

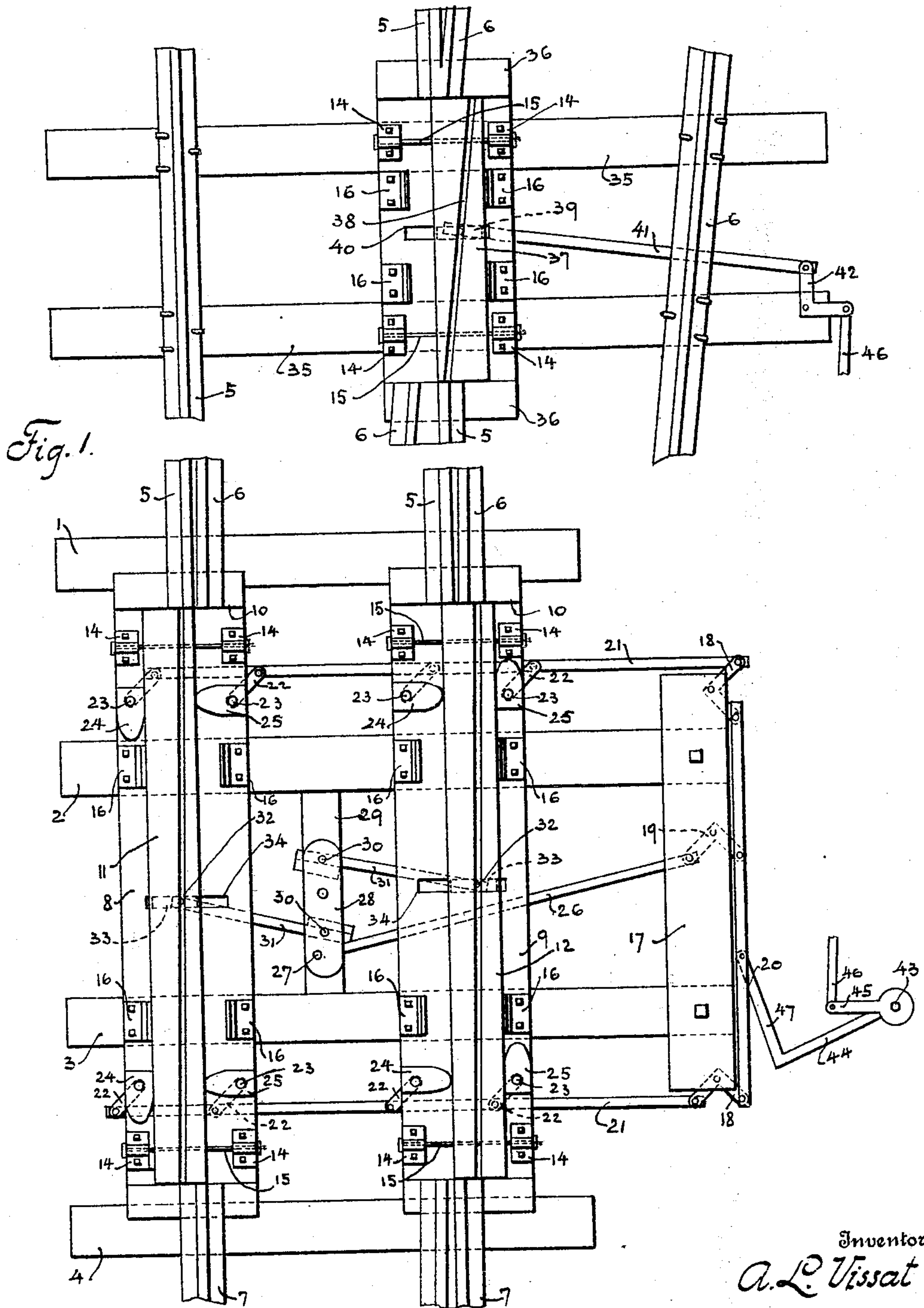
940,566.

A. L. VISSAT.
SWITCH.

APPLICATION FILED APR. 20, 1909.

