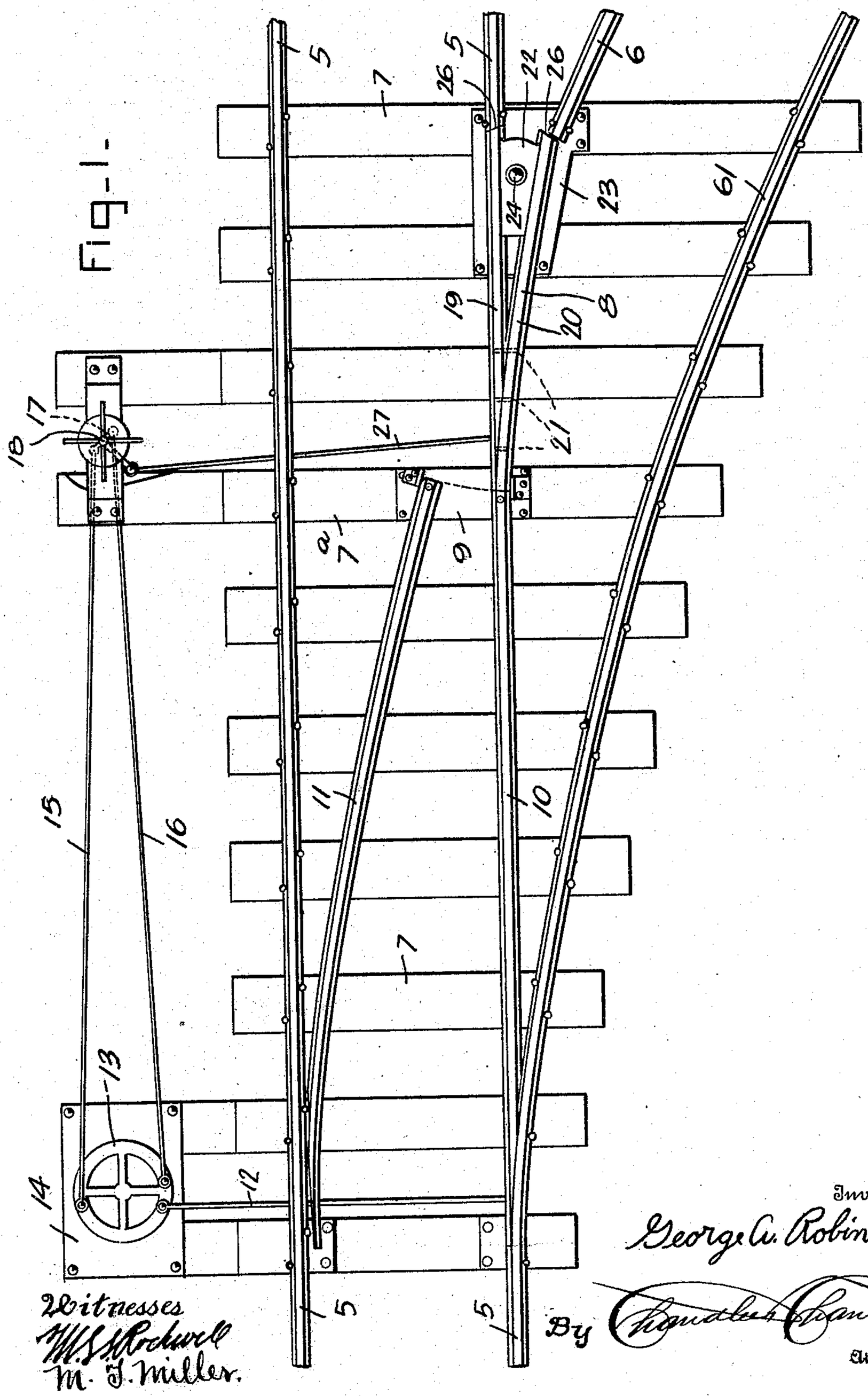
APPLICATION FILED OCT. 12, 1907.

908,037.

Patented Dec. 29, 1908.

