

T. C. SPELLING.
TOY RAILROAD SYSTEM.
APPLICATION FILED JULY 7, 1913.

1,089,799.

Patented Mar. 10, 1914.

3 SHEETS—SHEET 1.

Fig. 1.

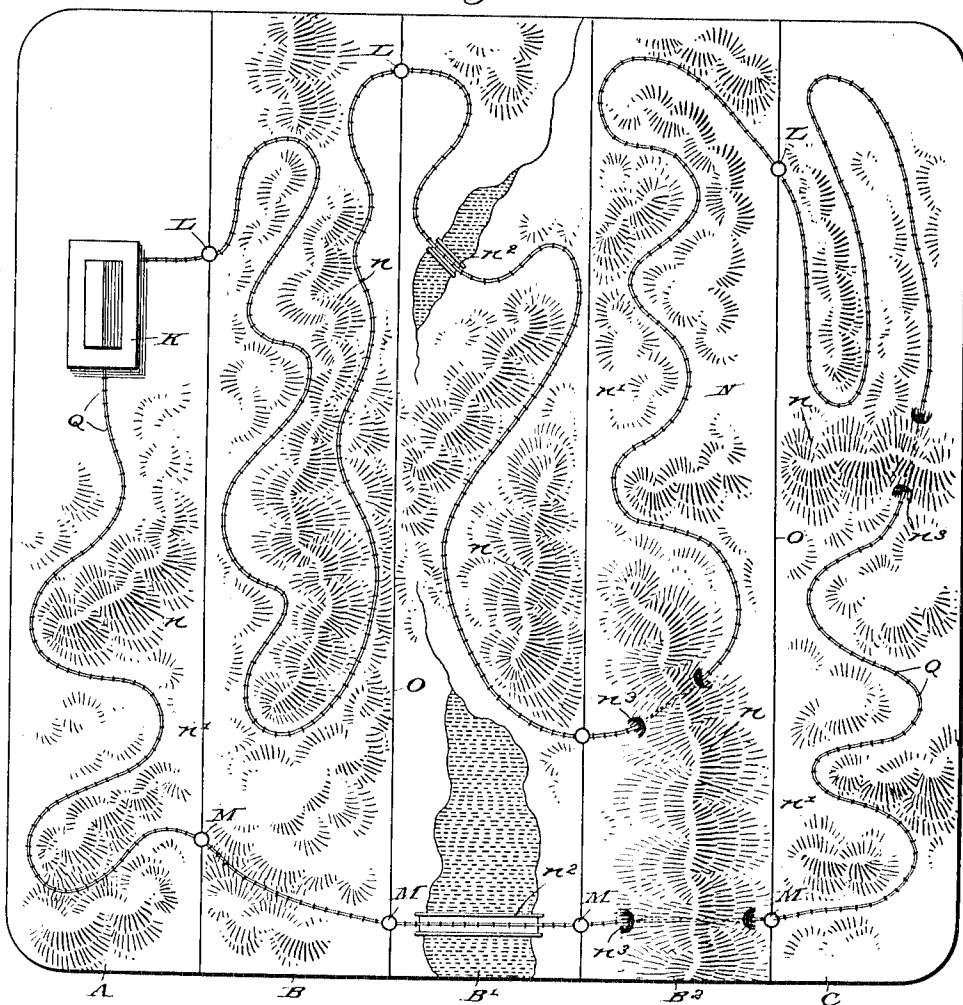
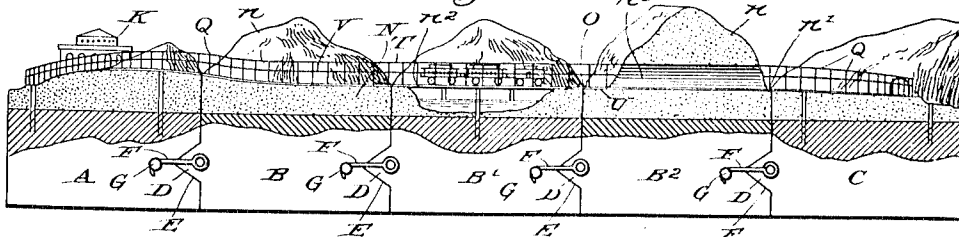


Fig. 3.



