

June 22, 1926.

1,590,071

H. S. BECKER

TOY RAILROAD BRIDGE

Filed Jan. 22, 1926

2 Sheets-Sheet 1

Fig. 1.

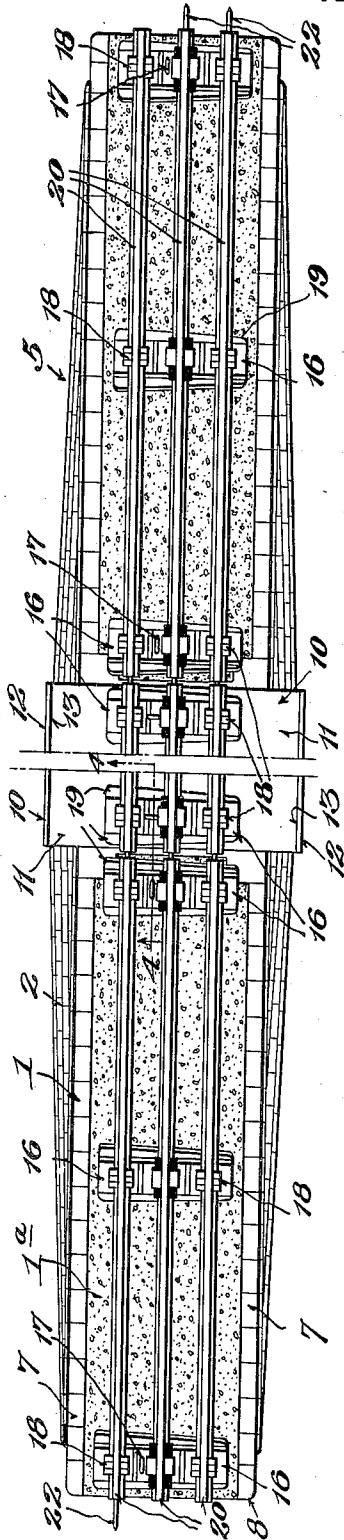


Fig. 2.

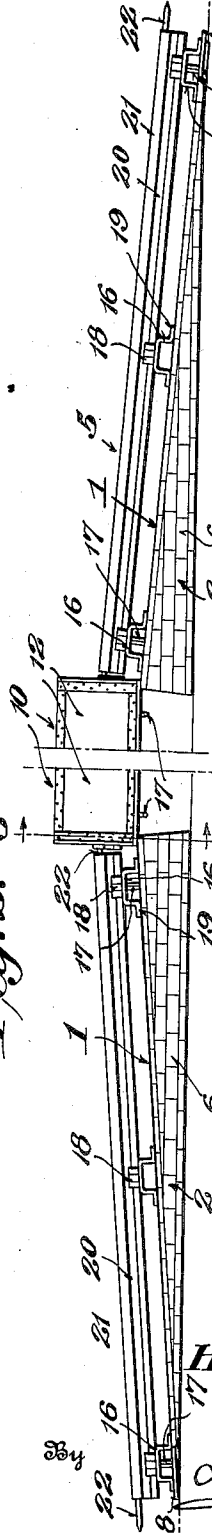


Fig. 3.

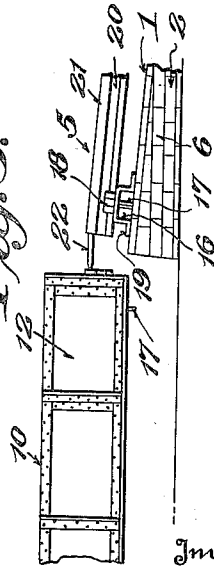
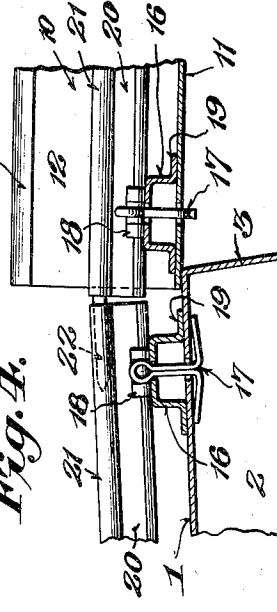


Fig. 4.