2 SHEETS—SHEET 1.

Fig-1-



Witnesses

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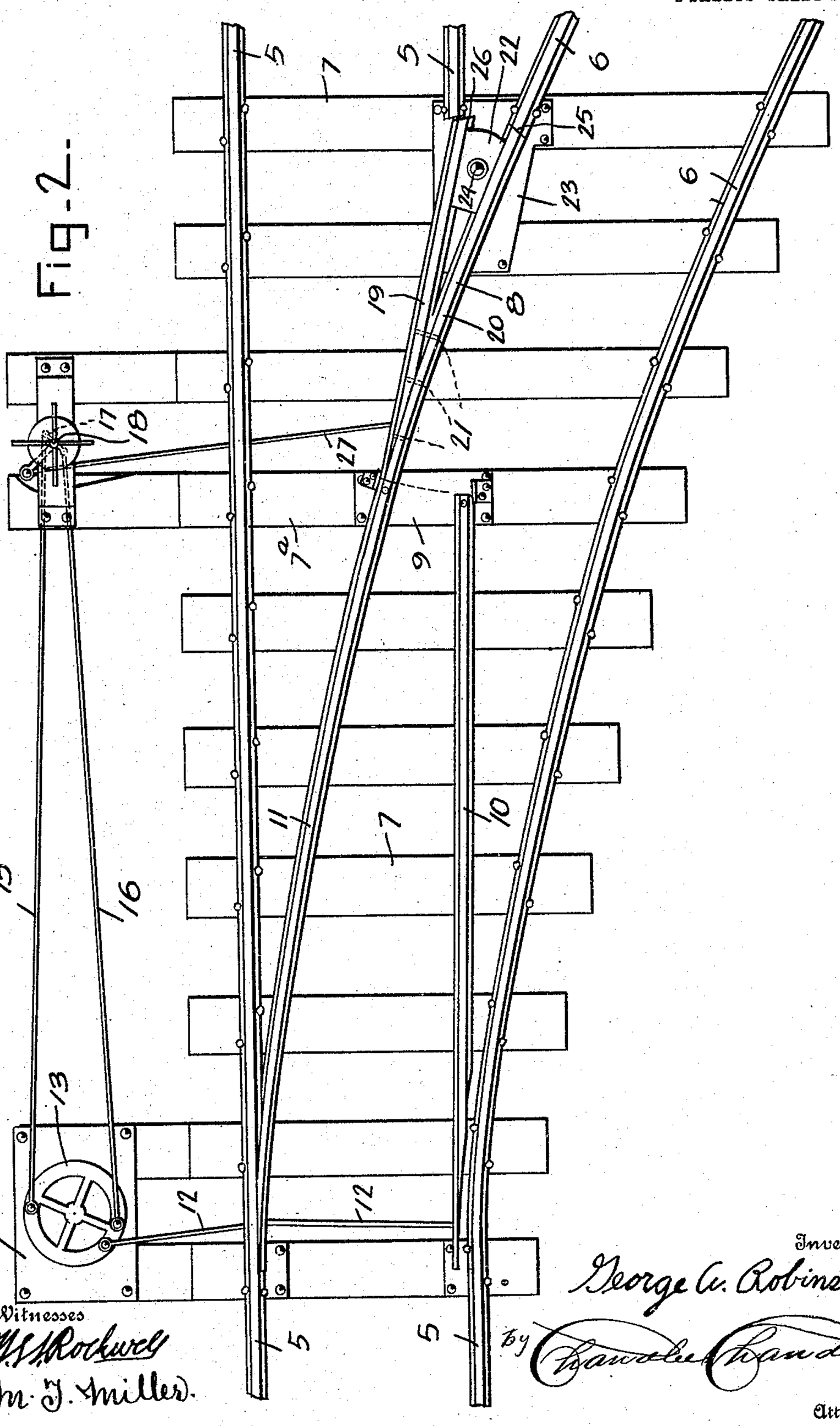
2 SHEETS—SHEET 2.

Fig-2-



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UNITED STATES PATENT OFFICE.

GEORGE A. ROBINSON, OF BONNER SPRINGS, KANSAS.

SWITCH-FROG.

No. 908,037. Specification of Letters Patent. Patented Dec. 29, 1908.

Application filed October 12, 1907. Serial No. 397,190.

To all whom it may concern:

Be it known that I, GEORGE A. ROBINSON, a citizen of the United States, residing at Bonner Springs, in the county of Wyandotte, State of Kansas, have invented certain new and useful Improvements in Switch-Frogs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railroad frogs and has for its object the provision of a frog which will require less power for its operation and will assume a position in perfect alinement with either of the track rails when it is swung to either of two positions.