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3 SHEETS—SHEET 2.

Fig. 2.

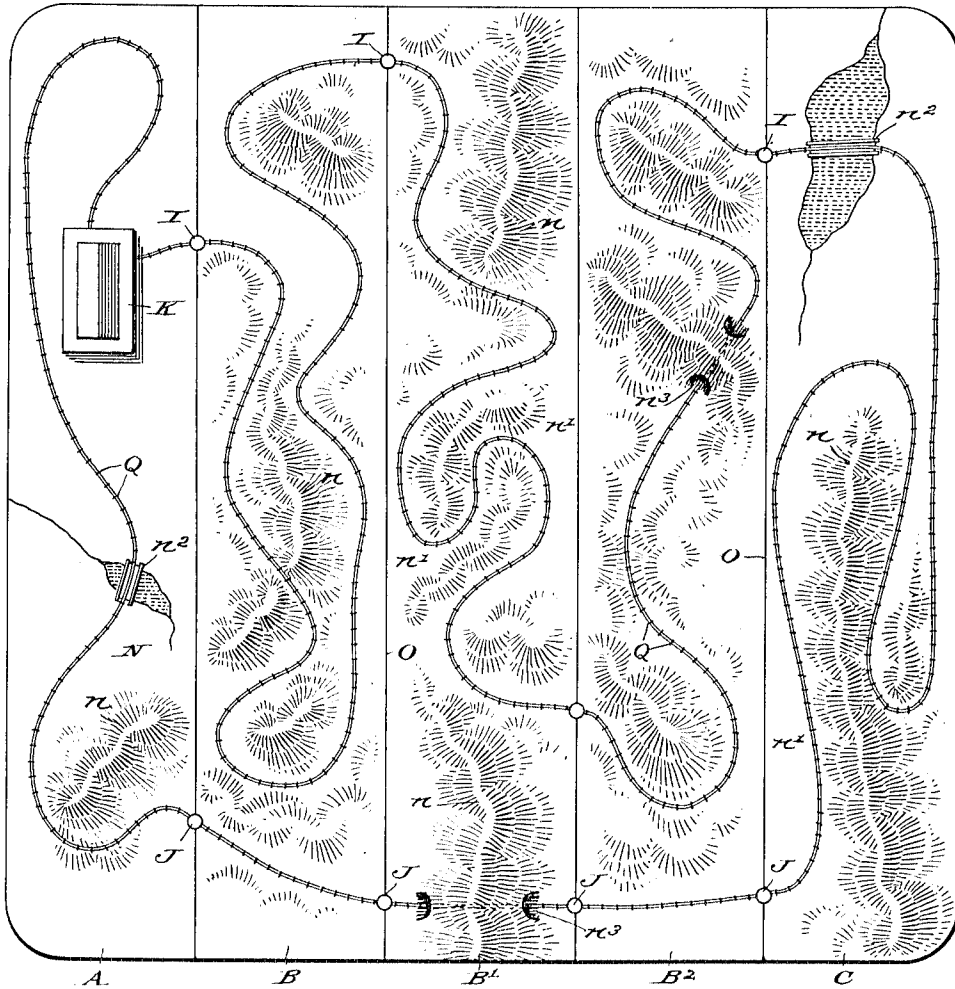
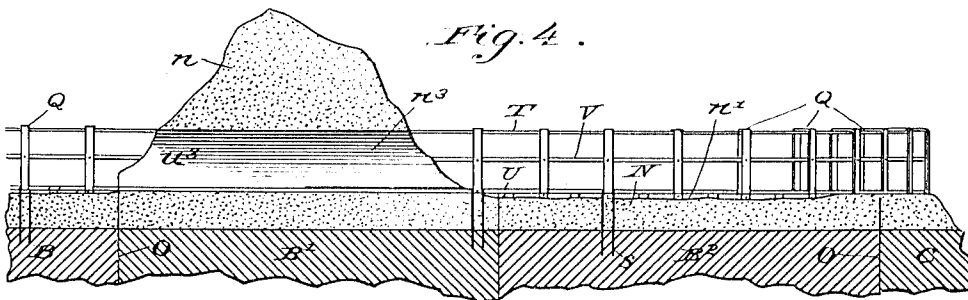