Patented Nov. 16, 1909.

3 SHEETS—SHEET 1.



Witnesses

Frank Frimmer

W. H. Butler

By

W. H. Everts

Attorneys

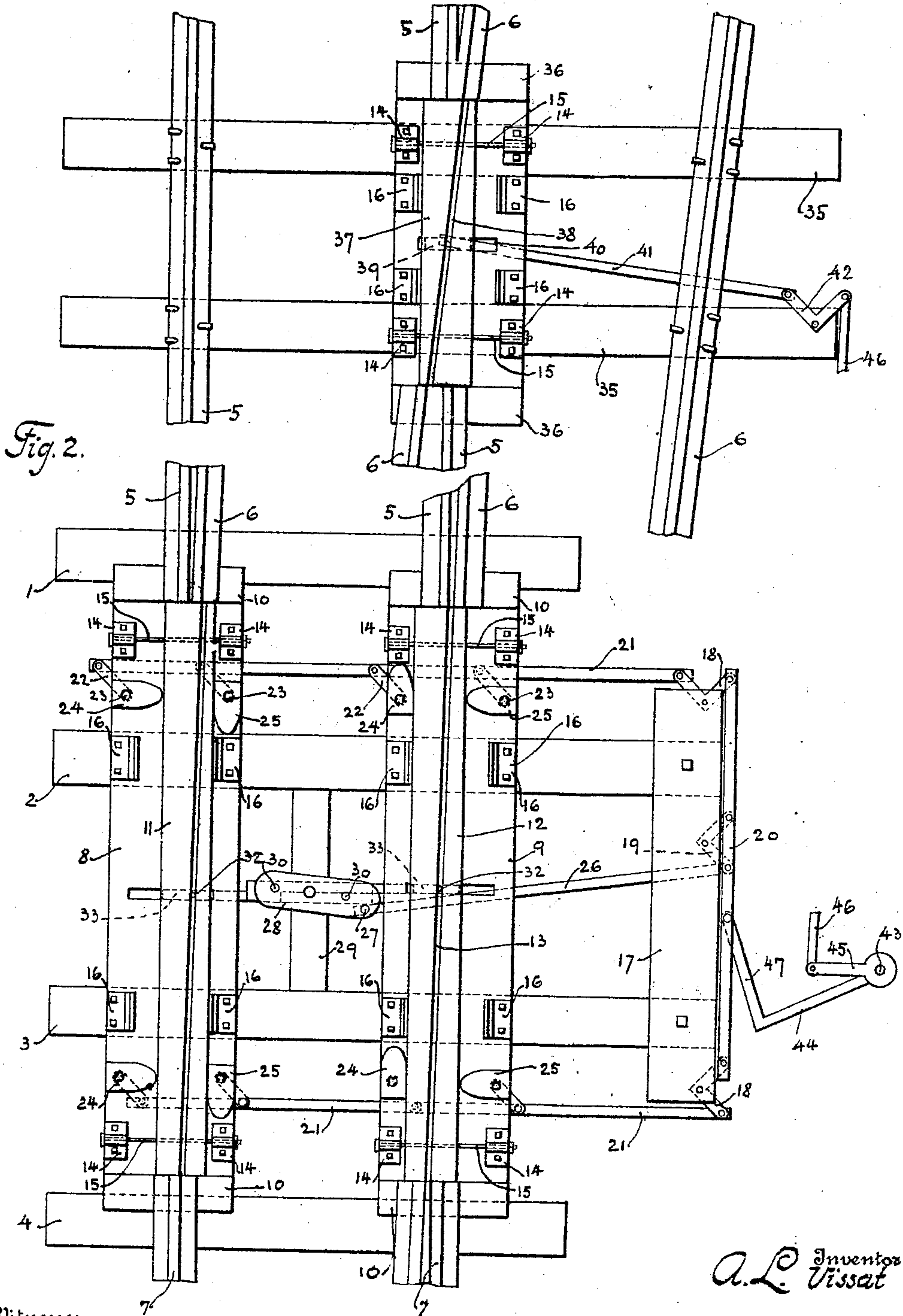
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Frank Trimmer

R. H. Butler

By

A. L. Vissat

Attorneys

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3 SHEETS—SHEET 3.

