Oct. 19, 1926. **1,603,466**

F. HORNBY

TRACK FOR TOY TRAINS

Filed Feb. 27, 1926

FIG. 1.

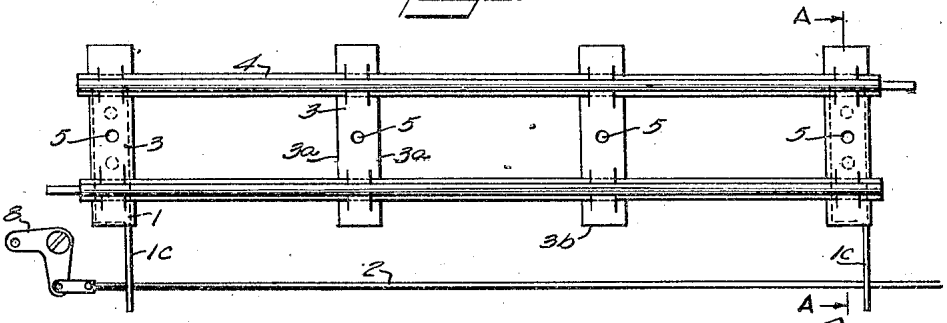


FIG. 4.

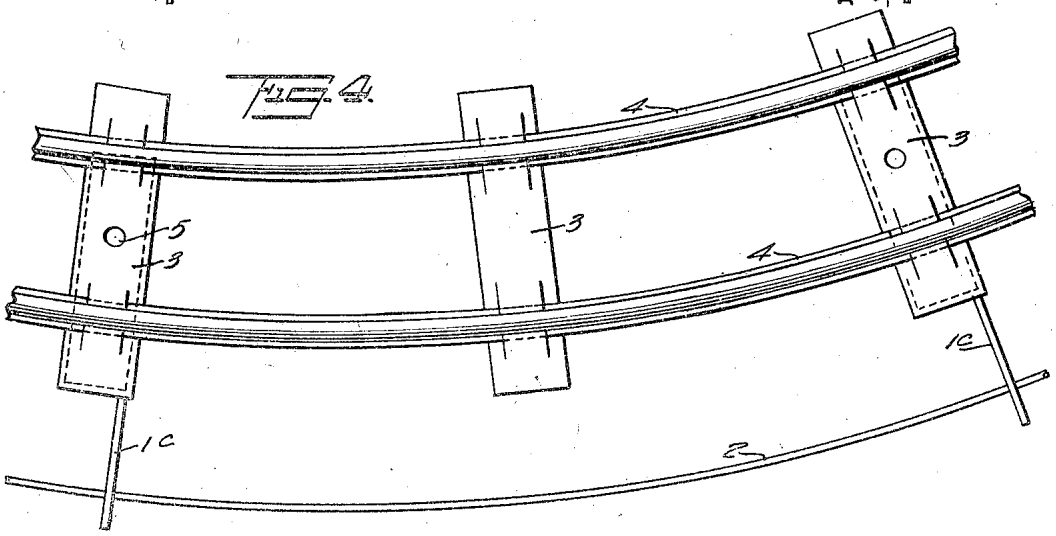


FIG. 6.

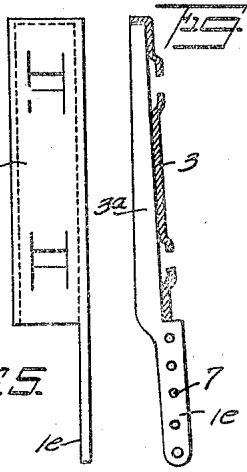


FIG. 5.

FIG. 2.

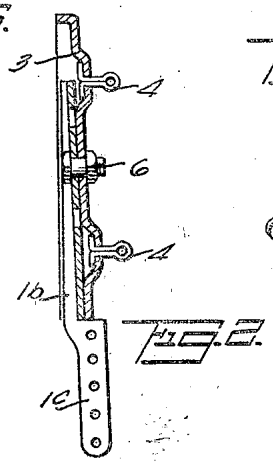
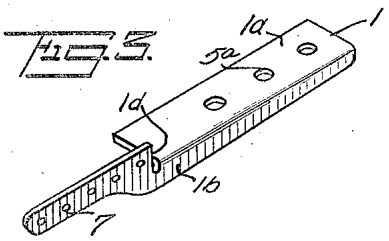


FIG. 3.