Fig. 4.



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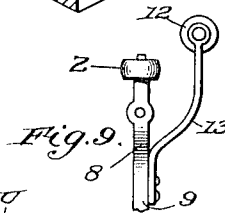
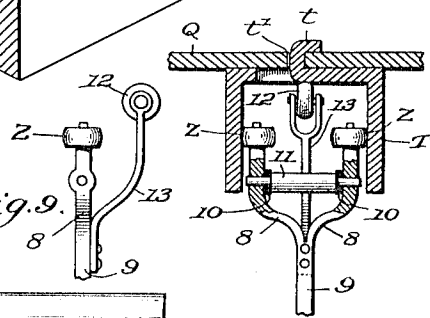
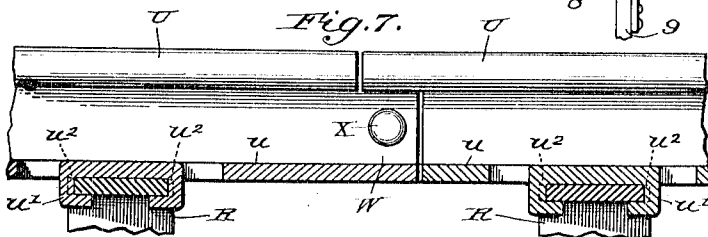
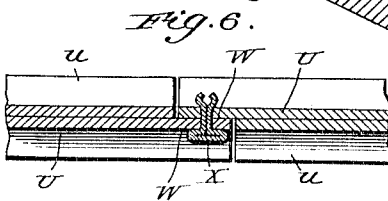
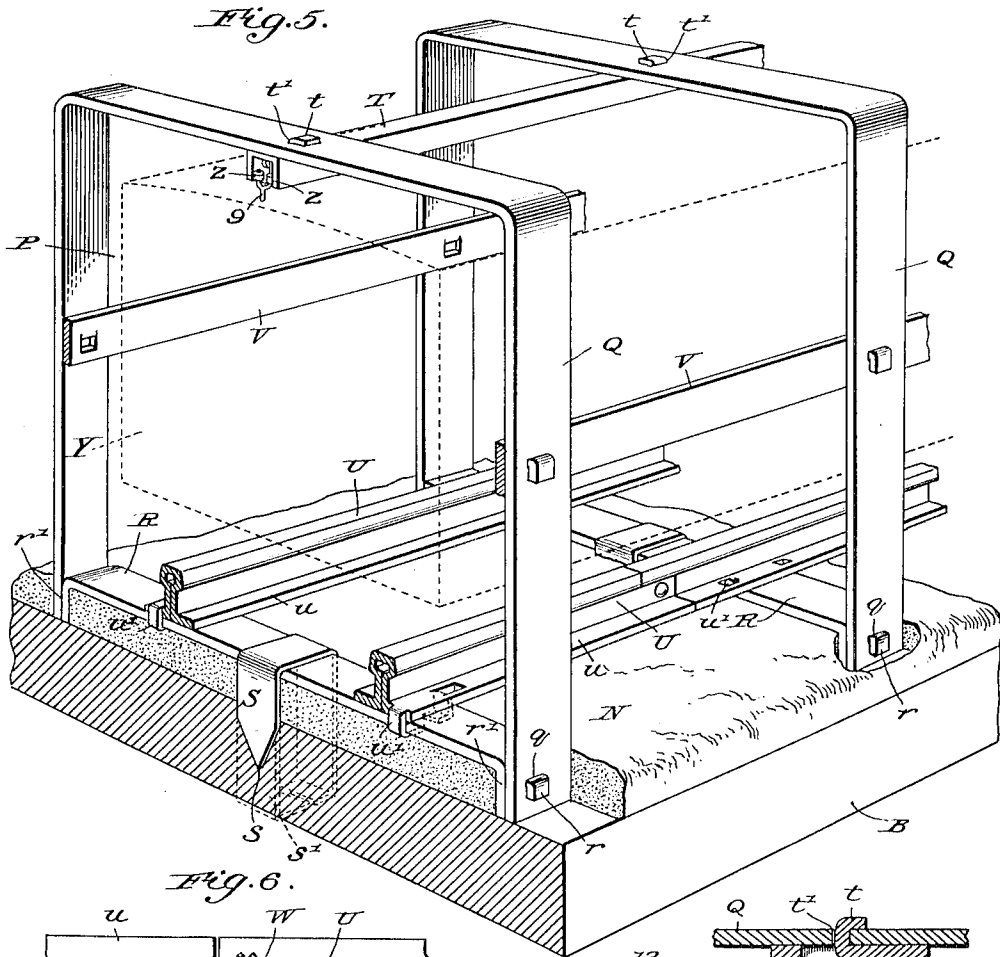
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3 SHEETS-SHEET 3.



