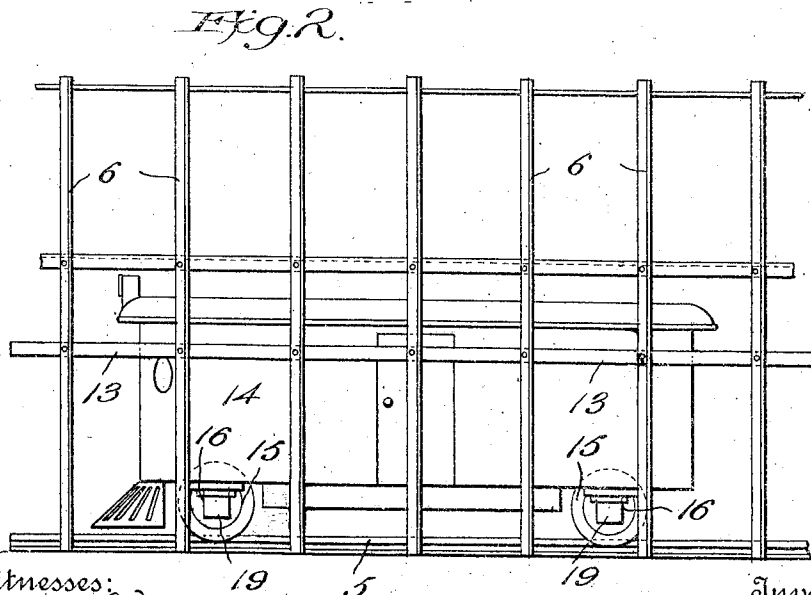
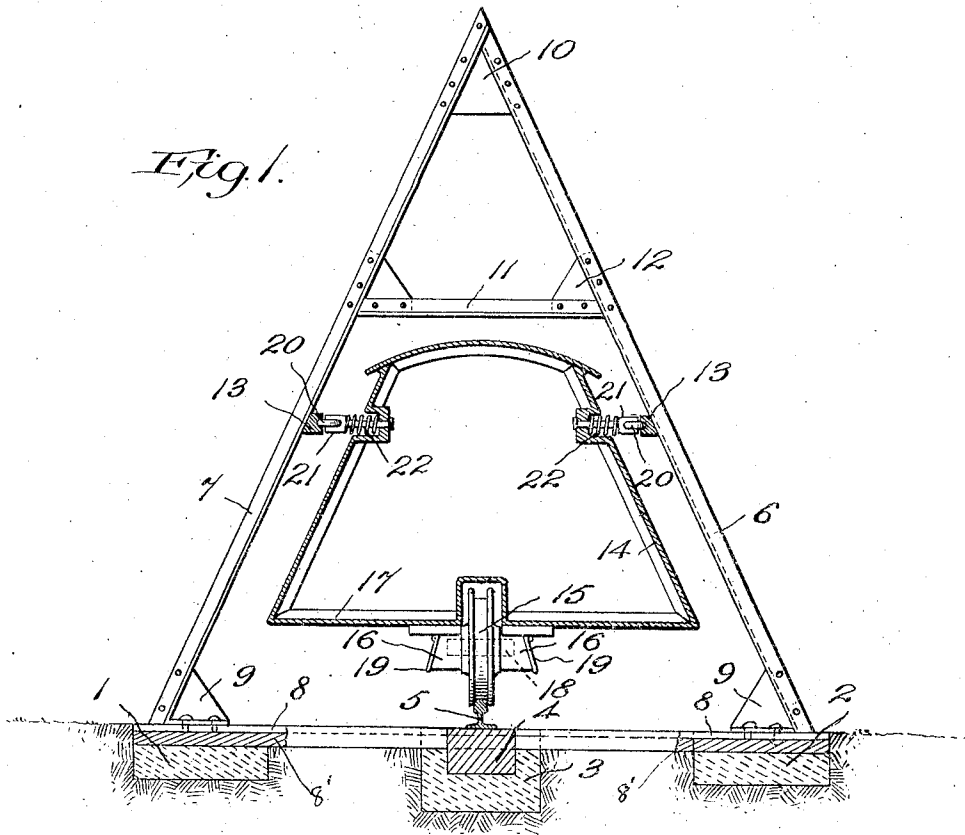


T. C. SPELLING.
MONORAILROAD SYSTEM.
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1,058,481.

Patented Apr. 8, 1913.



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MONORAILROAD SYSTEM.

1,058,481.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS CARL SPELLING, citizen of the United States, and resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Monorailroad Systems, of which the following is a specification.

The present invention relates to monorailroad systems and has for its object the provision of a durable, practical and cheap construction, readily assembled wherever desired, and comprises generally speaking, a frame-work of strong rigid character consisting of a plurality of open frame members associated to constitute a way there-within, in combination with a car adapted to travel within the said way, and simple and efficient instrumentalities for mounting and securing the frame and associated track members, etc., to the ground or other surface over which the system is to be laid.

