

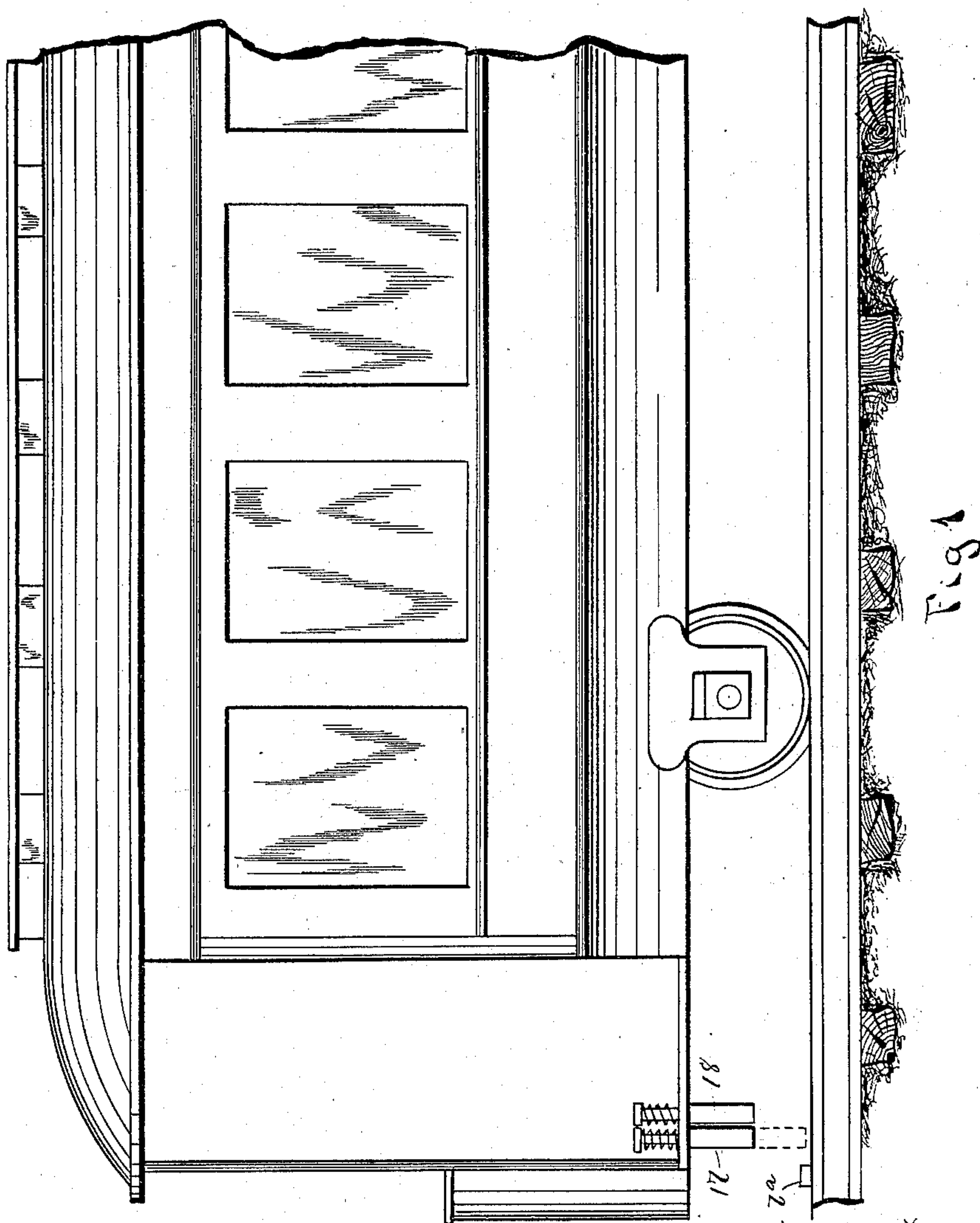
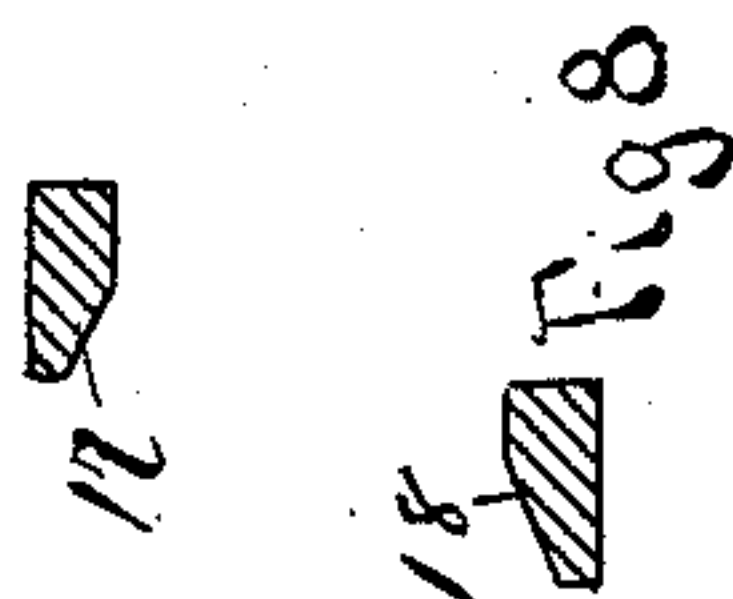
(No Model.)