INVENTOR
FRANK HORNBY
BY
Ralph L. Scott
ATTORNEY

Patented Oct. 19, 1926. 1,603,466

UNITED STATES PATENT OFFICE.

FRANK HORNBY, OF LIVERPOOL, ENGLAND, ASSIGNOR TO MECCANO COMPANY, INC., OF ELIZABETH, NEW JERSEY, A CORPORATION OF NEW YORK.

TRACK FOR TOY TRAINS.

Application filed February 27, 1926, Serial No. 91,020, and in Great Britain March 23, 1925.

The present invention relates to improvements in tracks for toy trains. In toys of this kind it is altogether desirable that the installation and operation of parts be so simplified as to require only that degree of skill found in young boys. It is also desirable that the elements may be readily assembled and disassembled, in order that the user may have part in the building as well as in the operation of the toy.

In toy train outfits now on the market the switch and signal operating rods are carried by brackets to be positioned near the track but wholly independent thereof, and secured in place on the floor or other surface by tacks or screws. The proper positioning and securing of such brackets is beyond the ability of the average small boy. Further, even when the brackets are properly positioned and secured, the track must remain in fixed relation thereto; and if the track be moved, the brackets must be taken up, and then again put in place,—leaving the surface marked by holes.

The object of the present invention is the provision of means whereby the switch and signal operating rods are supported by brackets formed as a part of or carried by the track sleepers. With such arrangement no skill is required to position the brackets; they are securely held in place by the track, without mutilation of the floor; the rods are always in a position parallel to the rails, thus insuring smooth and reliable operation; and the track structure including the brackets and rods may be moved about at will and put in any desired location.

The invention broadly consists in a detachable sole plate having a flange depending from one side and extending beyond the end of the plate, said extended portion having a plurality of holes through which the operating rods or cables are adapted to slide, and means for securing the plate to a sleeper. Such plates may be used in combination with tracks of the usual type now in the hands of users. Alternatively to making the brackets as separate elements to be secured to the track the invention may be embodied in sleepers having a body portion with a depending flange on each side thereof, with an extension on one of said flanges projecting beyond the end of the body portion, and a plurality of holes in said extension through which the operating rods or cables are adapted to slide. Both forms may be most economically made, as by stamping from sheet metal, and such economy of manufacture is essential to commercial production.

The accompanying drawings are for the purpose of illustrating preferred forms, but it is to be understood that they are for that purpose only and are not meant to define the limits of the invention, as it is capable of receiving other mechanical variations. In the drawings—

Fig. 1 is a plan view of a track section showing detachable guide brackets fitted to the sleepers;

Fig. 2 is a cross section on the line A—A of Fig. 1 showing the guide bracket in position and bolted to the sleeper;

Fig. 3 is an isometric view of such bracket;

Fig. 4 shows the application of the bracket for carrying the guide rod round a curve;

Figs. 5 and 6 are a plan and a section respectively of a bracket formed integrally with the sleeper.

In carrying out the invention the brackets 1 or the like in which the operating rods 2 for the switch points or signal gear slide are preferably made detachable as shown in Figs. 1, 2 and 3. Such brackets are adapted to be secured to the sleepers 3 of the track, the rails 4 of which are secured on the sleepers in known manner. The sleepers are provided with a hole 5, and the sole plate or flat member 1^a on the bracket 1 is similarly provided with a hole 5^a. The width of the sole plate 1^a is such that it will preferably fit closely within the shallow side flanges 3^a of the sleeper with a side flange 1^b on the bracket lying closely against one of the side flanges 3^a of the sleeper. When in this position the central hole 5^a in the bracket registers with the hole 5 in the sleeper, and a small bolt 6 may be inserted through the registering holes and secured by a nut. The abutting of the flange 1^b against a flange 3^a will prevent any sidewise movement of the bracket.

The outer end of the bracket is formed with a flange 1^c pressed up preferably at right angles to the sole plate 1^a, and in this upstanding flange is formed a series of holes

7 through which are passed the operating rods such as 2, shown in the form of a wire of small diameter, for controlling the switch points or the signals, the rods being connected up in known manner to the usual bell cranks 8.

Such an arrangement besides ensuring parallelism of the operating rods with the track over straight stretches also permits the rods to assume a curved formation around bends in the track as in Fig. 4, the thin sheet metal of the flange 1^c permitting the curved rods to move slidably through the brackets without binding.

