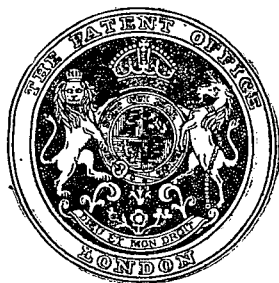


PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in or connected with Points for Model Electric Railways

We, **TRIX LIMITED**, of 91, Regent Street, London, W.1, a British Company, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to electrically operated points for model electric railways.

It has been proposed in a track switch to dispose a slidable armature operating the movable section of the rails between the rails and a base on which the rails are mounted, the ends of the armature having upstanding portions which are disposed on either side of the track and are operated upon by two solenoids mounted on the base and positioned one on each side of the rails.

The object of the present invention is to provide improved points whereby the whole of the electrical mechanism is contained within the base of the points without any projections on the underside of the base.

According to this invention, the points for model electric railways are so constructed that the track switch blades are actuated by an armature rockably moved by one or the other of two electro-magnets, the whole of the electrical mechanism being contained within the base of the points.

The invention will be clearly understood from the following description aided by the accompanying drawings, in which:—

Figure 1 is a plan of some points. Figure 2 an under plan, and Figure 3 a section on the line III—III of Figure 2 showing one example of carrying the invention into effect.

According to the example shown on the accompanying drawings, the points com-

prise a base 1 of insulating material having depending flanges 2. On the upper face of the base 1 are ribs over which inverted U-shaped metal outer ribs 3, 4 and 3a, 4a and centre rails 5, 5a, 5b are mounted. The outer rails 3, 4 and 3a, 4a are electrically connected by clips 7, 7a, 7b, 7c, 7d and 7e to spring connectors 8, 8a, 8b, 8c, 8d, 8e and the centre rails 5, 5a, 5b by clips 9, 9a, 9b respectively to spring connectors 10, 10a, 10b for connecting the rails of the points to the rails of adjoining sections as is known.

11 are guard rails.

The pivot piece 12 fixing the switch blades 13, 14 is pivotally mounted at one end on a pivot 15, the other ends of the blades 13, 14 being connected to a slide 16 of insulating material by clips which pass through the slide 16 and are formed on the under side with contacts 17, 18 adapted to make contact with the inner ends of the spring connectors 8, 8a.

In the underside of the base 1 are located two small separately energised electro-magnets 19, 20 and adjacent to them an armature 21 pivotally mounted intermediate of its length on a pivot 22.

On the armature 21 and to one side of the pivot 22 is pivotally mounted on a pivot 23 an actuating lever 24, the pivot 23 being at a little distance from one end. This end of the lever 24 is formed with a slot engaging with a stud 25 on the end of the armature 21 and the other end of the lever 24 is formed with a slot engaging with a stud 26 on the slide 16.

On the upper face of the base 1 are two lugs 27, 28 in which is rockably supported a hand operating lever 29, the lower end of which passes through a hole in the base to engage a disc 38 which is connected through a rod 30 with the slide 16.

One end of the coils of each electro-magnetic 19, 20 is connected by leads 31, 90

[Price

32 to terminals 33, 34 respectively and the other ends of the coils are connected by a common lead 35 to the centre rail 5 through the clip 9. The clip 9 is connected by leads 37, 37a from the clip 9 to the clip 9a of the centre rail 5a and through a clip 9c to the centre rail 5b respectively.

The outer rail 3 is connected by a lead 36 between the clip 7b and a clip 7f to the outer rail 3a, and the outer rail 4 by a lead 36a to the outer rail 4a.