2 Sheets—Sheet 1.

A. SCHMACKERS.
STREET RAILWAY SWITCH.

No. 567,921.

Patented Sept. 15, 1896.



Witnesses
J. Longenecker
W. B. Nevill

Inventor
Anton Schmackers.
By R. J. McCarty,
his Attorney.

(No Model.)

2 Sheets—Sheet 2.

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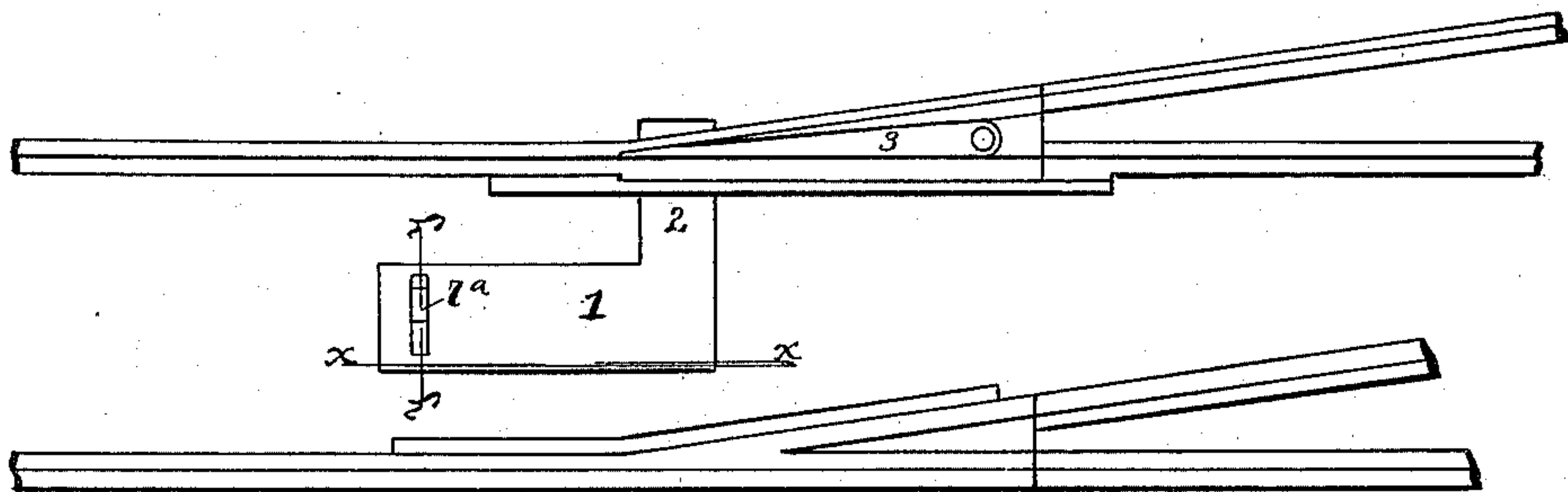