By providing the guide brackets with a series of holes a single operating rod 2 may be set in or out at certain definite distances parallel to the track, and the number of rods that may be used is limited only by the number of holes 7. As the guide brackets 1 are all made accurately and of standard uniformity, when they are so positioned under the sleepers that the holes 5 and 5^a register, and the parts are bolted in place, perfect parallelism of the rods in the guide apertures 7 of the bracket with each other and with the track rails is ensured, thus eliminating the necessity for accurate marking off and positioning the guide brackets when installed on the floor at the side but independently of the track. Any slight play or clearance as between the holes 5 and 5^a and the bolts 6, which might result in some slight difference in the position of the brackets 1, is prevented by the end shoulder 1^d of the flange 1^c which shoulder is abutted against the end 3^b of the sleeper when the guide bracket is being positioned and before the bolt 6 is tightened.

If desired the sole plate 1^a of the bracket, instead of being formed with a single hole, may be made with several holes, say three as shown, and in this case the holes may be advantageously pitched equidistantly apart thus enabling the bracket to be used in connection with constructional toy systems the characteristic feature of which is the facility of coupling several of their parts together by reason of the various elements having equidistantly pitched holes. By likewise pitching the holes 7 the bracket lends itself to being readily coupled with other elements in such toy outfits and thus forms a valuable addition thereto.

In the modified form shown in Figs. 5 and 6, instead of the guide bracket being formed separate from the sleeper and then detachably secured thereto, one of the sleeper flanges 3^a is provided with an extension 1^e similar to the member 1^c of the detachable bracket and similarly provided with the holes 7, such extension being integral with and forming part of the sheet metal stamping. In this form absolute alignment of the holes 7 is ensured and consequently a smooth sliding movement of the operating rods free from any liability of binding.

Having thus described the invention, the following is claimed:

1. In a track for toy trains, sleepers having a body portion provided with one or more holes therethrough and a depending flange on each side thereof, rails mounted on said sleepers, a detachable sole plate having a flange depending from one side and extending beyond the end thereof, said extended portion projecting above the plane of the plate and having a plurality of holes through which signal and switch operating rods or cables are adapted to slide, said plate being of a width to fit between the sleeper flanges and of such length that the inner end of its upwardly projecting flange will abut against the end of the sleeper to maintain parallelism between said rods and the track rails, and means for securing said plate to a sleeper.

2. In a track for toy trains, sleepers having a body portion with a depending flange on each side thereof, rails mounted on said sleepers, a detachable sole plate, means for securing the same to a sleeper, a flange depending from one side of said plate and abutting against one of the sleeper flanges to prevent sidewise movement of the plate, an extension on said flange projecting above the plane of the plate and abutting against the end of the sleeper to prevent inward movement of the plate, and a plurality of holes in said extension through which signal and switch operating rods or cables are adapted to slide.

3. The combination with the sleepers and rails of a track for a toy train of a detachable element comprising a rectangular sole plate having a flange depending along one side thereof and extending beyond the end of said plate, one or more perforations in the plate adapted to register with like perforations in the body of the sleeper whereby the parts may be secured together by bolts passing through said perforations, and a series of perforations in the extended flange to support and serve as guides for signal and switch operating rods or cables.

4. A detachable support and guide for signal and switch operating rods or cables in a toy railway system comprising a sole plate provided with a flange depending from one side and extending beyond the end thereof, said extending portion projecting above the plane of the plate and abutting against the end of the sleeper when in place and having a plurality of holes through which said rods or cables are adapted to slide, and one or more holes in said plate adapted to register with like openings in the sleepers to receive bolts whereby the support is secured in position.

5. A detachable support and guide for signal and switch operating rods or cables in a toy railway system comprising a sole plate provided with one or more holes adapted to register with like openings in a track sleeper and be secured thereto by bolts passing through said holes and a flange depending from one side of said plate and extending beyond the end thereof, said extended portion having a plurality of holes through which said rods or cables are adapted to slide.

6. In a track for toy trains, rails mounted on sleepers having a body portion provided with a depending flange on each side thereof, an extension on one of said flanges projecting beyond the end of the body portion and above the plane thereof, and a plurality of holes in said extension through which signal and switch operating rods or cables are adapted to slide.

7. In a track for toy trains, rails mounted on sleepers having a body portion provided with a depending flange on each side thereof, an extension on one of said flanges projecting beyond the end of the body portion, and a plurality of holes in said extension through which signal and switch operating rods or cables are adapted to slide.

In testimony whereof, I have signed my name to this specification.

FRANK HORNBY.