In carrying out my invention, I provide a frog which is operated from its free end so that less power is required to move it and cut its butt-ends diagonally as also the corresponding ends of the main and side track rails so that the branches of the frog will exactly aline with their corresponding rails when the frog is at one or the other limit of its movement.

In the accompanying drawings, Figure 1 is a top plan view of a switch and frog showing the application of the invention, the frog being set for the main track, and, Fig. 2 is a similar view showing the frog set for the side track.

In the drawings, there are shown the usual main track rails 5 and siding track rails 6. These rails are supported upon the usual ties 7 and a switch 8 is also supported upon two of the ties. The outer rails 5 and 6 at the switch are full rails securely spiked.

A tie plate 9 is secured upon one of the ties, this tie being indicated by the numeral 7ª, and pivoted to this tie plate 9, are the split switch rails 10 and 11, these split switch rails being connected by a switch rod 12 and this switch rod is in turn pivotally connected to a wheel 13 by means of a pin 27, the wheel being mounted upon a plate 14 supported by two of the ties. Rock bars 15 and 16 are also connected with the wheel 13 by means of the pins 30 and with the ends of a cross arm 17 shown in dotted lines in Figs. 1 and 2, and carried at the lower end of the switch stand shaft 18, it being understood that when the said switch stand shaft is rotated, the wheel 13 will rock and result in the movement of the switch rails from one position to the other.

The frog embodied in my invention is comprised of a straight split section of rail 19 which is adapted to be brought into alinement with one of the main track rails as shown in Fig. 1, and a curved rail section 20 which is bolted as at 21 to the straight track section and is designed to aline with one of the side track rails 6 and the split switch rail 11, as shown in Fig. 2. A web plate 22 is secured to the two rail sections 19 and 20 and aids in connecting them and furthermore, this web plate is located between the said sections adjacent their butt-ends. The said butt-ends of the sections rest upon a plate 23 secured upon two of the ties adjacent the point of intersection of the inner main and side track rails, and a pivot bolt 24 is passed through the web plate 22 and the base plate 23 and serves to pivotally hold the said rail sections upon the base plate so that they may have a swinging movement.

In order to prevent the frog passing either limit of its movement, the butt-ends of the rail sections comprising the frog are beveled off as at 25 and 26 respectively as are also the opposing ends of the inner main and side track rails and it will be readily understood that when the frog is swung from one position to the other, the end of either the section 19 or the section 20 will abut against the corresponding main or side track rail and further movement of the frog will be prevented and consequently when the frog is at one or the other limit of its movement, either the main or the side track rails will be in alinement depending upon the direction in which the frog is moved.

In order that the frog may be moved, a rod 27 is connected near one end to the point of the frog and to the lower or cranked end of the switch shaft 18. The said point of the frog of course registers with either the main rail 10, or the side rail 11 when the frog is moved, and in order to limit the movement of the frog and to insure of its registration with the main and side track rails, I secure upon the tie 7ª upstanding frog-engaging stop shoulders 25, against one or the other of which the frog abuts when at either limit of its movement.

What is claimed, is—

The combination, with an outer full main rail, and an outer full siding rail both being securely spiked, of two converging split switch rails arranged to be brought at one end against the inner edges of said main and

siding rails, the remaining ends of said split switch rails being pivoted, a securing plate receiving the pivoted ends of said switch rails, stop shoulders fixed to said securing plate and extending from the outer edges and beyond the pivoted ends of said split rails, a base plate, a pivot bolt carried by said plate, a web pivotally carried by said bolt, a curved rail section secured to said web and arranged to be swung into alinement with one of said pivotally held split rails and the inner siding rail, a straight split rail section secured at one end to said curved rail section, and at the other to said web, a switch shaft having a crank, a rod extending from said crank to said switch point, a cross arm secured to said shaft, two rock bars carried by said cross arm, a pivotally secured wheel, said bars being connected to said wheel, and a connecting rod extending from said wheel and being secured to the ends of said split rails, all arranged as set forth.

In testimony whereof, I affix my signature, in presence of two witnesses.

GEORGE A. ROBINSON.

Witnesses:

WM. STANFORD,

NEWT ROBINSON.