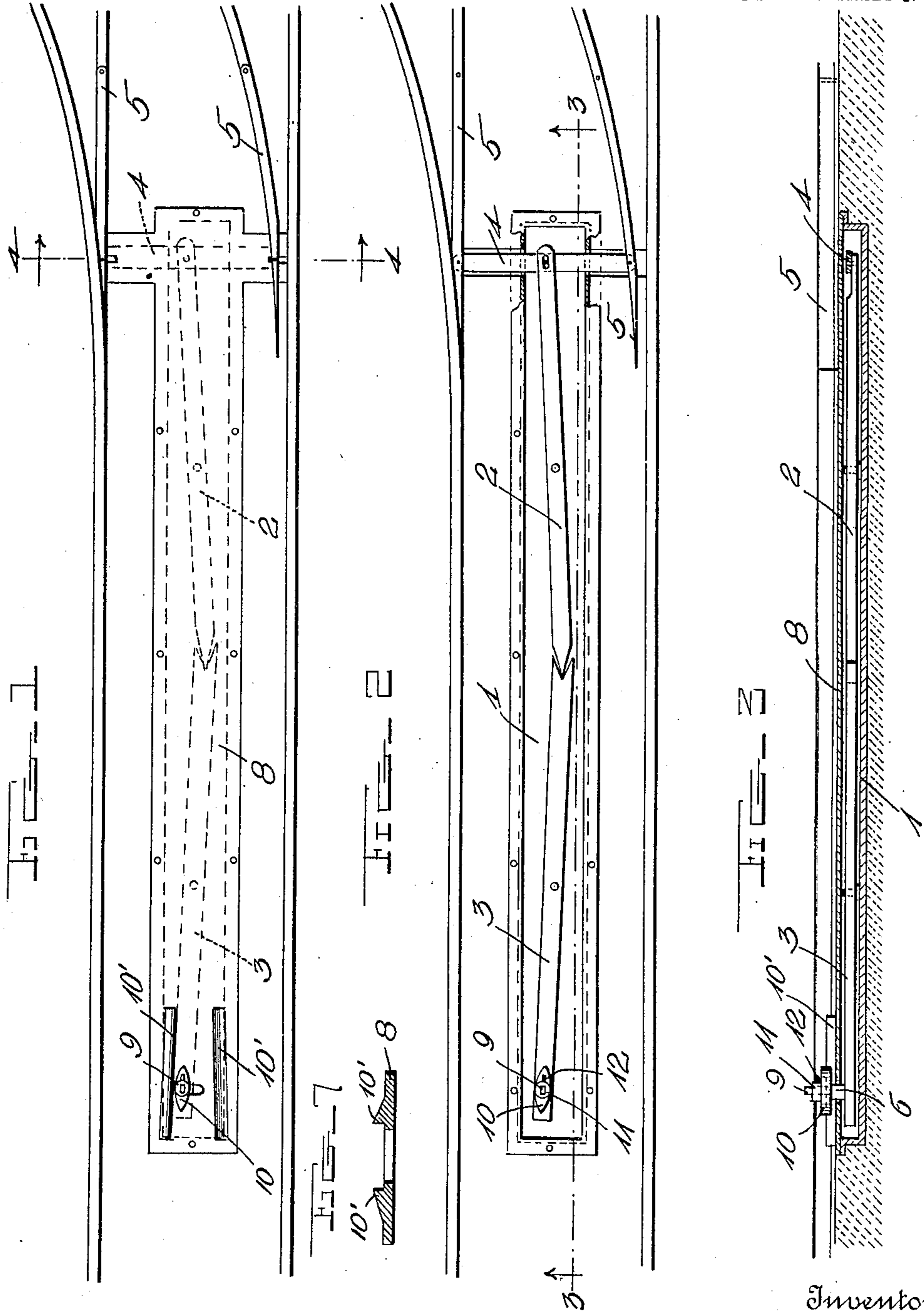


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 SWITCH MECHANISM AND ACTUATING MEANS THEREFOR.
 APPLICATION FILED AUG. 10, 1908.

913,427.

Patented Feb. 23, 1909.