Fig. 3.

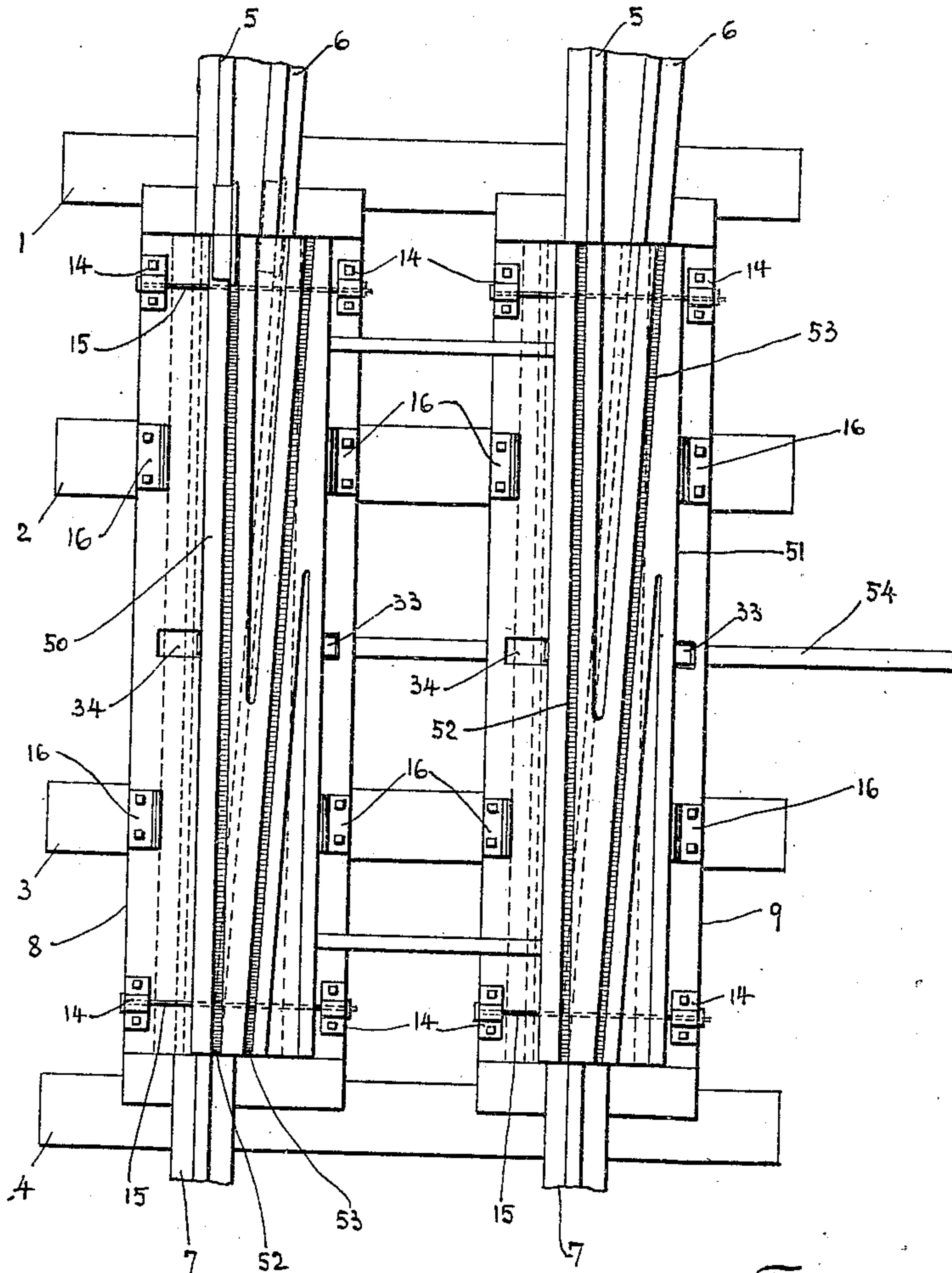


Fig. 4.

