June 10, 1947. S. SCHAFFAN, JR 2,422,047

MINIATURE RAILWAY UNIT

Filed Nov. 27, 1944

Fig. 1

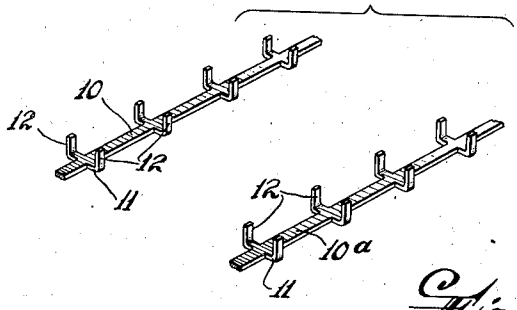


Fig. 2

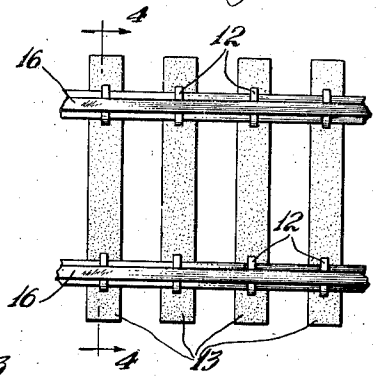


Fig. 3

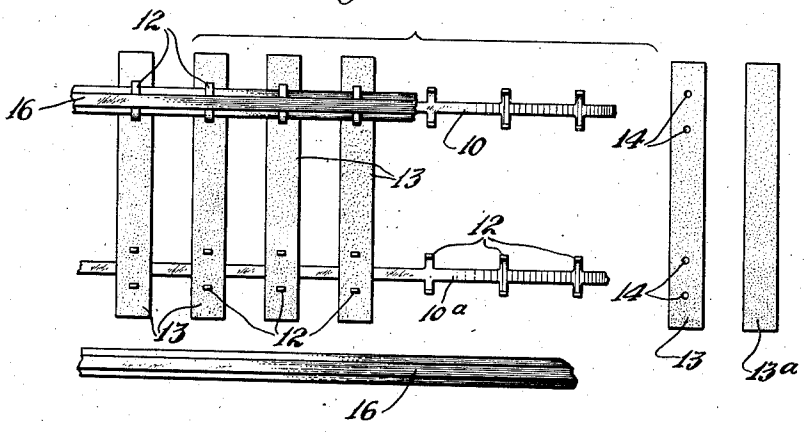
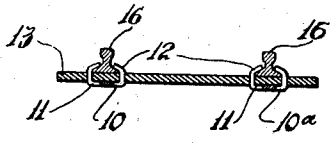


Fig. 4



INVENTOR.
STEPHAN SCHAFFAN JR.
BY
ATTORNEY

Patented June 10, 1947

2,422,047

UNITED STATES PATENT OFFICE

2,422,047

MINIATURE RAILWAY UNIT

Stephan Schaffan, Jr., Irvington, N. J.

Application November 27, 1944, Serial No. 565,266

1 Claim. (Cl. 238—10)

1

This invention relates to miniature railway units, and more particularly to the means for securing the rail members thereof to the cross tie units.

Miniature railways have become a very popular hobby. To those who enjoy the construction and use of such units it is important to obtain as faithful a reproduction of the full-scale railway system as possible. It is customary to attempt to faithfully reproduce precise details. In this art, many expedients have been proposed and resorted to, as is evident by the number of patents issued, with the objective of simulating workmanlike track systems. In miniature railway track construction, a deviation which, in a full scale system, might well be ignored, becomes obvious to the eye and may indeed result in a glaringly improper spacing of the rails or in a poor alignment of the cross ties and rails.

By the use of the unit of my invention, it is possible to align the rails in accurately spaced relation and to space the ties in precisely the correct spaced relation to each other and at precisely a perpendicular alignment with the axis to the rails so that the finished product is neat and represents an accurate simulation of the full scale railway units.