The invention also has for its purpose to provide a mono-railroad system wherein the trackage construction will comprise but few parts, to the end of utilizing the enormous energy which is now wasted in the existing systems of railroad construction; one which will effectively guard against all liability of derailment of the cars; and which may be supported by suspending cables for crossing rivers or ravines. And it is further proposed that the design of structure will be such as to permit of the same being erected with despatch, and wherein the cost of manufacture will be comparatively small.

The invention has for its further purpose to provide a type of car especially adapted to this system wherein the supporting or carrying wheels thereof are provided with means for preventing possible derailment; and which is provided with means to steady the car in the event of the same losing its equilibrium while in motion; to minimize oscillation and to support the car in erect position while the same is stationary.

Summarily stated, the invention proposes a system of railroad which will by its simplicity of construction and principle of operation readily suggest itself as the most practical type of conveyance where speed and safety of movement are paramount; and for installation in countries which are not by their natural characteristics suited to ordinary railroad construction such for in-

stance as mountainous countries and countries which would otherwise require considerable bridge erection to introduce the present method of railroad building.

The invention may also be used in subways in large cities or may be constructed in various other ways to suit traffic or geographical conditions.

To these ends the invention consists in the novel details of construction and combination of parts more fully hereinafter described and particularly pointed out in the claims.

Referring to the accompanying drawings, forming a part of this specification in which like numerals designate like parts in all the views:—Figure 1 is a transverse sectional view of the trackage construction, and showing a type of car employed and Fig. 2 is a side elevational view of the same.

Referring to the construction in detail the railroad construction consists of a suitable bed comprising masonry or other suitable bases 1 and 2 disposed in parallel relation, and an intermediate masonry or other suitable bed 3 which is countersunk to receive a continuous sill 4 of wood or other suitable material for the continuous track 5 which is secured thereto in any proper manner.

The frame-work of triangular design in cross section is constructed to inclose the mono-rail and provides in effect a conduit for the cars. The frame-work consists of angularly disposed beams 6 and 7 connected at their lower ends by the reinforcing plates 9 to the bottom cross bars 8 which bars form the base of the triangle and are also securely held embedded within the cross ties 8' and adapted to underlie the track 5.

At their respective upper ends the beams 6 and 7 are connected and reinforced through the medium of triangular plates 10 and intermediate supporting bases and their respective connected ends; said beams are further reinforced or braced through the medium of cross bars 11 and plates 12 secured respectively to the bars 6 and 7.

A pair of horizontal grooved rails or tracks 13 connect the several beams of the respective sides of the structural frame-work and have for their purpose to cooperate with means carried by the car to hold the same erect while the car is stationary and to minimize oscillation in movement as will be understood.

The car 14 is of substantially triangular design in cross section to conform with the passage-way provided by the structural frame, and at either end thereof has journaled thereon a supporting wheel 15.

The supporting wheels 15 are each mounted in a pair of journal boxes 16 secured to the underside of the car floor 17 on a relatively short axle 18, and the journal boxes of each of the axle bearings are readily accessible at all times through the medium of suitable openings which are, under normal conditions, closed by the hinged plates 19. The wheel 15 is of the double flange type to the end that the same will readily hold to the track under all conditions of travel of the car.

A pair of rollers 20 carried by the car are adapted to engage with the side grooved rails 13 for the purposes above mentioned, and each of said rollers 20 is journaled in a bifurcated arm 21 which is in turn mounted to have movement on the side of the car, and a spring 22 which is mounted on the arm normally tends to hold the roller in engagement with the track 13 with the required friction.

From the foregoing description it will be apparent that applicant has provided a construction wherein the strong, rigid characteristics of the triangle are obtained, such triangle including a base bar secured to the foundation or bed or cross ties, as the case may be, and the converging side members being directly connected together at their upper ends, furnishing a device complete in itself and independently of the bed or foundation on which the triangle is fastened. Through the medium of the cross bars 11 and the lower corners braces 9, the middle portions of the side bars of the triangle are greatly strengthened to resist the outward pressures or strains incident to the lateral bearings carried by the car contacting with the rails 13; also that the manner of seating the base bar of the triangle in the wooden cross tie with the latter in turn seated in the longitudinal wooden sill upon which the rail 5 is supported, constitutes an efficient and highly practical manner of securing the triangular frames to the base or foundation, it being understood that the longitudinal sill and cross ties may be placed as desired in keeping with the conditions surrounding the particular service at hand and the nature of the surface over which the system is built.

Many changes of construction and arrangement may be made in the device as above explained without departing from my present invention, and I do not limit myself to the details and modifications herein shown and described.