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UNITED STATES PATENT OFFICE.

THOMAS CARL SPELLING, OF NEW YORK, N. Y.

TOY RAILROAD SYSTEM.

1,089,799.

Specification of Letters Patent.

Patented Mar. 10, 1914.

Application filed July 7, 1913. Serial No. 777,752.

To all whom it may concern:

Be it known that I, THOMAS C. SPELLING, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Toy Railroad Systems, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to railroad systems, which, though capable of other uses, is primarily intended as a toy, capable, in instances, of assisting in imparting educational matters.

The invention embraces the proposition of forming on a sectional base, pictorial or topographical formations,—though the base may be plain, if so desired,—and securing to the sectional base so as to be carried thereby, the correspondingly sectional tracks of a railroad system adapted, when the sections are properly assembled, to include the various sections and pass over the pictorial or topographical formations, including bridges, excavations or tunnels in the latter, placed either in keeping with the arbitrary idea of the manufacture of the goods in the case of a mere toy, or to correctly portray actual conditions where true topographical representations are employed, for educational purposes.

The invention further comprehends not only a base of sectional construction, each section having permanently secured thereto and carrying its portion of the railroad system, enabling the separation of the base for the sake of compactness in storage and shipping, but also embraces the formation of interchangeable intermediate sections, so that while a continuous system may be constantly preserved, the topographical, pictorial, or other nature of the intermediate sections may be changed to permit optional formations of railroad routes, readily assembled or changed to suit the whim or desire of a person using the device.

A practical embodiment of the invention, capable of satisfactorily producing the desired results, hereinabove noted, possesses many characteristic details in the construction and association of parts, and these will be appreciated from the specific description hereinafter contained when read in connection with the accompanying drawings, forming a part hereof, and wherein, for the

sake of illustration, the preferred embodiment of the invention is illustrated.

In the drawings:—Figure 1 is a plan view showing in a clearly diagrammatic manner a foundation or base of sectional character, including one system of railroad thereover; Fig. 2 is a similar view showing the interchangeability of sections; Fig. 3 is an end view; Fig. 4 is an enlarged sectional detail view; Fig. 5 is an enlarged perspective view showing the manner of securing the tracks and the frame work constituting the carway in place; Fig. 6 is a detail sectional view showing the manner of detachably connecting the abutting ends of rails together; Fig. 7 is a side view of a pair of adjoining rails with associated parts, and Figs. 8 and 9 are detail views of the means for preventing undue swaying of a car and to overcome any tendency of the car to leave its rails when the rail is converted to an undulatory surface.