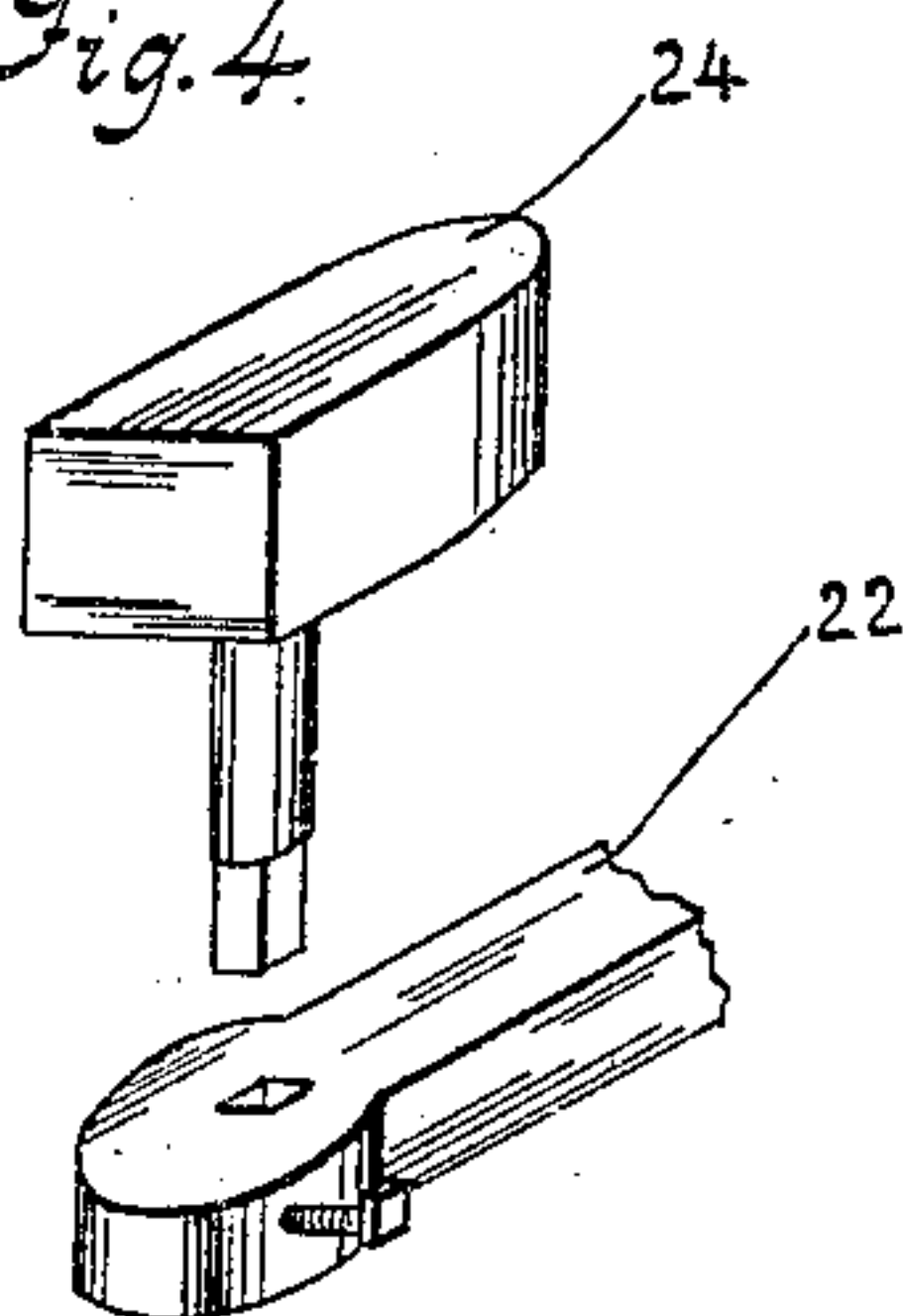
