

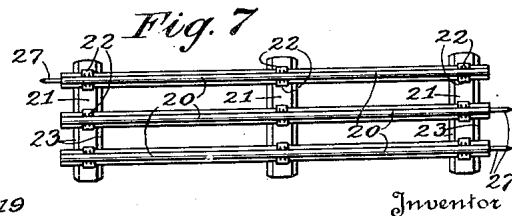
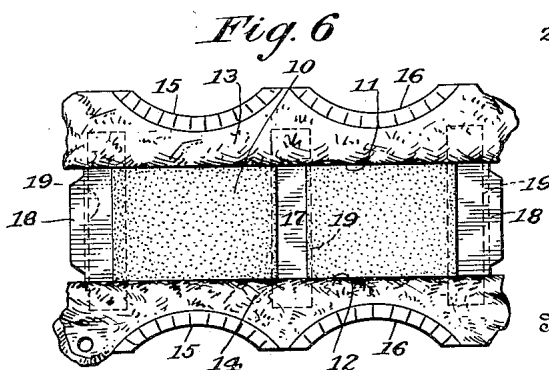
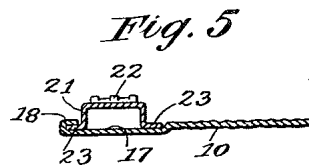
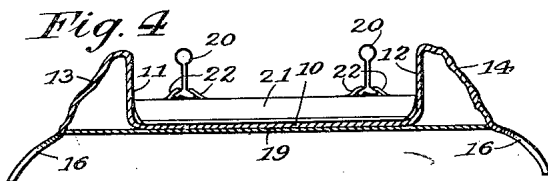
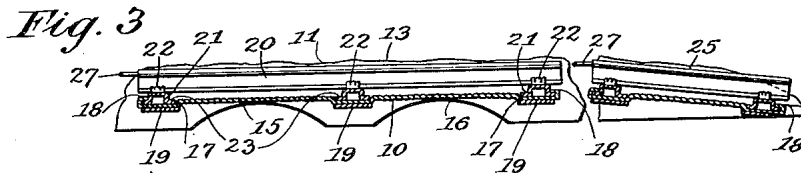
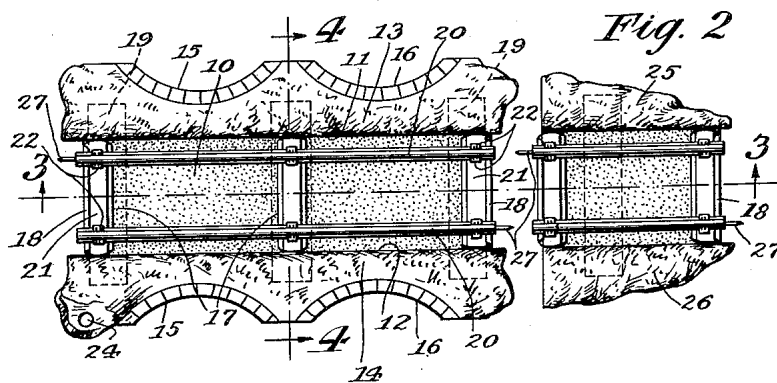
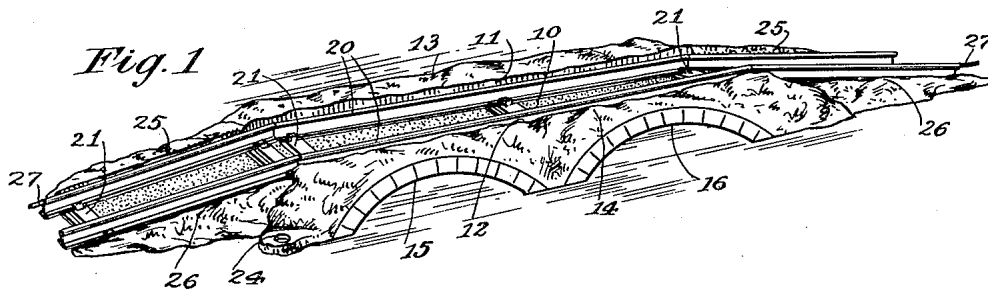
Nov. 4, 1924.

1,513,816

H. C. IVES

TOY RAILWAY BRIDGE

Filed May 10, 1924



Inventor

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UNITED STATES PATENT OFFICE.

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TOY RAILWAY BRIDGE.

Application filed May 10, 1924. Serial No. 712,256.

To all whom it may concern:

Be it known that HARRY C. IVES, a citizen of the United States, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, has invented certain new and useful Improvements in Toy Railway Bridges, of which the following is a specification.

This invention relates to an improved toy railway bridge, an object being to provide a structure of this character which will be realistic in appearance, and will be of simple and reliable construction. In toy railway systems the power of the locomotives is not usually sufficient to negotiate a steep grade without difficulty, so that relatively high bridges with rapidly inclined approaches are more or less impractical, and, at the same time it is highly desirable that the bridge should be of sufficient height to give the proper appearance of a realistic bridge. With this in view, it is a further object to provide a bridge structure which will be of sufficient height to give the appearance of a bridge, and at the same time having approaches of relatively low inclination.