Referring more specifically to the drawings, constituted by the above stated figures, and wherein like reference characters designate corresponding parts in the several views, A, B, B', B² and C, represent the sections of a separable base, which may be formed of any suitable material, such as wood, of any convenient size and character, sufficient to give the strength and durability in keeping with the particular use for which the device is designed, A and C being the respective end sections, and B, B' and B² the intermediate sections. The sections are formed with coöperating beveled ribs D, and grooves E, to center and interfit the sections, when assembled, pivoted hooks F at the ends of the sections coöperating with pins G to lock the sections together. Of course this interfitting and interlocking may be changed where desired. Obviously the sections may be disposed endwise instead of sidewise if desired, in which case the ends of the adjoining sections will be secured together as distinguished from the sides thereof.

On the upper surface of the base I provide a complete railroad system preferably permanently secured to be carried by the sections of the base.

One arrangement of the system is illustrated in Fig. 1, wherein it will be noted that the same assumes a circuitous course over each section of the base of the outgoing

terminal or connecting portions I and J, leading from what may be termed a station K, and finally over the end section C from which the return run is made through the connections J back to said station.

In Fig. 2, I have illustrated the manner of changing the intermediate sections, and, in fact, the end sections so that the system may take an entirely different route than that illustrated in Fig. 1, the alternative assembling of the sections into a complete base being enabled by the user possessing himself of any number of intermediate or end sections desired, a common characteristic feature, however, being that the terminal or connecting portions I and J of Fig. 1 are maintained at the same place, as illustrated at L and M in Fig. 2, so that the sections may be readily coupled together, either with part of the system as illustrated in Fig. 1 and part of the system as illustrated in Fig. 2, or the two systems assembled together as independent propositions, as disclosed in said two figures respectively.

The railroad system may be carried in a plane or in an undulatory manner across the upper surface of the base, but preferably, as illustrated, I form upon the said upper surface topographical representations made up of a suitable material, for example, papier-maché, molded upon or placed over the sections of the base, as indicated at N and formed to register, when the sections are assembled, as at O. This topographical formation may be arbitrarily formed to represent hills n , valleys n' , bridges n^2 and tunnels n^3 (Fig. 3) in keeping with any desired fanciful design, or such formations may be in approximate or true accordance with a geographical locality such as a State or a country, to assist in imparting an accurate knowledge of the topography of such locality, and further, representative of an actual railroad system situated in such locality.

Upon the topographical formation above described I mount the railroad system now to be particularly pointed out, to wit: The car or trainway P is formed of closely associated inverted V or U-shaped members Q, preferably formed of sheet metal, tied together at their lower ends by similarly inverted U-shaped metallic ties R having struck-out tongues r adapted to be passed through apertures q in the frame members Q and bent over onto the outer surface of the latter, as shown in Fig. 5. The ties are secured in place by embedding either the whole or the legs r' thereof in the composition N, and at the low points of the system where the ties rest directly upon the base sections, the ties are further fastened through the medium of staples S passing over the ties and having their ends s driven into the base, as shown in full lines, Fig. 5,

or passing through and clenched on the bottom of the base sections, as shown in dotted lines s' , same figure.

The upper portions of the frame members Q are tied together so as to assist in maintaining said members in proper positions by an inverted U-shaped metal member T underlying the central portion of the top or connecting portion of the members Q, and secured thereto by struck out tongues t passed through openings t' in said top portion and bent down upon the upper surface of the latter.

The construction thus far described affords a rigid, inexpensive construction devoid of fastening rivets or separate fastening elements, although, as will be obvious, the parts may be connected together in any suitable manner found expedient. The member T constitutes a guideway as will later appear.