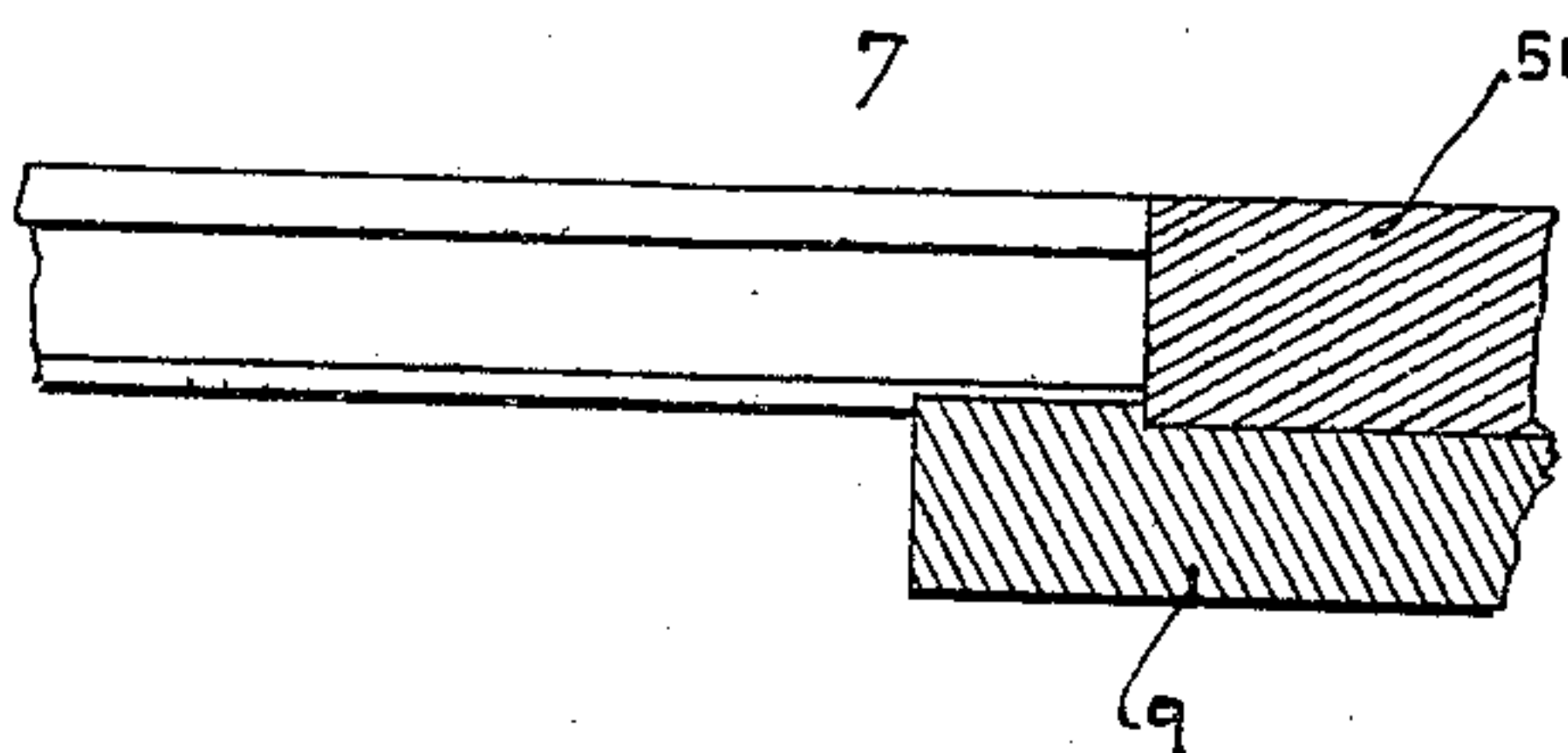