These and other advantageous objects, which will later appear, are accomplished by the simple and practical construction, combination and arrangement of parts hereinafter described and exhibited in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a pair of railway units constructed in accordance with my invention,

Fig. 2 is a top plan view of a railway track section embodying said units,

Fig. 3 is a top plan view partly fragmentary, of the railway track section shown in Fig. 2, with parts broken away, removed and extended for the sake of clarity,

Fig. 4 represents a transverse, vertical sectional view taken on line 4—4 of Fig. 2, in the direction of the arrows.

As shown in the drawings, the railway track unit of my invention comprises a bar 10 provided with laterally depending fingers 11, the ends 12 of which are preferably upturned at right angles to the axis of the bar. The fingers 11 are arranged longitudinally along the axis of the bar 10 in predetermined spaced relation for a purpose presently described.

The bar 10 of my invention is preferably used in conjunction with a like bar or unit 10*a*, each of the bars 10 and 10*a*, being adapted to hold one rail member as will presently appear.

The fingers 12 of the bars 10 are adapted to be passed through the cross-tie units 13, the latter being either imperforate, as indicated by the cross-tie 13*a* in Fig. 3, in which case the fingers

2

11 are forced through the material of the tie, or being provided with apertures 14 for the reception of said fingers, illustrated by the cross-tie 13 in Fig. 3.

It will be apparent that as the fingers 12 are arranged on the bars in spaced longitudinal arrangement, when the fingers are forced through the cross-ties, the latter will thereby be aligned in accurately spaced relation as shown in Figs. 3 and 4.

The fingers 12 define a guide channel for the reception of the rail members 16, which may be positioned thereon as shown in Fig. 3; then by simply clinching the fingers 12 upon the rails 16, the bars 10, rail ties 13, and rails 16 may be united with the parts maintained in accurately spaced, aligned, arrangement.

The rail unit of my invention may be fixed to cross-ties in any desired or convenient manner within the scope of this invention.

The bars 10 and 10*a* may be made of any suitable material, such as by blanking the same out of their flat steel, and then turning the ends 12 of the fingers upwardly, the final operation of clinching the fingers 12 over the rails 16 being performed in a simple manner, as by the use of a tool superimposed over the rails and having tapered surfaces, to clinch the fingers 12 thereover as shown in Fig. 4. The operation may be formed manually or by machine.

Any suitable material other than steel may be used for the construction of the railway unit of my invention, and the unit may likewise be formed by a molding process or in any other operation found convenient for that purpose. If it is desired to manufacture the railway track unit shown in Fig. 2 as a complete unit by machine, this can readily be done by following up the blanking and bending operations of the bar members with an operation in which the cross-ties are superimposed thereon and the rails positioned thereon, and the fingers 12 finally clinched down on the rails.

It will also be apparent that other forms of tie structures may also be used within the scope of this invention. For example, said ties might have connecting means to automatically space the same; this feature would be unnecessary as the construction of this invention provides the automatic self-aligning feature above set forth.

Where it is desired to provide circular or curve trackage, that end may be attained by transversely cutting the bar 10 or 10*a* which is to receive the rail which will describe the larger or outside diameter or arc of the curve, and bending the rails to the desired arc or curve, the bars 10 and 10*a* then readily conforming to the bending operation.

Having thus described my invention what I

claim as new and desire to secure by Letters Patent, is:

In a miniature railway system, a pair of spaced flat bars, pairs of fingers extending laterally from opposite side edges of each bar and being equidistantly spaced, said fingers being integral with said bar, the outer ends of said fingers being bent upwardly and disposed at right angles to the plane of the bar, cross ties positioned across the spaced bars and the respective pairs of aligned fingers, the upwardly disposed ends of the fingers projecting through the cross ties and extending thereabove, rails seated on said cross ties above the bars, the projecting upper ends of the fingers being clenched over the base portions of the rails to unite the parts in accurately spaced and aligned arrangement.

STEPHAN SCHAFFAN, JR.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,133,500	Donnelley	Oct. 18, 1938
2,161,562	Day	June 6, 1939
2,186,186	Weinreich	Jan. 9, 1940
2,188,894	Tyler	Jan. 30, 1940