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Fig. 5.

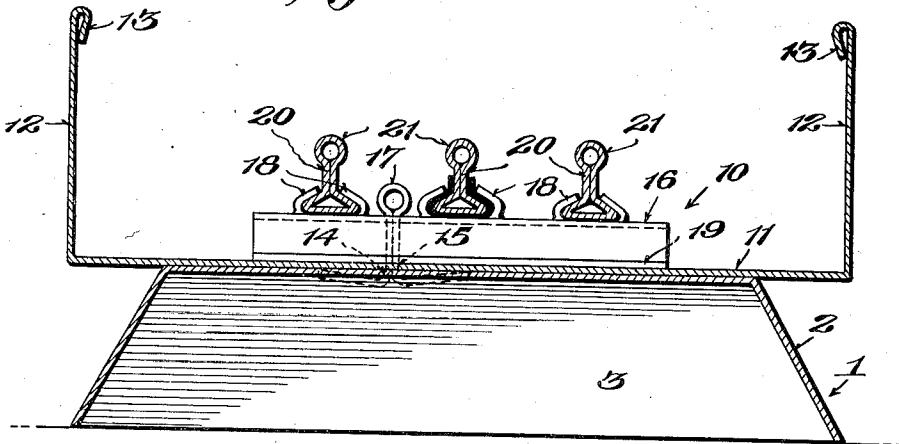


Fig. 6.

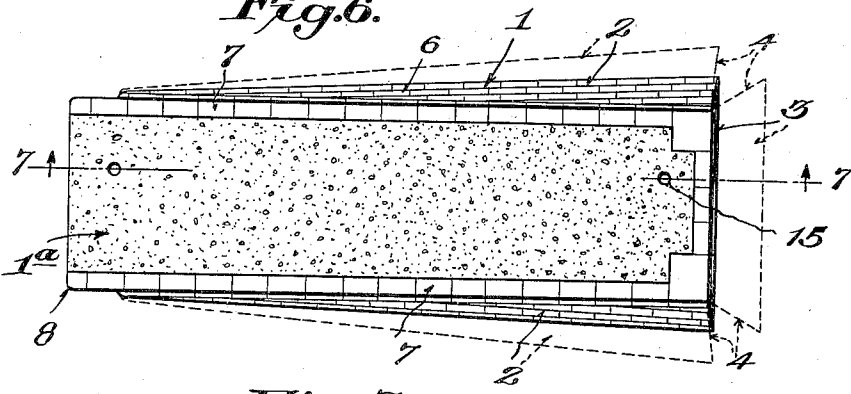
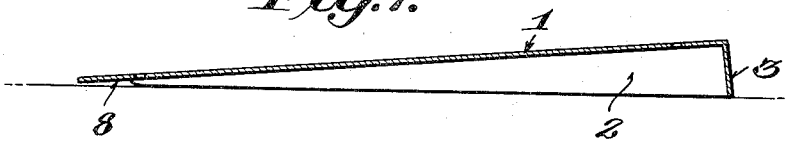


Fig. 7.



WITNESSES:-

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UNITED STATES PATENT OFFICE.

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TOY RAILROAD BRIDGE.

Application filed January 22, 1926. Serial No. 83,072.

This invention relates to toys and more particularly to bridges for use in connection with toy railroads and the like.

A primary object of the invention is to provide a bridge of this character which while realistic in appearance is simple in construction yet strong and durable.

A further object is to provide a toy bridge structure composed of a plurality of separable units which when packed and nested will occupy a minimum amount of space the units being in the form of approach and span sections on which sections trackage is so mounted that it can be readily removed or applied by children or inexperienced persons without damaging or marring the bridge structure in any way.

In this connection the invention recognizes that in the production of a sectional bridge of this character it is not only desirable that it be cheaply constructed but that it also preserve the appearance of a high-priced structure and be of the latest type and construction of railroad bridges.

