F. SCHAD.

SWITCH OPERATING APPARATUS.

APPLICATION FILED JUNE 7, 1910.

969,302.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.

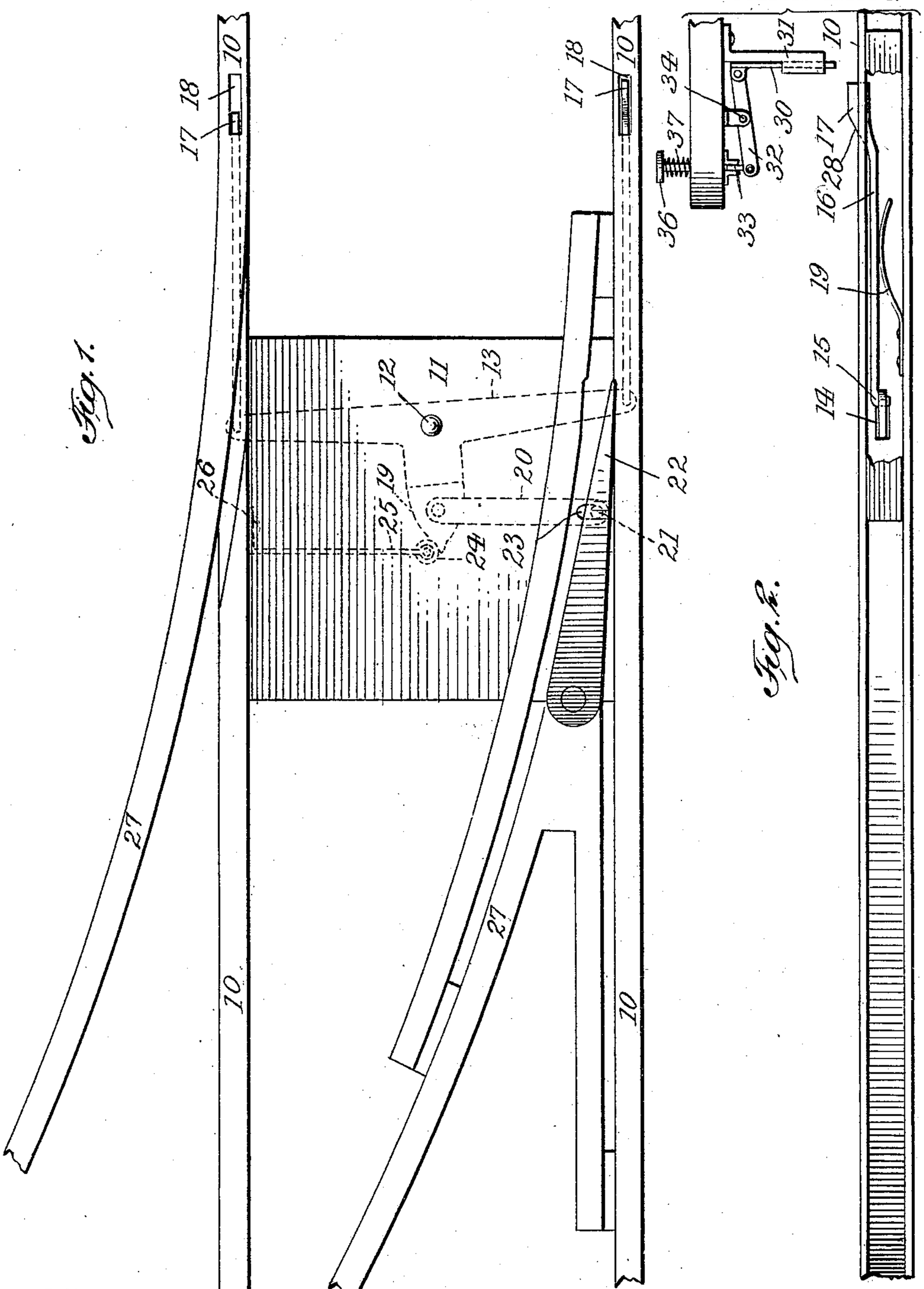

Fig. 1.

Fig. 2.