Fig. 5.



Witnesses

Frank Grimmer

A. H. Butler

Inventor
A. L. Vissat

By

H. C. Ewert

Attorneys

UNITED STATES PATENT OFFICE.

ANTHONY L. VISSAT, OF BRIDGEVILLE, PENNSYLVANIA.

SWITCH.

940,566.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed April 20, 1909. Serial No. 491,179.

To all whom it may concern:

Be it known that I, ANTHONY L. VISSAT, a citizen of the United States of America, residing at Bridgeville, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Switches, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to switches, and to certain new and useful improvements in the switch disclosed in my Patent No. 912,049, granted Feb. 9th, 1909.

15 The object of the present invention is to simplify the construction, reduce the expense of manufacture, and provide a more durable and easily operated switch than that disclosed in my former patent.

20 With the above and other objects in view which will more readily appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be hereinafter described and then specifically claimed.

25 Referring to the drawings:—Figure 1 is a plan of a switch partly broken away, illustrating the same in position for main line traffic, Fig. 2 is a similar view, illustrating the switch in position for side tracking or switching rolling stock. Fig. 3 is a plan of switch blocks of a modified form of construction, Fig. 4 is a perspective view of one of the shifting shoes, and Fig. 5 is a longitudinal sectional view of a portion of 35 one of the switch blocks.

In the drawings, the reference numerals 1, 2, 3 and 4 designate ties, the tie 1 supporting the ends of main rails 5 and switch rails 6; the tie 4 supporting main rails 7. 40 The ties 2 and 3 arranged between the ties 1 and 4 are of a greater length, and upon said ties are secured switch plates 8 and 9 having the ends thereof resting upon the ties 1 and 4, and in conjunction with said 45 ties supporting the ends of the rails 5, 6 and 7. The switch plates 8 and 9 are cut away, as at 10, for longitudinal switch blocks 11 and 12, said blocks having grooves 13 formed therein for the flanges of car 50 wheels adapted to pass over the same.

14 designates bearings arranged at the longitudinal edges of the switch plates 8 and 9 adjacent to the ends thereof, said bearings supporting transverse guide rods 55 15 for the ends of the blocks 11 and 12,

said guide rods extending through said blocks and preventing vertical displacement.

16 designates braces mounted upon the plates 8 and 9 at the longitudinal edges thereof above the ties 2 and 3, these braces 60 limiting the movement of the blocks 11 and 12 and bracing said blocks in either of their adjusted positions.

17 designates a beam secured upon the ties 2 and 3, and pivotally connected to the 65 under side of said beam are bell crank levers 18 and 19, said levers being coupled together by a connecting bar 20. The levers 18 are pivotally connected to rods 21 extending under the plates 8 and 9 between 70 the ties 3 and 4 and 1 and 2. The rods 21 are pivotally connected to the cranks 22 of vertical pins 23 journaled in the plates 8 and 9. The upper ends of the pins 23 are provided with sets of shoes 24 and 25, the 75 shoes 25 being designed to move and hold the blocks 11 and 12 in one position and the shoes 24 in another position.

26 designates an actuating rod connected with the bell crank lever 19 and extending 80 under the plates 8 and 9 between the ties 2 and 3. The rod 26 is pivotally connected, as at 27, to the under side of a pivoted cross head 28 superimposed upon a frame 29 connecting the ties 2 and 3. The ends of the 85 cross head 28 are pivotally connected, as at 30, to rods 31, which are pivotally connected as at 32, to depending tongues 33 of the blocks 11 and 12, said tongues extending through transverse slots 34 provided there- 90 for in the plates 8 and 9. The rod 26 is shifted simultaneously with the shifting of the rods 21 and moves the cross head 28 upon its pivot, such movement in connection with the rods 31 shifting the blocks 11 and 95 12 in a direction away from the connecting bar 20, if the cross head be moved in the opposite direction the blocks 11 and 12 are moved toward the connecting bar 20. The movement of the blocks 11 and 12 through 100 the medium of the bar 20 and the connections between it and the blocks 11 and 12 is had simultaneously with the positioning of the shoes 25 or the shoes 24.