To accomplish such construction the invention has in view the provision of a three unit structure to each of which trackage is secured so that it can be easily and quickly assembled or adjusted and yet be securely connected with the structure and avoid all possibility of the trackage being bent or broken through severe usage.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts as will be hereinafter more fully pointed out, illustrated and claimed, there being shown in the drawings for illustrative purposes a preferred and practical embodiment of the invention.

In the accompanying drawings:

Figure 1 represents a plan view of a toy railroad bridge structure embodying this invention with the approach and span units shown attached.

Fig. 2 is a side elevation thereof.

Fig. 3 is an enlarged detail side elevation showing one approach section separated from the span section.

Fig. 4 is a detail longitudinal section taken on the line 4—4 of Fig. 1.

Fig. 5 is an enlarged transverse section taken on the line 5—5 of Fig. 2.

Fig. 6 is a plan view of one of the approach sections with the track removed, and

Fig. 7 is a longitudinal section taken on the line 7—7 of Fig. 6.

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

The bridge constituting this invention is constructed for use in connection with a toy railway system employing electrically powered locomotives operating upon three rail trackage which includes a third or trolley rail although obviously the bridge may be equipped with any form of rail trackage desired.

In carrying this invention into effect the bridge structure is shown of the three section type including a span unit or section 10 of any desired length and two approach sections 1 and 5 for detachable connection with the span unit.

This invention contemplates the support of the span section on the high end of the approaches which latter have cut-out sections at their lower ends to eliminate manufacturing difficulties such as dies and the like and to permit the approach to lie flat. The approaches are also flanged at their high ends to support and take up all load of the bridge and to strengthen the bridge through- out. It also contemplates the use of detachable track fasteners to eliminate solder and special fastening means.

The invention also contemplates the provision of a rolled edge at the top of the span section to cover up sharp edges, present an attractive appearance and to strengthen the bridge.

The embodiment illustrated which constitutes a preferred and practical form of the invention, comprises a span unit or section 10 having a sheet metal face with a raised bed 11 having vertical side members 12 bent upwardly from the bed 11 the upper edges of said sides being rolled as shown at 13 to increase the strength of the section and add to the appearance thereof. This rolled edge also provides means for eliminating sharp edges. The outer faces of the side members 12 may be ornamented in any desired manner or have indicia, lithographed or other-

wise applied thereto to produce a realistic appearance of the bridge. The bed 11 of the span section is provided with apertures 14 suitably located to correspond with similar apertures 15 in the track member 16, said apertures being designed to receive cotter pins 17 for detachably mounting the trackage on the bridge. It will therefore be apparent that the span section 10 is of channel formation, the sides of the channel being relatively deep not only to provide reinforcement for the span, but to permit of the said sides extending upwardly above the plane of the tracks to simulate a standard bridge span. It will be observed from Figures 2 and 3 in particular the outer face of the side wall 12 of the span section is ornamented with panels simulating riveted plate construction.

The rails 20 are mounted on hollow channel-like sleepers or ties 16 which are secured to the bridge by the cotter pins 17 as above described. These ties 16 are shown made of sheet metal and have out-struck rail engaging fingers 18 which are bent around the base of the rail to secure it to the ties.

The channel-like ties or sleepers 16 are applied in inverted position to the bridge section 10 and have laterally extending flanges 19 which fit flat against the bed 11 of the bridge section.

The approach sections 1 and 5 are exactly alike so that one only will be described in detail. Each of these sections comprises a sheet metal base the blank of which before being bent to shape is in the form of a keystone as illustrated in dotted lines in Fig. 6. Side flanges 2 increase gradually in width towards the inner end of the approach to form wedge shaped elements while the end flange 3 is of uniform width and has the ends thereof beveled or inclined as shown at 4 so that when bent at right angles to the face of the approach these flanges support the approach so that it tapers from the highest point or inner end thereof gradually down to the point where it merges into the ordinary road bed. These side flanges 2 are preferably decorated on their outer faces to represent masonry as shown at 6. The bed or base 1^a of the approach is preferably lithographed or otherwise decorated to represent crushed rock or gravel to produce the appearance of a realistic bridge approach.