Witnesses:
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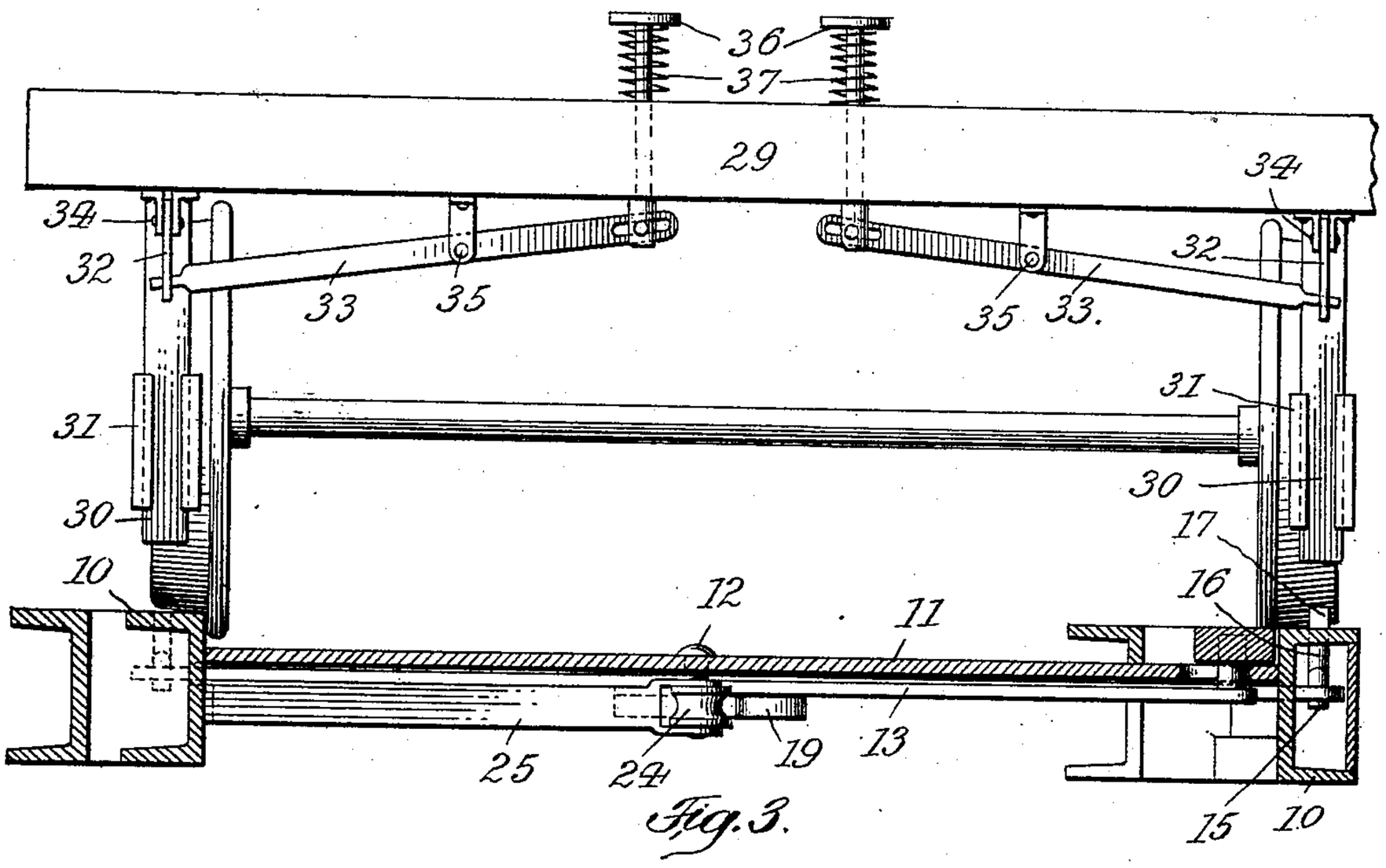

Fig. 3.