2 SHEETS—SHEET 1.



Witnesses
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C. H. Giesbauer

Inventor
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 Attorneys

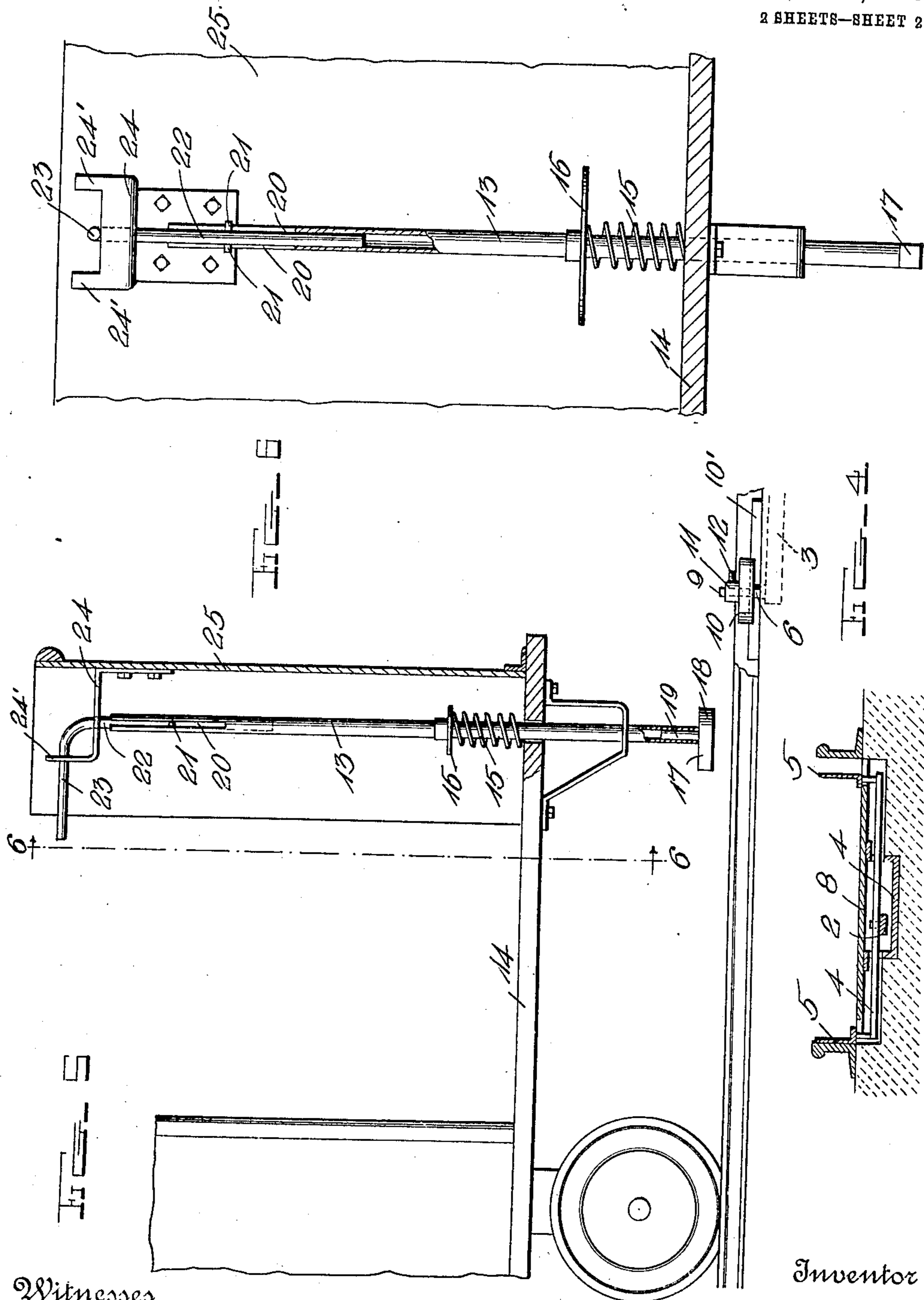
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UNITED STATES PATENT OFFICE.

JOHN C. PHILLIPS, OF AKRON, OHIO.

SWITCH MECHANISM AND ACTUATING MEANS THEREFOR.

No. 913,427.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed August 10, 1908. Serial No. 447,861.

To all whom it may concern:

Be it known that I, JOHN C. PHILLIPS, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Switch Mechanism and Actuating Means Therefor; 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.

This invention relates to new and useful improvements in switch mechanisms and car carried actuating means therefor; and has for its object to provide a simple and improved form of switch mechanism which may be actuated from the platform of a street railway car, thereby obviating the necessity of having an attendant to throw the switch.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan view of the switch mechanism embodying my improvements, Fig. 2 is a similar view with the cover removed, Fig. 3 is a central longitudinal section on the line 3—3 of Fig. 2, Fig. 4 is a transverse section on the line 4—4 of Fig. 1, and Fig. 5 is a side elevation of a portion of a street railway car with my switch actuating means applied thereto, and with certain parts broken away. Fig. 6 is a transverse section taken on the line 6—6 of Fig. 5, and Fig. 7 is a transverse section taken through the flanged end of the cover of the boxing.