Each approach section has an embankment 7 along each side and the outer end of the side flanges 3 are cut away as shown at 8 so that both ends of the approach are on the same level thus forming a solid foundation for the approach.

The tread members 21 of the track rails are made tubular in form and are equipped at the ends thereof with longitudinally extending pins 22, that is, some of the rails have these end pins while others remain in

the form of tubes to receive the pins of adjacent sections so that when the sections are assembled they will be interlockingly connected. These pins 22 are bent as shown in Fig. 4 where they connect the span with the approach sections so that the rails of the two connected sections will be properly inclined relatively to each other.

The approach sections 1 and 5 when the structure is to be assembled have their high ends facing each other and on which rest the ends of the span unit so that the flanges 3 of said approach members support and take up the load of the bridge thereby strengthening it throughout.

The top rails of the approach sections are the same as those shown and described for the span section and are mounted in the same manner on inverted channel bars or ties 16. These ties are removably secured to the approaches by a cotter pin 17 in the same manner as those shown on the span section.

From the above it will be seen that the track rails of the respective sections may be readily applied and removed by placing them on the ties and bending the clamping fingers or clips 18 around the bases thereof and the ties may be removed by simply taking out the cotter pins thus avoiding the necessity of using any solder or special fastening means.

As above pointed out the gist of this invention resides in providing a toy railroad bridge having the appearance of an expensive structure and yet may be cheaply manufactured, the rolled or beaded edges of the upstanding side members of the span unit operating to eliminate sharp or rough edges and at the same time add the appearance of solidity while strengthening the bridge.

When the sections are assembled as shown in Figs. 1 and 2 the surfaces of the approach sections are inclined so that the track carried thereby rises from the normal level of the adjacent trackage to the raised level of the bridge track.

Without further description it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention and scope of the appended claims.

I claim:

1. A toy railway bridge structure comprising span and approach units, the ends of the span unit resting on and supported by the inner ends of the approach units.

2. A toy railway bridge structure comprising span and approach units, the approach units having downturned supporting side flanges tapering toward their outer ends, the ends of the span unit resting on

and supported by the higher inner ends of the approach units.

3. A toy railway bridge including approach units each formed of sheet metal and having down-turned supporting side edges and a down-turned flange at the inner end thereof to assist in supporting the weight to which said unit will be subjected, and a span unit having its ends resting on the flanged ends of the approach units.

4. A toy railway bridge structure including a span unit having upstanding side flanges with railway ties arranged transversely on said unit, said unit and ties being provided with registering apertures, and removable fastening elements adapted to extend through said apertures to detachably connect the ties to the unit.

5. A toy railway bridge structure including a span unit having upstanding side flanges with railway ties arranged transversely on said unit, said unit and ties being provided with registering apertures, and cotter pins extending through said registering apertures to detachably connect the ties to the unit.

6. A toy railway bridge structure comprising detachably connected span and approach units, each unit being formed of sheet metal with its side edges bent to form flanges, the flanges of the approach section being bent downwardly and inclined laterally outward and tapering in width from their inner toward their outer ends, the flanges of the span unit being bent upwardly and their edges rolled to form reinforcing

beads, the ends of the span unit resting on and supported by the inner ends of the approach units.

7. A toy railway bridge structure comprising detachably connected span and approach units, each unit being formed of sheet metal with its side edges bent to form flanges, the flanges of the approach units being bent downwardly and inclined laterally outward and tapering in width from their inner toward their outer ends, the flanges of the span unit being bent upwardly and their edges rolled to form reinforcing beads, the ends of the span unit resting on and supported by the inner ends of the approach units, said approach units having down-turned flanges at their inner ends to form reinforcing braces for the approach units.

8. A toy railway bridge including approach sections, a channel-shaped span section having tracks thereon and supported at its ends on the approach sections, and the upstanding side walls of the channel-shaped span section projecting above the plane of the tracks.

9. A toy railway bridge including, in combination, approach sections having tracks thereon and adapted to connect at their opposite ends with the main trackway, and a span section carrying tracks thereon and located between and supported by the inner ends of the approach sections.

In testimony whereof I hereunto affix my signature.

HARRY S. BECKER.