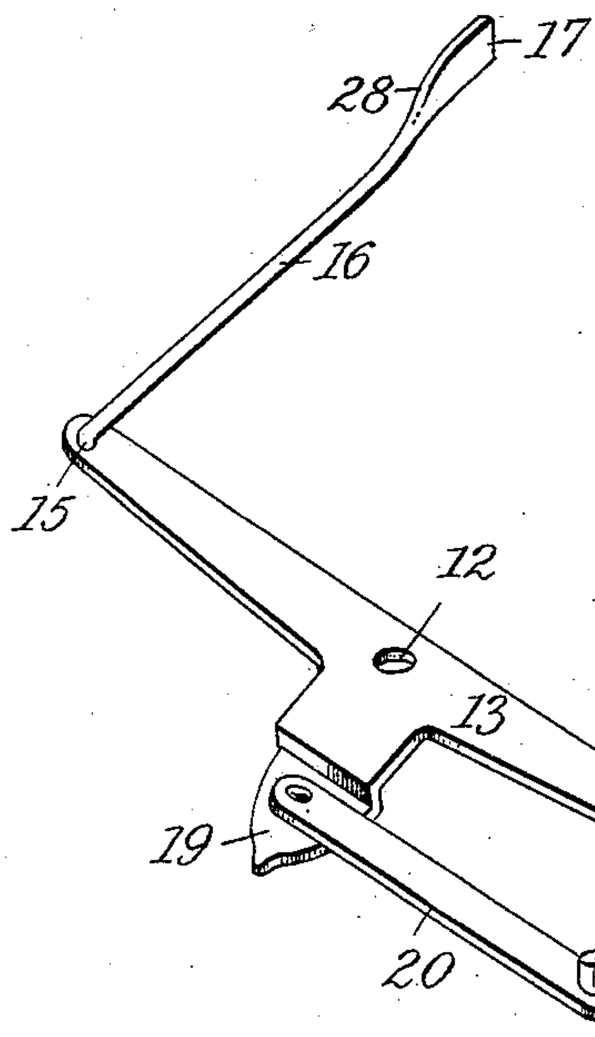

Fig. 4.

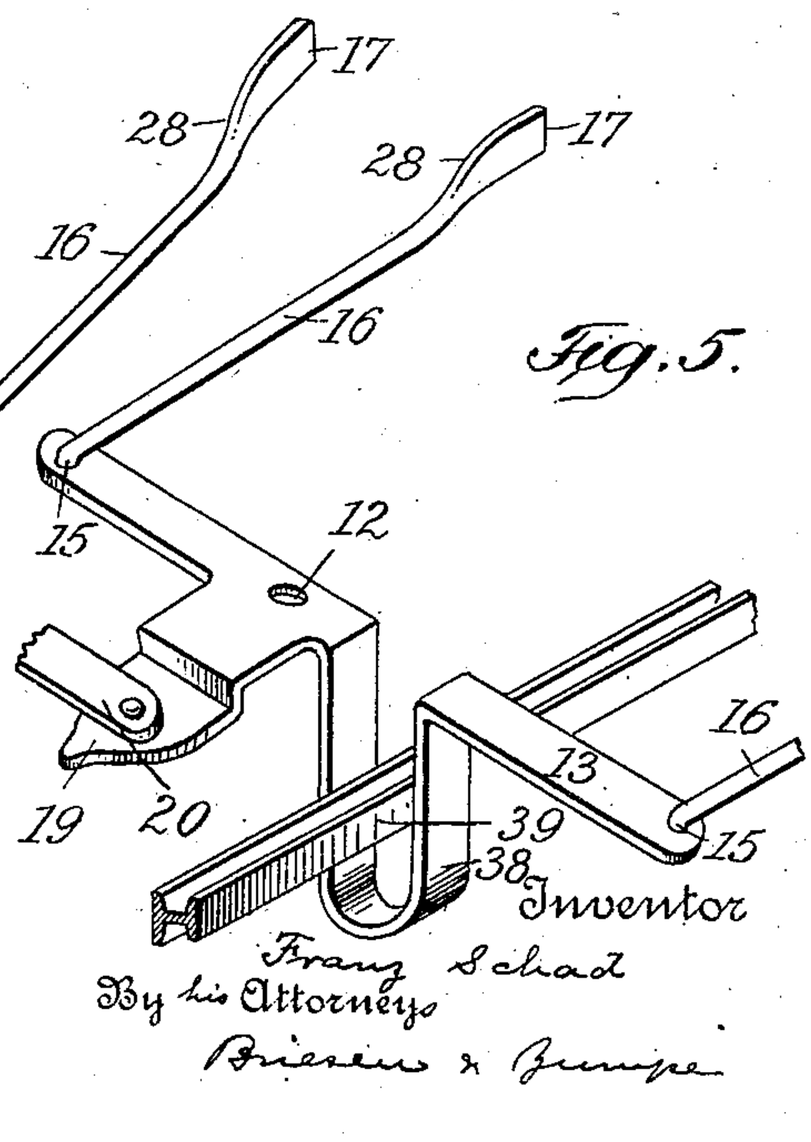

Fig. 5.

