No. 897,622. PATENTED SEPT. 1, 1908.

C. A. HOTCHKISS.

TOY RAILWAY SWITCH.

APPLICATION FILED JUNE 8, 1907.

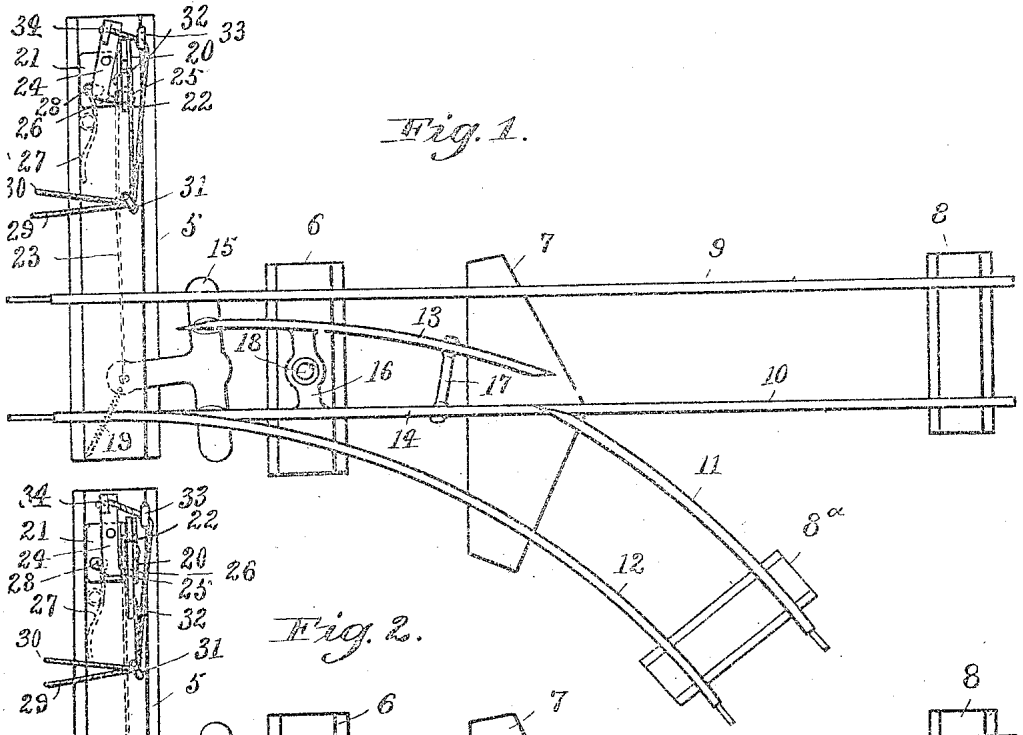


Fig. 1.