The leads from the control are connected to the terminals 33, 34 with the return through the centre rail 5. On closing the circuit to say the left hand magnet 19 in Figure 2, the magnet 19 is energised and so attracts this end of the armature 21 which rocks and through the pivot 23 and stud 25 also rocks the operating lever 24 and moves the slide 16 over for the pivot piece 12 and blades 13, 14 to be in position for the train to run over the curved portion of the track. When in this position, the contact 18 of the rail 14 on the slide 16 contacts with the spring connector 8 of the straight outer rail 3 and makes the rail live, at the same time the contact 17 of the blade 13 is free of the spring connector 8a of the curved outer rail 4 so that the rail 13 is "dead." If desired, the centre rail spring connector 10a at this end could be so arranged that the contact 17 makes contact with the spring connector 10a so as to earth the blade 13. *Vice versa* when the other magnet 20 is energised the slide is moved over and the contact 18 could make contact with the spring connector 10a of the centre rail so that the spring contact 10a is always connected with the idle blade 13 or 14.

By rocking the hand lever 29 the points can be actuated by hand without electrical operation.

The underside of the base 1 is closed by a cover plate 39.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Points for model electric railways, wherein the track switch blade is actuated by an armature rockably moved by one or the other of two electro-magnets, the whole of the electrical mechanism being contained within the base of the points.

2. Points for model electric railways as claimed in claim 1, wherein a hand operating lever is provided for manually actuating the switch blade.

3. Points for model electric railways, comprising a hollow base of insulating material carrying the rails on the upper surface, a slide of insulating material in said base to which the non-pivoted ends of the switch blades are connected, two electro-magnets located in said hollow base, an armature rockably mounted in relation to said electro-magnets, an actuating lever pivotally connected intermediate its length on said armature, one end of the lever co-acting with a stud on the armature and the other end co-acting with a stud on the slide, so arranged that on energising one or the other of the electro-magnets the slide is moved to operate the switch blades, the whole of the electrical apparatus being contained within the hollow base, substantially as set forth.

4. Points for model electric railways as claimed in claim 3 wherein the slide carries contacts on the underside electrically connected with the rails of the switch blades, said contacts being adapted to contact with means on the track rails, substantially as set forth.

5. Points for model electric railways as claimed in claims 3 or 4, wherein a hand lever is rockably mounted in the upper face of the base and adapted to be actuated for manually operating the slide, substantially as set forth.

6. Points for model electric railways constructed substantially as described with reference to the accompanying drawings.

Dated this 14th day of July, 1948.

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[This Drawing is a reproduction of the Original on a reduced scale.]

FIG. 1.