35 designates ties supporting a frog plate 105 36 at the intersection of the main rail 5 with the side of the rail 6. This frog plate is cut away, and provided with the guide rods 15 and the braces 16 similar to the plates 8 and 9. Slidably mounted upon the frog plate 110

36 is a switch block 37 having a groove 38 formed therein for flanges of rolling stock. The switch block 37 is provided with a depending tongue 39 extending through a slot 40 provided therefor in the frog plate 36. The lower end of the tongue 39 is connected by a rod 41 to a bell crank lever 42 pivotally mounted upon the outer end of one of the ties 35. To shift the block 37 simultaneously with the blocks 11 and 12, a suitable switch stand or mechanism can be employed, for instance, as a rotatable standard 43 provided with cranks 44 and 45 adapted to be connected to the bell crank lever 42 by a link 46 and to the bar 20 by a link 47.

It is apparent that the blocks 11, 12 and 37 in connection with their supporting plates provide a strong support or foundation for the wheels of rolling stock when shifting from one track to another, it being impossible for the blocks to shear or become displaced and cause railway accidents.

In Fig. 3 of the drawings, there are illustrated switch blocks 50 and 51, each block having a straight groove 52 and an angularly disposed groove 53 formed therein, said blocks providing a wheel tread between the rails 7 and the rails 5 and 6. These switch blocks 50 and 51 are simultaneously moved by a lever 54, and the blocks are supported and guided similar to the blocks 11 and 12.

My invention is not confined to any specific type of levers or operating mechanism employed for shifting the switch blocks, as these blocks can be used in connection with various kinds of systems and in connection with rails of different widths and shapes.

It is thought that the operation and utility of the switch will be fully understood without further description, and while in the drawings there are illustrated the preferred embodiments of my invention, it is obvious that such changes in the structural details as fall within the scope of the invention may be resorted to.

Having now described my invention, what I claim as new is—

1. In a switch the combination with a main track, and a side track, of switch plates at the juncture of said tracks, blocks movably arranged upon said plates, shoes movably arranged upon said plates for shifting said blocks, a frog block at the intersection of said tracks, and means for simultaneously moving all of said blocks.

2. In a switch, the combination with a main track, and a side track, of switch plates at the juncture of said tracks, switch blocks movably arranged upon said plates, shoes movably mounted upon said plates for moving said blocks, bars extending under said plates for moving said shoes, a frog plate at the intersection of said tracks, a block movably mounted upon said plate, a bar for moving said block, and means for simultaneously moving all of said bars.

3. In a switch, the combination with a main track, and a side track, of switch plates at the juncture of said side tracks with said main track, switch blocks slidably mounted upon said plates, said blocks having flanged grooves formed therein, sets of shoes movably arranged upon said plates for moving said blocks, bars arranged beneath said plates for moving said shoes, depending tongues carried by said blocks and extending through said switch plates, a cross head for moving said tongues, a bar for moving said cross head, a frog plate at the inner section of said tracks, a block movably mounted upon said frog plate and having a flanged groove formed therein, a bar for moving said block, and means for simultaneously moving all of said bars.

4. In a switch, the combination with a main track, and a side track, of switch plates at the juncture of said side tracks with said main track, switch blocks slidably mounted upon said plates, said blocks having flanged grooves formed therein, sets of shoes movably arranged upon said plates for moving said blocks, bars arranged beneath said plates for moving said shoes, depending tongues carried by said blocks and extending through said switch plates, a cross head for moving said tongues, a bar for moving said cross head, means carried by said switch plates for guiding the ends of said blocks, a frog plate at the inner section of said tracks, a block movably mounted upon said frog plate and having a flanged groove formed therein, a bar for moving said block, and means for simultaneously moving all of said bars.

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

ANTHONY L. VISSAT.

Witnesses:

R. G. RUSSELL,
GEO. M. CONNER.