In the embodiment illustrated the mechanism is contained in a suitable box or casing 1, which is laid in the bed of the track longitudinally thereof.

The switch mechanism comprises a switch throwing bar which is made in two longitudinal sections 2 and 3 respectively pivoted in the casing centrally of their ends and freely engaged at their inner or meeting ends. The outer end of the section 2 is connected with a transverse shifting bar 4, which extends through the side walls of the casing and is connected at opposite ends with the pivoted switch tongues 5. The outer end of section 3 of the switch throwing

bar is provided with an upright stud 6, which extends through a transverse opening 7 in a suitable cover 8, which is arranged over the box or casing 1. The upper end of this stud projects above the top of the cover and is reduced, as at 9, to receive a track cam 10, the latter being held upon the reduced end of the former by a washer and set-screw 11 and 12, or their equivalent means. Upstanding longitudinal flanges 10' are formed on the cover on opposite sides of the track cam, the purpose of which will be disclosed.

The switch actuating mechanism comprises an upright tubular plunger 13 which extends through the platform 14 of the car vestibule, said plunger being normally held in elevated position by a coil spring 15 interposed between the platform and a tread plate 16 formed on the plunger. The shoe 17 which is provided with a front beveled end 18 and a cylindrical stem 19 is carried by the lower end of the plunger, the same being held in position by means of its stem, which extends into and is welded to the lower end of the plunger. The upper end of the plunger is slotted longitudinally as at 20 to receive two laterally projecting off-sets or lugs 21, which extend from the body 22 of a suitable handle 23, which is used for turning the shoe either to the right or to the left to throw the switch in the proper direction. A rearwardly extending horizontal brace 24 extends from the front wall 25 of the car vestibule to support the handle 23, the rear end of said brace having a pair of laterally spaced upright lugs 24' to prevent the handle of the plunger from swinging out of engagement with the brace.

It is to be understood that my improved switch throwing mechanism may be applied to a double switch instead of to a single switch, as in the former case the same principles would necessarily be carried out.

The flanges 10' serve to force the shoe in positive engagement with either side of the track cam.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the

principle or sacrificing any of the advantages of this invention as defined in the appended claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. In a switch mechanism, the combination with a boxing laid longitudinally of the track bed, of a longitudinal switch throwing bar mounted therein, said bar comprising two intermediately pivoted sections, a shifting bar for connecting the outer ends of one of the sections with the switch tongues, a cover arranged over the box, an upright stud projecting from the outer end of the other pivoted section through the cover, and a track cam arranged at the outer projecting end of said stud.

2. In a switch mechanism, the combination with a boxing laid longitudinally of the track bed, of a longitudinal switch throwing bar mounted therein, said bar comprising two intermediately pivoted sections, a shifting bar for connecting the outer ends of one of the sections with the switch tongues, a cover arranged over the box, an upright stud projecting from the outer end of the other pivoted section through the cover; a track cam arranged at the outer projecting end of said stud, and switch throwing mechanism comprising a shoe adapted to engage the track cam.

3. In a switch mechanism, the combination with a boxing, of a longitudinal switch throwing bar comprising two pivoted sections mounted therein, a shifting bar for connecting one of the sections with the switch tongues, a cover arranged over the boxing, an upright stud projecting from the

outer end of the other section through the cover, a track cam arranged at the outer projecting end of the stud, switch throwing mechanism comprising a shoe adapted to engage the track cam, and longitudinal flanges formed upon the cover at opposite sides of the cam to force the shoe of the switch throwing mechanism into positive engagement with the cam.

4. In combination with a switch mechanism comprising a track cam having beveled side surfaces, switch actuating means comprising a tubular plunger movable through the platform of the car, a shoe having a front beveled end to engage either surface of the track cam and a vertical stem fitting in the lower end of the plunger, a spring to normally hold the plunger in elevated position, a foot plate to lower the plunger against the action of the spring, and manually operated means for turning the shoe in position to engage either of the side surfaces of the track cam.

5. A switch actuating mechanism comprising a tubular plunger formed in its upper end and at opposite points with vertical slots, a handle fitting in the upper end of the plunger and having lateral studs to enter the slots thereof, a brace to limit the lateral swinging movement of the handle, and a shoe at the lower end of the plunger.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN C. PHILLIPS.

Witnesses:

WM. A. MARTIN,
ADELLA C. SORRICK.