Upon the ties R, I mount rails U of sheet metal formation, as shown, from the base flanges u of which are struck-out tongues u' arranged in pairs and disposed in opposite relation to fold around and embrace the ties R, the latter being suitably notched as represented at u^2 to prevent lateral play of the rails longitudinally of the ties.

In lieu of the pair of rails to which I here allude, the system may be provided with but a single central rail, fastened as stated, to constitute a mono-railroad system, and the frame members Q may be additionally connected by side rails V, after the manner disclosed in my United States Letters Patent No. 1,058,481, dated April 8, 1913.

As shown in Fig. 6, the ends of the rails U are slightly cut away at their web portions to provide overlapping flanges W, perforated for the reception of detachable spring coupling pins X which constitute the means of connection between the rail terminals or end portions of adjoining base sections, at the points illustrated at I and J, Fig. 1, and L and M, Fig. 2.

In Fig. 7, the overlapping of the rail webs is clearly shown, as well as the engagement of the rails with the cross ties R, and in Fig. 4, I have in a somewhat enlarged detail manner shown the sinuous course of the framework Q of the system passing over a base section and including a composition tunnel w^3 . In this view it is also seen how the track members Q are partially embedded in the composition of the topographical formation, and partially directly secured to the base by means of the staples S.

Y is a diagrammatic representation of a car adapted to traverse the car-way P, it being understood that a train may comprise any practical number of cars drawn by any suitable means, conveniently an electrically propelled locomotive.

To prevent undue swaying of the cars, and

also to prevent the disengagement of the car wheels from the rail or rails traversed thereby,—the tendency to do which latter is present in a structure involving an undulatory formation or rail.—I provide guide shoes Z rounded in the direction of travel of the same, and preferably in the nature of rollers, as shown, projecting upwardly from the top of the car Y and adapted to extend into the guideway formed by the inverted U-shaped tie member T (see Fig. 5), and to engage the walls of the guideway when the car tilts. Normally these shoes may be free, that is out of engagement with the guideways referred to, but preferably the rollers are carried by yieldable prongs 8, at the bifurcated end of a supporting standard 9, adapted to be connected to the car. The arms H are preferably of spring metal, adapted to yield laterally and to maintain the shoes Z with light pressure against the walls of the guideway. Under tilting action of the car the arms are forced inwardly against shock absorbing material 10, in the nature of elastic washers or packing, interposed between the inner surface of the arms 8 and the shouldered portions of the shaft 11, having its ends passed laterally through the arms 8 (Figs. 8 and 9).

A roller 12 (preferably a rubber tired wheel), to render the same yieldable and to eliminate noise, is carried by the spring arm 13 secured to the standard 9, the function of the roller 12 being to engage the under surface of the top wall of the tie member T to yieldably maintain the car in traction engagement with its rails.

While I have herein disclosed one practical embodiment of my invention, it will be apparent to persons skilled in the art that the invention is capable of embodiment in still other forms and arrangements, as may be in keeping with the hereto appended claims.

I claim:—

1. A railroad system of the character described comprising portable base sections, and out-going and return rail sections secured to and carried by each base section adapted when assembled to form a complete system.

2. A toy railroad system of the character described comprising portable base sections bearing topographical formations, and rail sections secured to and carried thereby adapted when assembled to form a complete system, in combination with means for securing the base sections together when in their assembled relation.

3. A toy railroad system of the character described comprising portable base sections bearing topographical formations, and rail sections secured to and carried thereby adapted when assembled to form a complete system, in combination with means for sep-

arably securing the base sections together when in their assembled relation.

4. A railroad system of the character described comprising portable base sections, and rail sections secured to and carried thereby adapted when assembled to form a complete system, in combination with means for separably securing the base sections together when in their assembled relation, consisting of interfitting edge portions of the base sections and fastening devices to maintain engagement therebetween.

5. A railroad system of the character described comprising portable base sections, and rail sections secured to and carried thereby adapted when assembled to form a complete system, in combination with means for separably securing the base sections together when in their assembled relation, consisting of detachable fasteners at abutting ends of the sections.