Another object is to provide a bridge structure in which the trackage will be protected, so that it will not become bent or broken through rough usage.

As is well known, toy railway systems are of two types, those having mechanically powered locomotives and operating upon two rail trackage, and those having electrically powered locomotives and operating upon three rail trackage including a third or power rail. In the manufacture of accessories, such as bridges, both kinds have been manufactured as independent items with the particular type of track built into the same, with the result that the manufacturer was apt to be overstocked with one type and have a shortage of the other. It is an object of the invention, therefore, to provide a bridge structure which may be manufactured in any desired quantities, and to which standard track lengths, of either the two or three rail type, may be readily secured in the necessary amounts as occasion demands, so that the manufacturer is enabled to accurately control his output to the particular requirements of the market.

With the above and other objects in view, an embodiment of the invention is shown in the accompanying drawings, and this embodiment will be hereinafter more fully described with reference thereto, and the invention will be finally pointed out in the claims.

In the drawings:

Fig. 1 is a perspective view of a toy railway bridge structure, according to the present embodiment of the invention, and showing the intermediate and approach sections attached;

Fig. 2 is a plan view thereof, and showing one approach section separated from the intermediate section;

Fig. 3 is a longitudinal sectional view, taken along the line 3—3 of Fig. 2;

Fig. 4 is a cross section, taken on the line 4—4 of Fig. 2;

Fig. 5 is an enlarged section of one of the sleepers and an end of the bridge section, illustrating in detail the method of fastening one to the other;

Fig. 6 is a plan view of the intermediate bridge section, before attachment of the track section; and

Fig. 7 is a detached plan view of a three rail electric toy track section, also adapted to be secured to the center bridge section.

Similar reference characters indicate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, the bridge structure shown therein is of the three section type comprising an intermediate section of full length, and end approach sections of high length, it being understood however, that this arrangement may be reversed, the intermediate section being of half length and the approach sections of full length, or that all of them may be of the same length.

According to the present embodiment of the invention, the intermediate section comprises a sheet metal base having a raised bed 10 extending longitudinally and provided with upwardly bent parallel side walls 11 and 12 to form a channel, and side or terrace portions 13 and 14 bent outwardly and downwardly from the side walls with their lower edges in a horizontal plane below the bed. Arched cut outs 15 and 16 are provided in each of the terrace portions, with

their margins impressed to represent masonry in imitation of bridge arches, and the terrace portions are preferably painted to represent grass and foliage, and roughly impressed to add to its realistic appearance.

The bed 10 is provided centrally and at each end with depressed sleeper or tie seating recesses 17, the portions of the bed between these recesses being roughly impressed to give the appearance of gravel or cinders. At each end of the bed there are provided extended flap portions 18, as shown in Fig. 6, for securing the track sections thereto, as will presently appear.

A series of transverse reinforcing brace bars 19 are provided at the under side of the structure, being soldered at their ends to the under sides of the terrace portions and at their intermediate portions to the under surfaces of the recesses 17, thereby providing a rigid structure in which the raised bed is firmly supported.

The standard track sections are either of the two rail type, as shown, for instance in Fig. 2, or of the three rail type, as shown in Fig. 7. The rails 20 are formed from sheet metal bent to produce a hollow tread and a flanged base, and are mounted upon the spaced end and intermediate sleepers or ties 21, being secured thereto by means of clamping lugs 22 struck from the upper surface of the sleepers. The sleepers are in the form of channels having outwardly bent base flanges 23 along their longitudinal edges.

The track section, either of the two or three rail type, is secured to the bridge by seating the same upon the bed 10, with the sleepers engaged in the seating recesses 17 and having their ends engaging the side walls 11 and 12 of the channel to position the track transversely. The end flap portions 18 are thereupon bent over into clamping relation with the end flanges 23 of the end sleepers, and the track section is thereby securely fastened and held against either transverse or longitudinal shifting. Fig. 2 shows the bridge provided with track of the two rail type, while Fig. 7 shows the three rail electric track also adapted for attachment to the bridge in the same way.

The bed channel is of such depth that the upper surfaces of the terrace portions are substantially flush with the upper tread surfaces of the rails, so that while the bridge has the appearance of being relatively high, the actual height of the tracks, and therefore the grade of the approaches thereto, are relatively low. The channel structure also protects the tracks, so that there is very little likelihood of the tracks becoming bent or broken from rough usage.

The ends of the terrace portions extend beyond the ends of the bed and tracks, and serve to overlap the ends of the approach

sections, as will presently more fully appear, and at one end one of the terrace portions is provided with an extended apertured portion 24, for the purpose of fixing the position of the bridge upon a suitable support, or for hanging the same up when not in use.