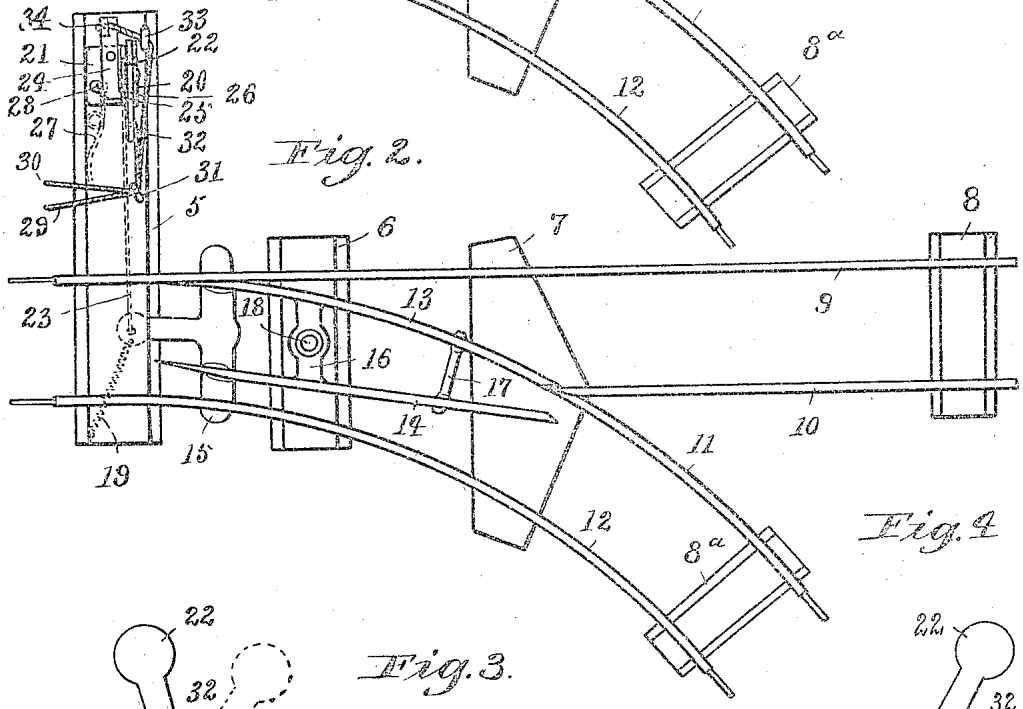


Fig. 2.

Fig. 4

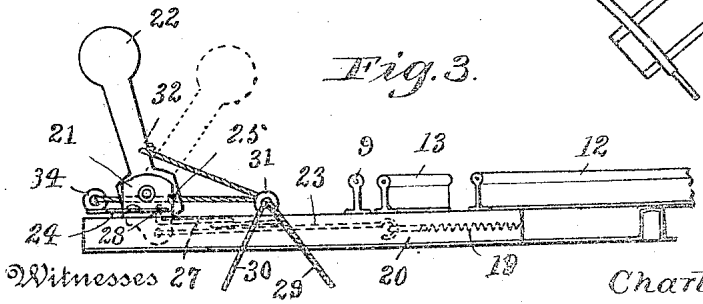
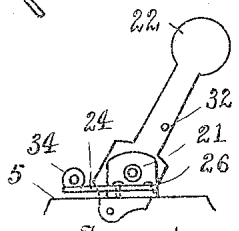


Fig. 3.



Witnesses
R. H. Newman.
Ruth Raymond.

Inventor
Charles A. Hotchkiss
By Chamberlain & Newman
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES A. HOTCHKISS, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE IVES MANUFACTURING CORPORATION, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

TOY-RAILWAY SWITCH.

No. 897,622. Specification of Letters Patent. Patented Sept. 1, 1908.

Application filed June 8, 1907. Serial No. 377,888.

To all whom it may concern:

Be it known that I, CHARLES A. HOTCHKISS, a citizen of the United States, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Toy-Railway Switches, of which the following is a specification.

My invention relates to switches for toy railways, and has for its object the production of a simple switch of novel construction including means for operating the same, and at a distance if desired.

My switch as designed is adapted to be connected in a miniature track, manufactured from sheet tin and formed in sections including rails and sleepers, and adapted to be joined together to form various designs of track including branches or sidings where a switch of my novel design would be employed.

The switch includes in part suitable sheet metal sleepers having a pair of straight and a pair of curved sheet metal rails secured thereto. One of said straight rails extend the full length of the section while the other only extends part way. The curved rails are arranged at an angle to the straight rails, and comprises a long and short rail, the latter being connected with the short straight rail while the other is turned in to line with and form a part of the main line section. Intermediate of the intersecting portions of the two track sections I employ a short rail section consisting of two pieces of rails suitably secured together and pivotally attached to one of the sleepers in a way to be swung in either direction to close or open either track section. Suitable mechanism is connected with this intermediate pivoted rail section for operating the same, to quickly open or close either section and for holding the said rails in their respective positions until such times as it is to be changed.