6. A railroad system of the character described comprising a plurality of separate base sections adapted to be assembled in abutting relation to constitute a suitable support, rail sections carried by said base sections and permanently attached thereto, the terminals of the rail sections on each base being adapted to register with the corresponding terminals of the adjacent sections of the base when assembled.

7. A railroad system of the character described comprising a plurality of separate base sections adapted to be assembled in abutting relation to constitute a suitable support, rail sections carried by said base sections and permanently attached thereto, the terminals of the rail sections on each base being adapted to register with the corresponding terminals of the adjacent sections of the base when assembled, and means for coupling said rail terminals together.

8. A railroad system of the character described comprising base sections adapted to be assembled to constitute a suitable support, out-going and return rail sections carried by said base sections adapted when assembled to constitute a complete system, in combination with other similar sections bearing different arrangements of out-going and return rails to permit interchangeability of the parts, substantially as described.

9. A railroad system of the character described comprising base sections adapted to be assembled to constitute a suitable support, rail sections carried by said base sections adapted when assembled to constitute a complete system, in combination with other similar sections bearing different arrangements of rail sections to permit interchangeability of the parts, the terminal portions of the rail sections on the interchangeable sections being arranged at corresponding points on said sections.

10. A railroad system of the character de-

scribed comprising a sectional support, track sections following a circuitous course over each section and adapted to communicate with each other at the abutting edges of the sections, substantially as described.

11. A portable railroad system of the character described comprising a sectional support comprising separable abutting sections, track sections following a circuitous course over each section and adapted to communicate with each other at the abutting edges of the sections, one portion of the rail system constituting an outgoing portion and another portion an ingoing portion to constitute a continuous circuit, substantially as described.

12. A portable railroad system of the character described comprising a base, a plurality of sections adapted when assembled in abutting relation to constitute a suitable support, topographical formations carried by the sections adapted to register when the sections are assembled, and sectional rails carried by the sections and arranged over the topographical formations to constitute when the sections are assembled a complete system.

13. A railroad system of the character described comprising a suitable base having topographical formations thereon, and car supporting and guiding rails with ties therefor arranged over the topographical formation secured in place by partially embedding the ties in the material of said topographical formation.

14. A railroad system of the character described comprising a suitable base such as wood having plastic topographical formations thereon, and car supporting and guiding means arranged over the topographical formation secured in place by fastening devices engaging the same and said base.

15. A railroad system of the character described comprising a suitable base such as wood having plastic topographical formations thereon, and car supporting and guiding means arranged over the topographical formation secured in place by embedding portions thereof in the material of the topographical formation; and fastening other portions thereof directly to the base, substantially as described.

16. A railroad system of the character described comprising a portable sectional supporting bed or base, cross ties carried thereby and secured thereto, a rail on said cross ties, and a car-way formed of inverted U-shaped frame members secured at their ends to the ends of the cross ties, substantially as described.

17. A railroad system of the character described comprising a supporting bed or base, cross ties secured together, a rail on said cross ties, and a car-way formed of inverted U-shaped frame members secured at their

ends to the ends of the cross ties, said cross ties being of similar inverted U-shape and the points of connection between the same and the frame members being at the depending legs or flanges thereof.

18. A railroad system of the character described comprising a supporting bed or base, cross ties secured thereto, a rail on said cross ties, and a car-way formed of inverted U-shaped frame members secured at their ends to the ends of the cross ties, and means for securing the cross ties in place comprising staples passing around the same and engaging the base.

19. A railroad system of the character described comprising a supporting bed or base, cross ties secured thereto, a rail on said cross ties, and a car-way formed of inverted U-shaped frame members secured at their ends to the ends of the cross ties, and means for securing the cross ties in place comprising a composition of the base embedding portions of the cross ties and frame members.