Fig. 2

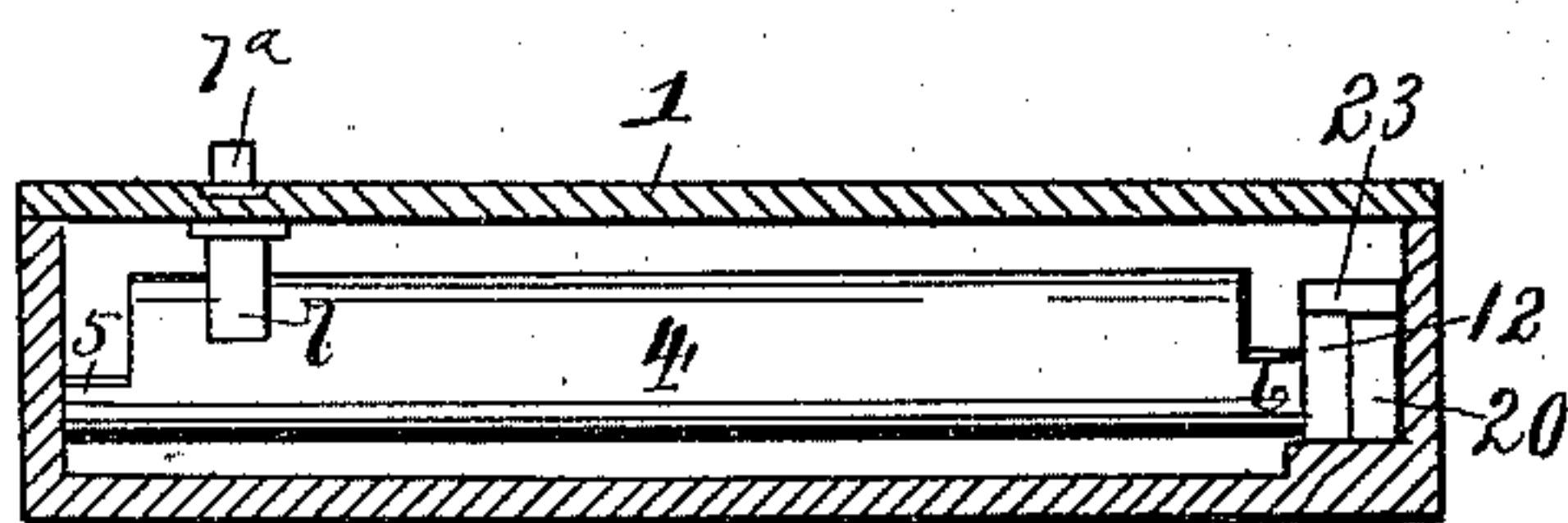


Fig. 3

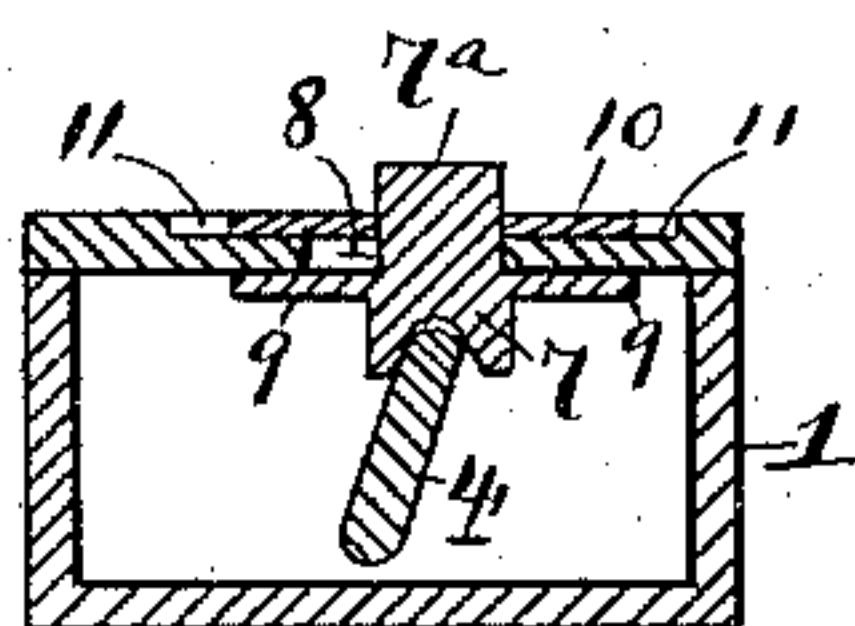


Fig. 5

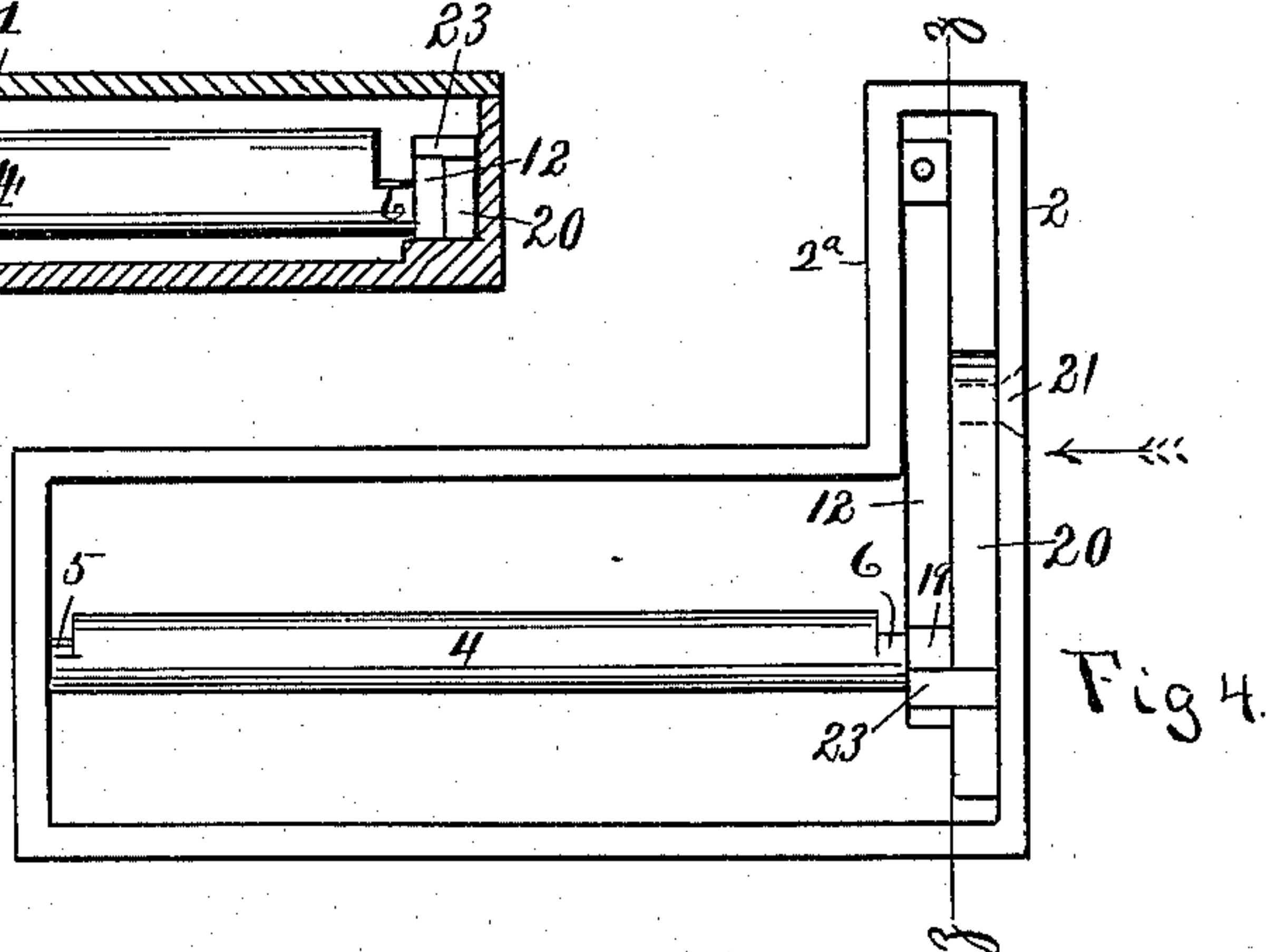


Fig. 4

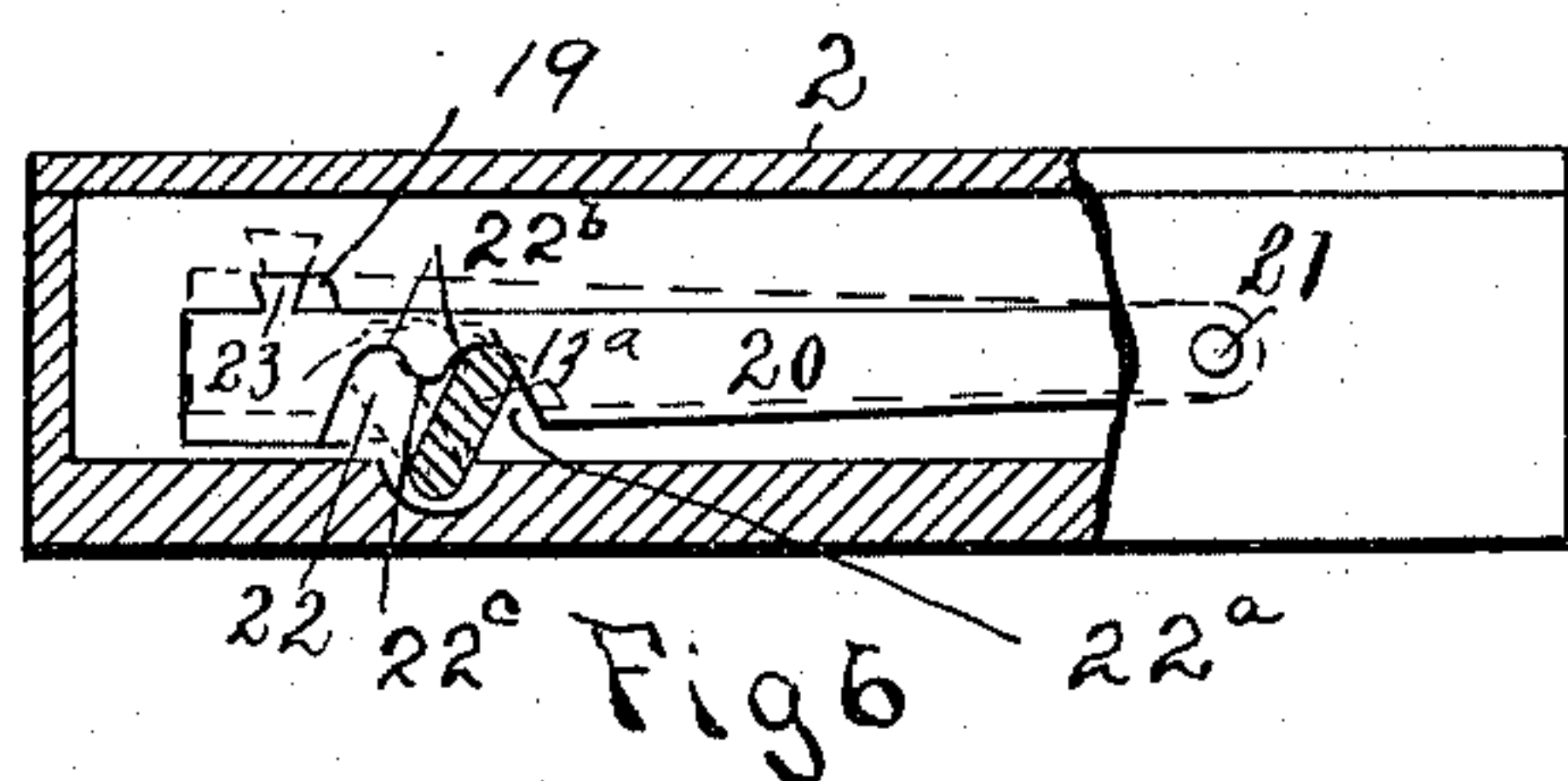


Fig. 6

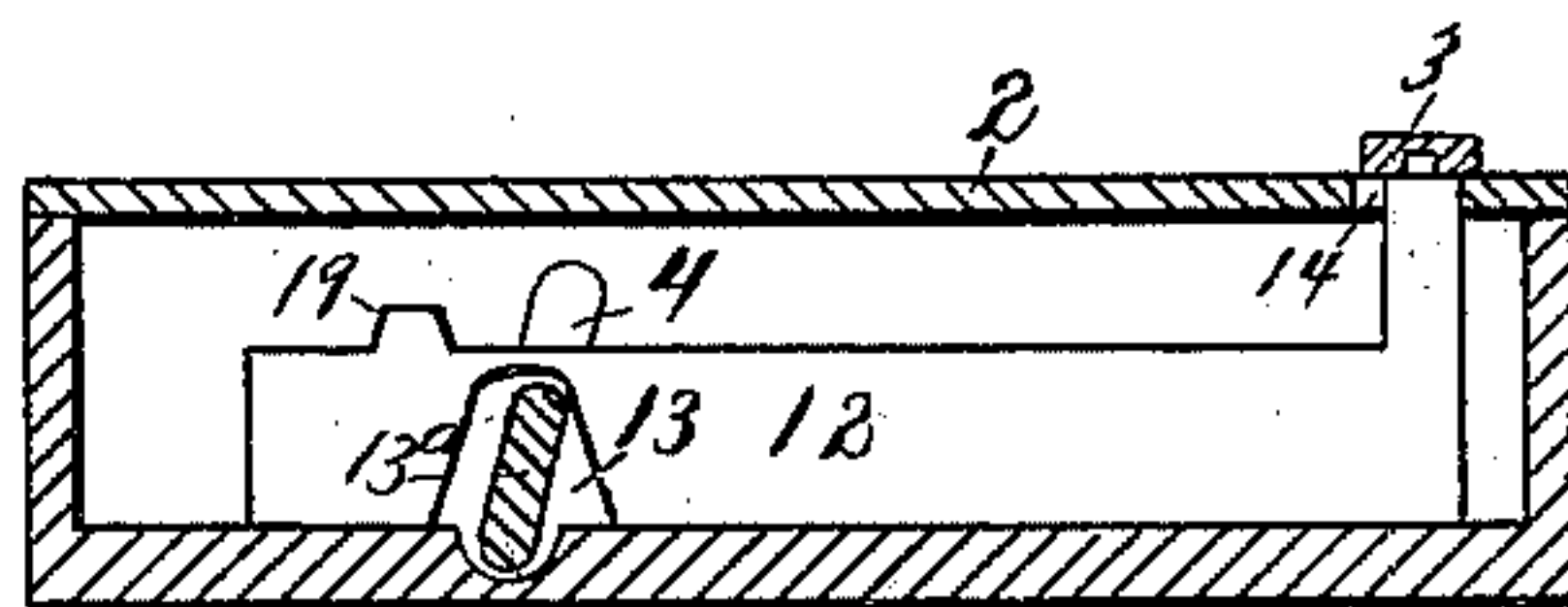


Fig. 7

Witnesses

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UNITED STATES PATENT OFFICE.

ANTON SCHMACKERS, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF TO
W. B. ANDERSON, OF SAME PLACE.

STREET-RAILWAY SWITCH.

SPECIFICATION forming part of Letters Patent No. 567,921, dated September 15, 1896.

Application filed April 10, 1896. Serial No. 587,044. (No model.)

To all whom it may concern:

Be it known that I, ANTON SCHMACKERS, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Street-Railway Switches; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in street-railway switches.

The object of the invention is to provide positive means for operating a switch and locking said switch against any movement independent of the means hereinafter described.

Referring to the annexed drawings, which are part of this application, Figure 1 is a side elevation of a portion of a street-car having means thereon for operating the switch. Fig. 2 is a plan view of main and diverging tracks with the switching devices. Fig. 3 is an enlarged sectional view on the line *xx* of Fig. 2. Fig. 4 is an enlarged plan view of the casing with the cover removed, showing the inclosed shifting devices. Fig. 5 is an enlarged sectional view on the line *yy* of Fig. 2. Fig. 6 is a view looking in the direction of the arrow in Fig. 4, showing part of the casing and the rocking bar in section. Fig. 7 is a sectional view on the line *zz* of Fig. 4. Fig. 8 designates cross-sections of the lower portions of the plungers.

In the specification similar reference-characters indicate corresponding parts.