Upon the accompanying drawings forming a part of this specification, similar characters of reference denote like or corresponding parts throughout the several figures and of which,

Figure 1, shows a plan view of a toy railway switch constructed in accordance with my invention. Fig. 2, is a similar plan view of switch the same being shifted to an open position. Fig. 3, is an end view of switch as seen from the left of Fig. 1, but with part of the curved rails broken away. Fig. 4, is a detail end view of operating lever and bracket seen in preceding figures the position agreeing with that shown in Fig. 2.

In detail, 5, 6, 7, and 8 represent main track sleepers which may be struck up from sheet metal in any preferred manner and to which the several rail sections are secured.

9 indicates one of the rails which as shown is full length and attached to all four sleepers, and 10 is a parallel rail extending from sleeper 7 to 8, and in itself representing but a part of the length of the full track section.

11 and 12 are the rails of intersecting curved track section, and like the straight rail sections are secured to the sleepers including an outer sleeper 8^a. The curved rail 11 is full length while the mate is a short rail joined at one end to the inner end of rail 10 and extends from sleeper 7 to 8^a. The inner end of the curved rail 12 lines up with the short straight rail 10 to form one side of the end of main track. A pair of short rails 13 and 14 secured together by plates 15, 16 and 17 are pivotally supported upon sleeper 6 as at 18 and are adapted to be swung thereon in one direction to cause the rail 13 to register with the curved rail section 11 and in the other direction to cause the straight rail 14 to line with the short straight rail 10 to complete that side of straight section.

It will thus be seen that the roadway of the respective sections may be closed or opened as desired to insure the movement of a train upon either branch.

While I have referred to one of the sections as being straight and the other as curved, yet it will be understood that such particular designs of rails are not essential since the rails of both sections may be curved if preferred.

The plate 15 is provided with an arm 15^a which extends through a slot in side of the long end sleeper 5, and is engaged by one end of a spring 19 the opposite end of which is attached to said sleeper in a manner to tend to draw the arm, strap and outer ends of rails 13 and 14 over so that the outer beveled end of short straight rail 14 will lie up close to side of end portion of long curved rail 12 while the opposite end of said rail will line up with the inner end of short straight rail 10 as shown in Fig. 1. The said long sleeper 5 is hollow throughout its length and near its outer end is provided with a slot 20

in its top side. Beside this slot is secured a bracket 21 and to the vertically disposed portion of said bracket I pivot an operating lever 22 the lower end of which is connected by a link 23 with the before mentioned spring actuated arm 15[a] to which the forward ends of short rails are secured. To the top surface of the bracket 21 is pivoted a locking pawl 24 having a finger 26 which operates freely through an opening in the vertical portion of the bracket to engage a notch 25 in lower portion of pivotal lever. A small spring 27 secured to the underside of sleeper is provided with an upturned end 28 which projects through an opening of the sleeper and bracket in a way to engage the said pawl and normally hold its finger in contact with the lower portion of lever to insure its engagement with the before mentioned notch 25 when the lever is thrown over to the position shown in Figs. 2 and 4, against the tendency of the before mentioned spring 19 intermediate of sleeper and lever.

It will thus be apparent that when the parts are in the position shown in Fig. 2, the switch can be quickly changed over to the position shown in Fig. 1, by simply drawing out the finger of the pawl in a way to release the operating lever, whereupon the spring 19 will quickly draw over the pivotal rail sections and likewise the operating lever.

In order to manipulate the switch from a distance I have provided cord connections 29 and 30, both of which are threaded through an eyelet 31 secured to the top side of the sleeper 5. The first named cord 29 is connected as at 32 to the operating lever and when said cord is drawn as from a distance it obviously serves to throw the lever against its spring, from the position shown in Fig. 1, to that shown in Fig. 2, where the parts are held by the before mentioned pawl. The other cord 30 is carried through a second eyelet 33 and secured to the outer end 34 of the pawl, so that when the cord is pulled the finger is drawn from the notch of operating lever, permitting the same and the pivotal rail sections to throw over by the action of the spring. The cords in question may obviously be carried to any distant point in either direction as may be desired thus permitting the switch to be operated in either direction from a distance.