20. A railroad system of the character described comprising a supporting bed or base, cross ties secured thereto, a rail on said cross ties, and a car-way formed of inverted U-shaped frame members secured at their ends to the ends of the cross ties, in combination with a guide constituting a tie member for the upper portion of the frame members adapted to cooperate with a suitable device carried by a car.

21. A railroad system of the character described comprising a plurality of frame members of approximately inverted U-formation to constitute a car-way therewithin, cross ties connecting the lower ends of the frame members together, means permanently securing the cross ties to a bed or base, and a rail within the frame, substantially as described.

22. A railroad system of the character described comprising a plurality of frame members of approximately inverted U-formation to constitute a car-way therewithin, cross ties connecting the lower ends of the frame members together, means permanently securing the cross ties to a bed or base, and a rail within the frame, in combination with a guide adapted to be engaged by a suitable cooperating device on a car.

23. A railroad system of the character described comprising a plurality of frame members of approximately inverted U-formation to constitute a car-way therewithin, cross ties connecting the lower ends of the frame members together, means permanently securing the cross ties to a bed or base, and a rail within the frame, in combination with a guide adapted to be engaged by a suitable cooperating device on a car, said guide comprising a U-shaped member, and said device comprising a projection adapted to traverse the same.

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24. A railroad system of the character described comprising a plurality of frame members of approximately inverted U-formation to constitute a car-way therewithin, cross ties connecting the lower ends of the frame members together, means permanently securing the cross ties to a bed or base, and a rail within the frame, in combination with a guide adapted to be engaged by a suitable cooperating device on a car, said guide comprising a U-shaped member, and said device comprising a projection rounded in the direction of its travel adapted to traverse the same.

25. A railroad system of the character described comprising a plurality of frame members associated to constitute a car-way therewithin, cross ties connecting the lower ends of the frame members together, and a rail within the frame on said cross ties, in combination with a guide adapted to be engaged by a suitable cooperating device on the car, said guide comprising an inverted U-shaped member, and said device comprising oppositely disposed yieldably held contact devices arranged to engage the side walls of the guide member, substantially as described.

26. A railroad system of the character described comprising a plurality of frame members associated to constitute a car-way therewithin, cross ties connecting the lower ends of the frame members together, and a rail within the frame on said cross ties, in combination with a guide adapted to be engaged by a suitable cooperating device on the car, said guide comprising an inverted U-shaped member, and said device comprising oppositely disposed yieldably-held contact devices arranged to engage the side walls of the guide member, and a yieldable contact device arranged to engage the top wall of said guide member.

27. A railroad system of the character described comprising a plurality of frame members associated to constitute a car way therewithin, cross ties connecting the lower

ends of the frame members together, and a rail within the frame on said cross ties, in combination with a guide adapted to be engaged by a suitable cooperating device on the car, said guide comprising an inverted U-shaped member, and said device comprising a yieldable contact device adapted to engage the top wall of the guide member, substantially as described.

28. A railroad system of the character described comprising a plurality of frame members associated to constitute a car-way therewithin, cross ties connecting the lower ends of the frame members together, and a rail within the frame on said cross ties, in combination with a guide adapted to be engaged by a suitable cooperating device on the car, said guide comprising an inverted U-shaped member, and said device comprising oppositely disposed yieldable arms carried by a standard, contact devices carried by said arms adapted to engage the opposite walls of the guide-way, and a yieldable means interposed between said arms for forcing the same outwardly, substantially as described.

29. A railroad system of the character described comprising a plurality of frame members associated to constitute a car-way therewithin, cross ties connecting the lower ends of the frame members together, and a rail within the frame on said cross ties, in combination with a guide adapted to be engaged by a suitable cooperating device on the car, said guide comprising an inverted U-shaped member, and said device comprising oppositely disposed yieldable arms carried by a standard, contact devices carried by said arms adapted to engage the opposite walls of the guideway and a shock absorber interposed between said arms.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS CARL SPELLING.

Witnesses:

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HARRY C. DAVIS.