What I claim is—

1. In a mono-railroad construction, a triangular frame, a supporting bed therefor,

the said frame including horizontally-disposed bottom cross-bars secured to the bed, a continuous sill forming a part of said bed and provided with a fixed rail, a triangular car located within said frame and having straight walls spaced equi-distally from adjacent portions of the frame and provided with alined supporting wheels mounted to travel on said rail, and means on the car for traveling engagement with the sides of the frame and operable to maintain said car in equilibrium.

2. In a monorailroad construction, the combination of a suitable bed supporting cross ties, a traveling car, outwardly thrust bearings at the sides of said car, a continuous sill on said bed associated with said cross ties, a track mounted on said sill, and a framework comprising connected bottom and side bars also mounted on said cross ties and providing a substantially inclosed passage-way, and rails mounted respectively on said side bars adapted to engage with the outwardly thrust bearings carried by the car, substantially as described.

3. In a monorailroad construction, a frame comprising a series of approximately triangular members so related as to form a way therethrough, each triangular member comprising a bottom cross bar and converging side bars, a rail supported upon the cross bars centrally thereof, a car adapted to traverse said rail through said way, rails opposite the sides of the car connecting the converging side members of the triangular frames together, means at the sides of the car engaging said rails to assist in maintaining the car in equilibrium, and cross braces for the triangular frames connecting the converging side members at a point adjacent to the car and above the rails at the sides of the car.

4. In a monorailroad construction, a frame comprising a series of approximately triangular members so related as to form a way therethrough, each triangular member comprising a bottom cross bar and converging side bars, a rail supported upon the cross bars centrally thereof, a car adapted to traverse said rail through said way, rails opposite the sides of the car connecting the converging side members of the triangular frames together, means at the sides of the car engaging said rails to assist in maintaining the car in equilibrium, and braces extending across the corners of the triangular frames to maintain the side members of the frame in position.

5. In a monorailroad construction, a frame comprising a series of approximately triangular members so related as to form a way therethrough, each triangular member comprising a bottom cross bar and converging side bars, a rail supported upon the cross bars centrally thereof, a car adapted to

traverse said rail through said way, rails opposite the sides of the car connecting the converging side members of the triangular frames together, means at the sides of the car engaging said rails to assist in maintaining the car in equilibrium, cross braces for the triangular frames connecting the converging side members at a point adjacent to the car and above the rails at the sides of the car, and braces connecting the side members of the triangular frames to the bottom cross bars at points below the side rails, substantially as described.

6. In a monorailroad construction, a frame comprising a plurality of triangular members so related as to form a way therethrough, each triangular member comprising a bottom cross bar and converging side bars forming an unobstructed space there- within, a rail mounted upon the bottom cross bars centrally thereof, a car adapted to traverse said rail through said way, yield- able abutments at the opposite sides of the car, and rails connecting the converging side members of the triangular frames together at points intermediate the ends of the same.

7. In a monorailroad construction, a frame comprising a plurality of triangular members so related as to form a way there- through, each triangular member compris- ing a bottom cross bar and converging side bars forming an unobstructed space there- within, a rail mounted upon the bottom cross bars centrally thereof, a car adapted to traverse said rail through said way, and bars connecting the converging side mem- bers of the triangular frames together at points intermediate the ends of the same.

8. In a monorailroad construction, a frame comprising a series of triangular members so related as to form a way there- through, each triangular member compris- ing a bottom bar and converging side bars, a tie in which the bottom bar is seated, a longi- tudinal sill in which the tie is seated, and a rail mounted on said sill over said tie and bottom bar.

9. In a monorailroad construction, a frame comprising a series of open members connected together at their sides and so re- lated as to form a way therethrough, each open member comprising a bottom bar and side bars, a tie in which the bottom bar is seated, a longitudinal sill in which the tie is seated, and a rail mounted on said sill over said tie and bottom bar.

10. In a monorailroad construction a frame comprising a series of open members so related as to form a way therethrough, each open member comprising a bottom bar and side bars, a tie in which the bottom bar is seated, a longitudinal sill, and a rail mounted on said sill over said tie and bottom bar.

11. In a monorailroad construction, a frame comprising a series of open members so related as to form a way therethrough, each open member comprising a bottom bar and side bars, a tie to which the bottom bar is secured, a longitudinal sill in which the tie is seated, and a rail mounted on said sill over said tie and bottom bar.

12. In a monorailroad construction, a frame comprising a plurality of open mem- bers so related as to form a way there- through, each member comprising a hori- zontal bottom bar and side bars connected together forming an unobstructed space therewithin, a base construction including cross ties to which the bottom cross bars are secured, a rail mounted upon the bottom cross bars centrally thereof, a car adapted to traverse said rail through said way, and bars connecting the side members of the open frames together at points intermediate the ends of the same.

Signed at New York, in the county of New York and State of New York, this 13th day of November A. D. 1912.

THOMAS CARL SPELLING.

Witnesses:

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