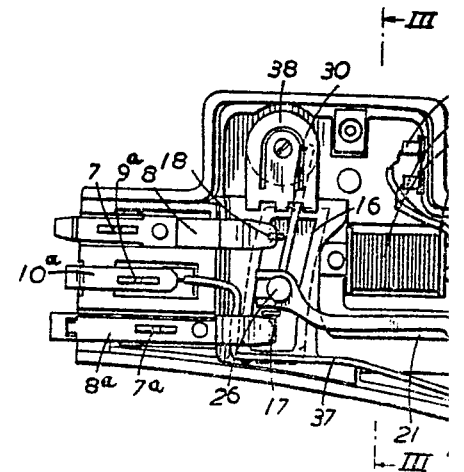
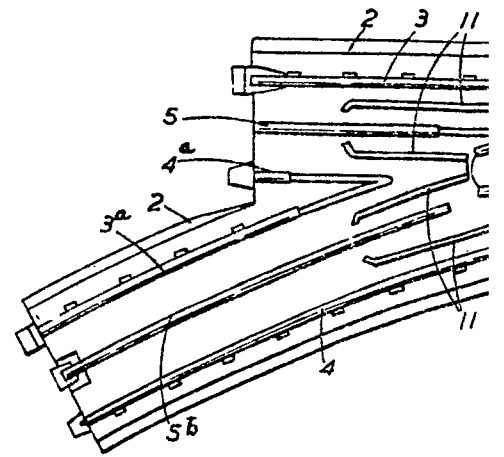
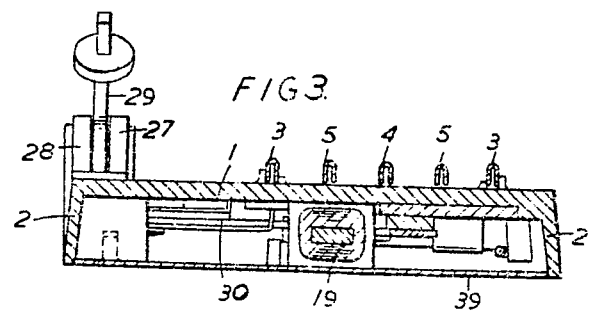
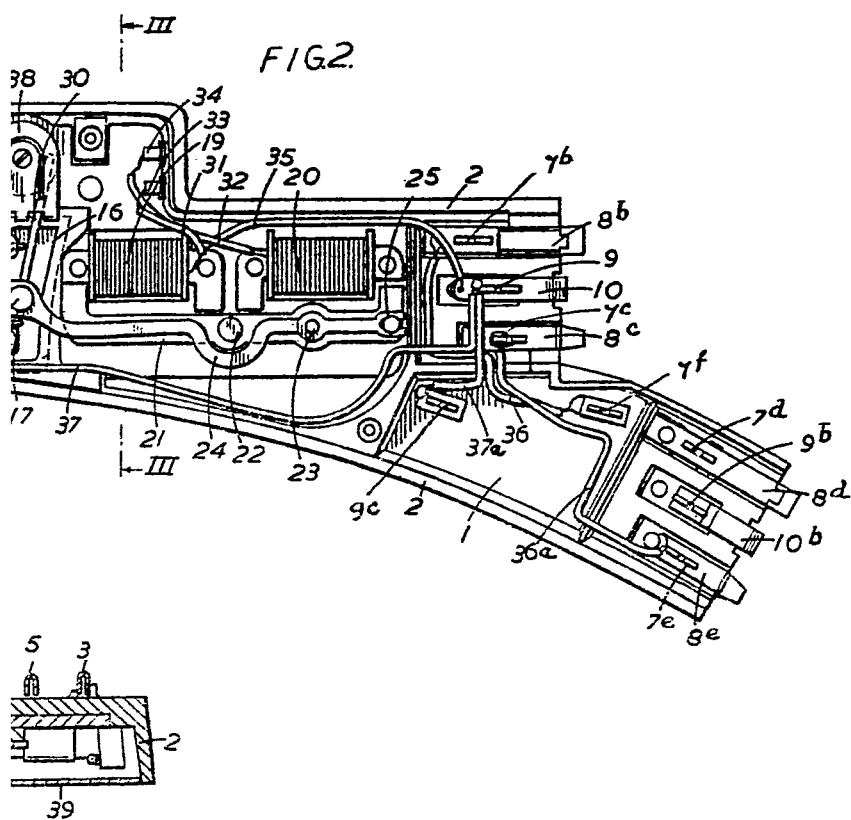
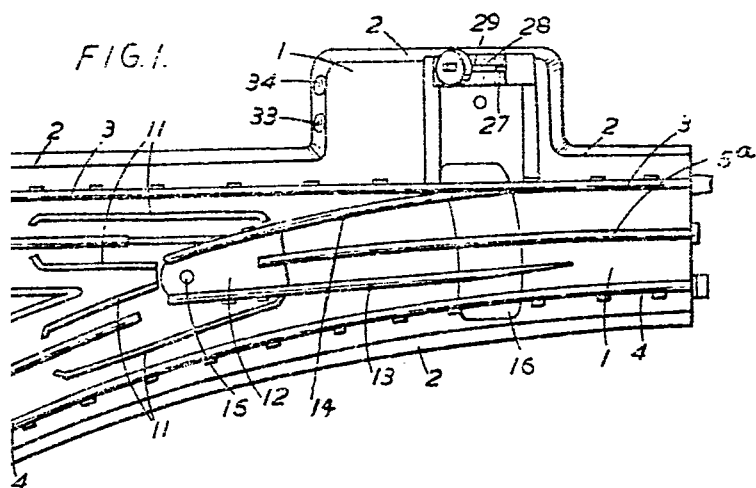


FIG. 3.







This Drawing is a reproduction of the Original on a reduced scale.