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UNITED STATES PATENT OFFICE.

FRANZ SCHAD, OF WEST HOBOKEN, NEW JERSEY.

SWITCH-OPERATING APPARATUS.

969,302. Specification of Letters Patent. **Patented Sept. 6, 1910.**

Application filed June 7, 1910. Serial No. 565,597.

To all whom it may concern:

Be it known that I, FRANZ SCHAD, a citizen of the United States, residing at West Hoboken, county of Hudson, and State of New Jersey, have invented new and useful Improvements in Switch-Operating Apparatus, of which the following is a specification.

This invention relates to a switch operating apparatus of novel construction, which permits the engineer or motor man of a train or car to set the switch without leaving his post.

The apparatus is of simple construction and reliable in operation.

In the accompanying drawing: Figure 1 is a plan of a switch embodying my invention, Fig. 2 a side view thereof with parts broken away and showing the actuating slide, Fig. 3 a cross section of the switch showing its engagement with said slide, Fig. 4 a detail of the tongue setting lever and cooperating parts, and Fig. 5 a detail of a modification of said lever.

Between the rails 10 of the main track there is located a base plate 11 which is secured to said rails in suitable manner. To the lower side of plate 11 is pivoted at 12 a T shaped three arm lever 13, the two alined arms of which extend outwardly through slots 14 of the rail-webs, and are engaged by the hook shaped rear ends 15 of a pair of rods 16. These rods are placed along the outer sides of rails 10, and are provided at the front ends with flattened heads 17, accommodated by slots 18, which are formed within the rail heads. Springs 19 secured to the rail flanges and engaging rods 16, tend to normally raise heads 17 to such a distance above the rails, as to be within the path of a suitable engaging device carried by the car. The central arm 19 of lever 13 is by link 20 and pin 21 pivoted to the switch tongue 22, plate 11, being slotted as at 23 for accommodating pivot 21.

The edges of arm 19 taper toward a point, and are engaged by a friction roller 24, journaled in a spring bar 25, which is secured to one of the rails 10 as at 26. As lever 13 is swung to the right or left, roller 24 will travel along the tapered edges of arm 19, and will securely hold the lever in position, by frictional engagement with said arm.

If say the head of the right rod 16 is pushed forward by the engine or car, lever 13 will be so tilted as to carry tongue 22 to the left and thus open the side track 27 (Fig. 1.) If the left head 17 is advanced, tongue 22 will be carried to the right to open the main track. A beveled edge 28 formed on the rear of head 17 and adapted to engage the lower side of the rail head, causes head 17, to be gradually depressed, during its movement, until it is flush with the rail tread, so that the wheels may pass freely over head 17, after the latter has performed its function of setting the switch.

The means for actuating the switch operating mechanism are as follows: The car or motor 29 is provided with a right and a left slide 30, alined respectively with the right and left head 17. Slides 30 are guided in ways 31 and are by levers 32, 33, fulcrumed at 34, 35, operatively connected to a right and left push pin or similar device 36, influenced by spring 37. Pins 36 may be operated either by hand or foot, and when depressed will lower the corresponding slide 30, so that the latter by engaging head 17, will set the switch in the manner already described. When pin 36 is released, it will be raised by spring 37, to elevate the slide above the plane of head 17.

In Fig. 5, lever 13 is shown to be provided with a bulged section 38, adapted to accommodate the current transmitting rail 39, of an electric railway.

I claim:

1. A device of the character described, comprising a pair of slotted rails, a switch tongue, a lever operatively connected thereto, a pair of rods connected to the lever and having heads that are received within the rail-slots, said heads being provided with beveled rear edges adapted to engage the rails, and means for normally raising said heads above the rails.

2. A device of the character described, comprising a pair of slotted rails, a switch tongue, a lever operatively connected thereto, a pair of spring-influenced rods connected to the lever and having flattened heads which are adapted to be received within the rail-slots, said heads being provided with beveled rear edges adapted to engage the lower sides of the rail-heads.

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Witnesses:

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