The approach sections are similar in their general formation and structure to the intermediate section, being provided with a channeled bed and the track sections being positioned transversely in the channel and attached at their ends by bent over flanges in a similar manner. The terrace portions 25 and 26, however, are of smaller size than the terrace portions 13 and 14, so that they fit at their projected inner ends under the ends of said latter portions, thereby giving the appearance of a continuous terrace. The upper surfaces of the terrace portions 25 and 26, as well as the bed, are inclined so that the track rises from the normal level of the adjacent trackage to the raised level of the bridge track. It will be understood that the outer ends of the approach sections are attached to the adjacent trackage by the fixed pins 27 provided in the ends of the rails and adapted to be inserted in the hollow ends of the adjacent rails, and that the approach sections of the bridge are attached to the intermediate section in a similar manner.

I have illustrated and described a preferred and satisfactory embodiment of the invention, but it will be obvious that changes may be made therein, within the spirit and scope thereof, as defined in the appended claims.

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

1. A toy railway bridge structure, comprising a base having a raised track bed, side walls at the longitudinal edges of said bed forming therewith a channel, and supporting means extending downwardly from said side walls with their lower edges below the plane of said bed, and rails attached to said bed between said side walls.

2. A toy railway bridge structure, comprising a base having a raised track bed, side walls at the longitudinal edges of said bed forming therewith a channel, and supporting means extending downwardly from said side walls with their lower edges below the plane of said bed, and tracks comprising ties and rails attached thereto, and attached to said bed with the ends of said ties in engagement with said side walls to position the track transversely.

3. A toy railway bridge structure, comprising a sheet metal base consisting of a raised track bed, side walls bent upwardly along the longitudinal edges of said bed, and supporting terrace portions bent out-

wardly and downwardly from the upper edges of said side walls with their lower edges below the plane of said bed, and rails attached to said bed between said side walls.

4. A toy railway bridge structure, comprising a sheet metal base consisting of a raised track bed having spaced tie-seating depressions stamped therein, side walls bent upwardly along the longitudinal edges of said bed, and supporting terrace portions bent outwardly and downwardly from the upper edges of said side walls with their lower edges below the plane of said bed, and tracks comprising spaced ties and rails attached thereto, and attached to said bed with the tie seated in said depressions and having their ends engaging said side walls to position the track transversely.

5. A toy railway bridge structure, comprising a sheet metal base consisting of a raised track bed, side walls bent upwardly along the longitudinal edges of said bed, and supporting terrace portions bent outwardly and downwardly from the upper edges of said side walls with their lower edges below the plane of said bed, reinforcing brace bars at the under side of said base secured at their ends to the under sides of said terrace portions and at their intermediate portions to the under side of said bed, and rails attached to said bed between said side walls.

6. A toy railway bridge structure, comprising a base having a raised track bed, side walls at the longitudinal edges of said bed forming therewith a channel, and supporting means extending downwardly from said side walls with their lower edges below the plane of said bed, rails attached to said bed between said side walls, and inclined detachable approach sections secured to the ends of said tracks.

7. A toy railway bridge structure, comprising a base having a raised track bed, side walls at the longitudinal edges of said bed forming therewith a channel, and supporting means extending downwardly from said side walls with their lower edges below the plane of said bed, rails attached to said bed between said side walls, and inclined detachable approach sections secured to the ends of said tracks, and comprising a base having an inclined bed, side walls at the longitudinal edges of said bed, supporting means extending downwardly from said side walls and having their lower edges in a horizontal plane, and rails attached to said bed between said side walls.

8. A toy railway bridge structure, comprising a base having a raised track bed, a

track section engaged upon said bed, means on said base adapted to position said track section transversely, and clamping means on said base adapted to clamp said track section on said bed and retain the same against longitudinal movement.

9. A toy railway bridge structure, comprising a sheet metal base consisting of a raised track bed, side walls bent upwardly along the longitudinal edges of said bed, and supporting terrace portions bent outwardly and downwardly from the upper edges of said side walls with their lower edges below the plane of said bed, a track section engaged on said bed between said side walls and positioned transversely thereby, and clamping means on said base adapted to clamp said track section to said bed and retain the same against longitudinal movement.

10. A toy railway bridge structure, comprising a sheet metal base including a track bed having extended clamping flap portions at its ends, and a track section engaged on said bed comprising end ties and rails secured thereto, said flap portions of said bed being bent over upon said end ties to clamp said track section to the bed.

11. A toy railway bridge structure, comprising a sheet metal base including a track bed having tie seating recesses adjacent each end and extended clamping portions at its ends adjacent said seating recesses, and a track section engaged on said bed comprising end ties and rails secured thereto, said ties being seated in said recesses and said clamping portions of said bed being bent over upon said end ties to clamp said track section to the bed.

12. A toy railway bridge structure, comprising a sheet metal base including a track bed and side walls bent upwardly along the longitudinal edges thereof, said bed being provided at its ends with extended clamping portions, and a track section engaged on said bed between said side walls comprising end ties and rails secured thereto, said track section being positioned transversely by said side walls, and said clamping portions being bent over upon said end ties to clamp said track section to the bed and position it longitudinally.

Signed at Bridgeport in the county of Fairfield and State of Connecticut this 8th day of May A. D., 1924.

HARRY C. IVES.

Witnesses:

C. M. NEWMAN,
MIRIAM GODDARD.