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

1. In a portable toy railway switch, the combination with a pair of intersecting track sections, sleepers upon which the rails of track are supported, one of said sleepers having an opening in its side, of a short rail section pivoted intermediate of the intersecting portions of said track sections, plates for securing the rails together, one of said plates being provided with an arm that extends into the said opening in side of sleeper, a lever connected with the said arm for moving the short rails to line with the respective track sections, and means for retaining said parts in line with either of its track sections.

2. In a portable toy railway switch, the combination with a pair of connected track sections supported upon sleepers, of a short rail section pivoted intermediate of the track sections, plates for securing the rails together one of said plates having an arm extending into the sleeper, a lever pivoted to sleeper and means within the sleeper for connecting the lever with the said arm.

3. In a toy railway switch, the combination with a pair of intersecting and connected track sections, of a short rail section pivoted intermediate the intersecting portions of track section, a spring for normally holding the short rail section so that one of its rails will line with one track section, a lever for shifting the said short rail section so that its other rail will line with the other section, and means for holding it in that position.

4. In a toy railway switch, the combination with a pair of connected track sections, of a short rail section pivoted intermediate the intersecting portions of track sections, a spring for normally holding the rail section to line with one side of track section, and means for retaining said parts in such position against the action of the holding means.

5. In a toy railway switch, the combination with a pair of connected track sections, of a short rail section pivoted intermediate the intersecting portions of track sections, means for normally holding the rail section to line with one track section, a lever for throwing said rail section to the opposite side, a pawl to engage the lever, and connections for engaging and releasing the pawl.

6. In a toy railway switch, the combination with a pair of connected track sections, of a short rail section pivoted intermediate the intersecting portions of track sections, means for normally holding the rail section to line with one track section, a lever connected with the rail section, means for operating the lever to set the rails, a pawl to retain the lever and rails in such position, and means for releasing the said pawl.

7. In a toy railway switch, the combination with fixed track sections, of a movable switch rail section, means for normally holding said movable section in line with one of the fixed rail sections, a connected pivotal lever for shifting the said movable section, means to hold the lever in such shifted position, and connections for setting or releasing said lever from a distance.

8. In a toy railway switch the combination with fixed track sections, of a movable switch rail section, a hollow sleeper connected to the fixed rail sections, a spring within the

sleeper to normally hold the pivotal rail section in line with a rail of one track section, a device for operating said movable switch in opposite directions against the action of said spring, and means for holding and releasing the operating device.

9. In a toy railway switch the combination with fixed track sections, of a movable switch rail section, a hollow sleeper connected to the fixed rail sections, a spring within the sleeper to normally hold the pivotal rail section in line with a rail of one track section, a bracket attached to the sleeper, a lever pivoted to bracket and connected with movable section, means to engage lever and retain movable switch section in open position.

10. In a toy railway switch, the combination with fixed track sections, of a movable switch rail section, a hollow sleeper connected to the fixed rail sections, a spring within the sleeper to normally hold the pivotal rail section in line with a rail of one track section, a device for operating said pivotal rails in opposite directions against the action of said spring, a pawl for holding the lever in such position, cords connected with lever and pawl for operating the same, and suitable guides through which the cords may be carried to distant points.

11. In a toy railway switch, the combination with a pair of intersecting and connected track sections, of a short rail pivoted intermediate the intersecting portions of track sections and having its two ends beveled to engage the sides of the rails of track sections, a lever for operating the pivoted short rail, a spring for holding the short rail in one position to register with one section, and means for holding it in another position to register with the other section.

Signed at Bridgeport in the county of Fairfield and State of Connecticut this 6th day of June A. D., 1907.

CHARLES A. HOTCHKISS.

Witnesses:
C. M. NEWMAN,
F. C. MURPHY.