1 designates metallic inclosing case, having a right-angle portion 2, that projects beyond the switch 3. The upper surface of this casing lies flush with the track between the rails, and is made water and dirt tight.

4 designates a rocking bar having eccentric journals 5 and 6, which have suitable bearings in the ends of the casing, and lie parallel with the rails.

7 designates a slide, the lower portion of

which straddles the upper edge of the bar 4, and the upper portion 7^a of which projects vertically through a transverse slot 8 in the upper side of the casing.

9 designates a flange projecting on both sides of said slide and forming a lower inclosure for the slot 8.

10 is a sliding plate through which the upper portion of the slide 7 projects, and which is shifted back and forth by said slide. This plate 10 lies in a recess 11 in the upper surface of the case and forms the upper inclosure of the slot 8, and which, together with the flange 9, prevents dirt, snow, or water from entering the interior of the casing.

12 designates a sliding bar lying in the casing at a right angle to the rocking bar 4 and is movable thereby. 13 is a tapering slot extending up from the lower side of said bar and which is occupied by an enlarged portion 13^a of one of the journals of the rocking bar. The other end of said sliding bar 12 projects upwardly through a slot 14 in the upper side of part 2 of the casing and is secured to the lower side of the switch 3. (See Figs. 4 and 7.) As the rocking bar is moved, the part 13^a thereof shifts the switch according to the direction of the motion imparted to the slide 7^a.

17 and 18 designate two spring-controlled plungers that project downwardly through the platform of the car, as shown in Fig. 1. These plungers are lowered by the foot in the path of the slide 7^a, and preferably have their lower ends tapering, as shown in Fig. 8, to lessen the friction when contact is made with the slide 7^a.

As shown in Fig. 7, the upper side of the bar 12 has a tapering lug, a projection 19, the function of which will presently appear.

20 designates a dog that lies parallel with and on the outside of the bar 12. This dog is pivoted to the casing at 21 and has slots 22 and 22^a, into which the part 13^a of the rocking bar works. The tapering sides 22^b of said slots offer no resistance to the rocking bar. Therefore the said dog begins to move upon its pivot at the same instant the rocking bar 4 is moved. The portion 22^c between the inclined sides 22^b of the slots 22 and 22^a in said dog 20 rests upon this portion 13^a of the rock-

ing bar 4, and is elevated thereby as said bar moves in an arc, as shown in dotted lines, Fig. 6.

23 is a downwardly and inwardly tapering lug or projection on the upper side of the dog that locks with the lug 19 on the bar 12. As shown in Fig. 4, this lug projects over the bar 12 on either side of the lug 19, and prevents the switch from being shifted out of position after once having been shifted. The motion imparted to the rocking bar 4 simultaneously elevates the dog 20 on its pivot and lifts the lug 23 away from lug 19, and further movement of the rocking bar 4 will shift the bar 12. When the limit of movement of bar 12 is reached in either direction, the dog drops by gravity, which brings the lug 23 on one or other side of lug 19, and prevents any sliding movement of the bar 12, except that imparted to it through the rocking bar 4. The side 2^a of the casing and the dog 20 form a way in which the bar 12 moves and is guided.

Having fully described my invention, what I claim is—

1. The combination with a railway-switch, of a shifting bar having a tapering slot in its lower side, and a lug or projection on its upper side, a dog pivoted parallel with said

shifting-bar, the said dog having a slot in its lower side in line with the slot in the shifting-bar, and a lug on its upper side, that projects over the shifting-bar and adjacent to the lug thereon, a rocking-bar projecting through said slots and adapted to impart a sliding movement to said shifting-bar, and an oscillating movement to said dog, and means for operating said rocking bar, substantially as shown and described.

2. The herein-described means for shifting a street-railway switch, consisting of a shifting-bar 12 having a tapering slot 13 and a lug 19, a dog pivoted adjacent to said shifting-bar and having a slot 22 in line with the slot, and a lug 23 that projects over said shifting-bar, a rocking bar 4 having a cam portion 13^a that projects through said slots and which is adapted to impart a simultaneous movement to said dog, and shifting-bar, and means for operating said rocking bar, substantially as described.

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

ANTON SCHMACKERS.

Witnesses:

EZRA M. KUHNS,
W. B. NEVIN.