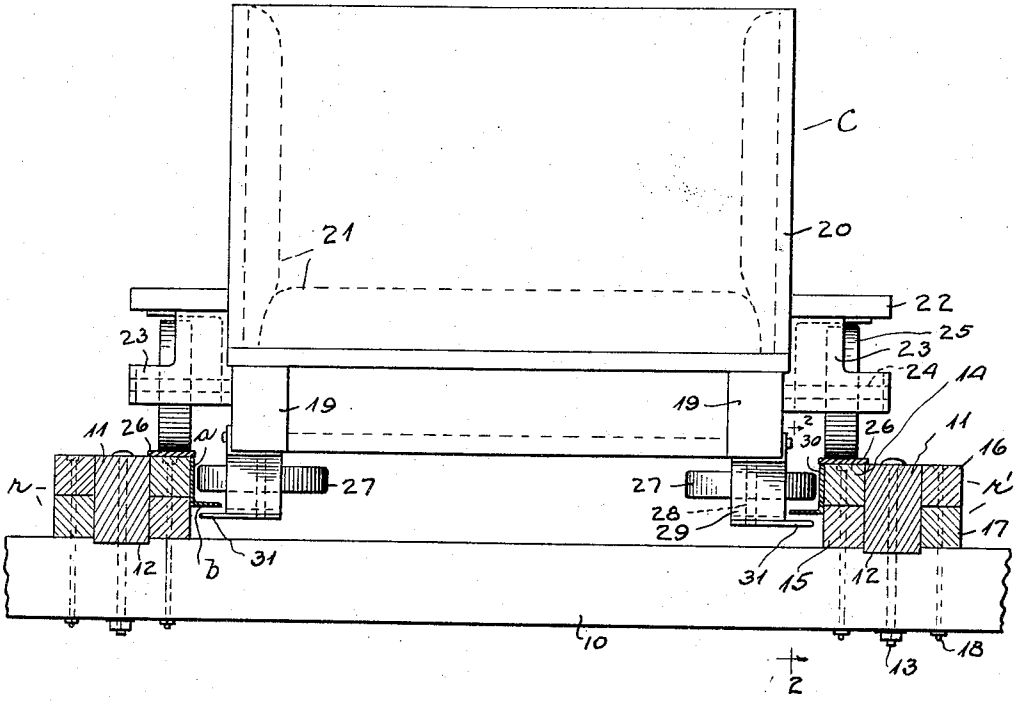
Sept. 29, 1931. J. A. MILLER 1,825,468

PLEASURE RAILWAY STRUCTURE

Filed May 9, 1929

Fig. 1.



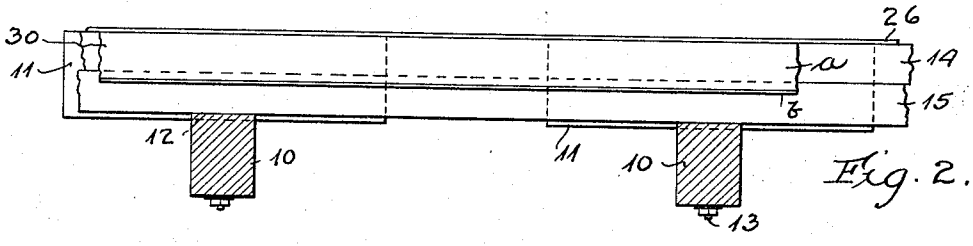


Fig. 2.

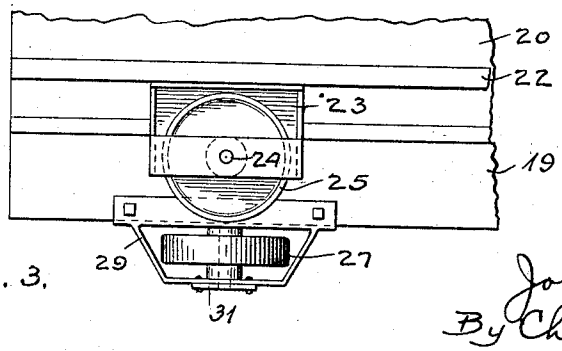


Fig. 3.

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Patented Sept. 29, 1931 1,825,468

UNITED STATES PATENT OFFICE

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PLEASURE RAILWAY STRUCTURE

Application filed May 9, 1929. Serial No. 361,616.

My invention relates to pleasure railway structure and in general the object is to provide improved track construction and safety arrangement for permitting the use of abrupt dips and summits and short curves and for assuring safe travel of the cars on the track.

More in detail one important object is to provide improved track construction which will enable rail structures to be readily and accurately built up and securely and permanently held to the proper gauge at sharp dips and curves, particularly at spiral dips.

Another important object is to provide improved means for holding cars laterally and vertically to the rails particularly when travelling rapidly on such sharp and abrupt dips and curves to thus assure safety for the passengers.

The various features of my invention are incorporated in the structure shown on the drawings, in which

Fig. 1 is a rear elevation of a car, and the track structure in transverse section,

Fig. 2 is a side view of the rail structure from plane 2—2 Fig. 1, and

Fig. 3 is a side elevation of part of the car showing a supporting wheel and the associated safety structure.

The cross ties 10 may be laid directly on the ground or supported on suitable superstructure or trestle. At the curves or dips the ties have applied thereto anchor blocks 11 for alining the rail structures r and r' to proper gauge. As shown the blocks are seated in gains 12 cut in the ties and securely held therein by bolts 13. Around these anchor blocks the rail structure is built up. As shown upper and lower timbers 14 and 15 run along the insides of the blocks and upper and lower timbers 16 and 17 run along the outside of the blocks of each rail structure. The timbers are sufficiently light and of such cross section that they may be readily bent or warped both horizontally and vertically to accurately follow the alining or anchor blocks so as to establish a correct and uniform gauge for the rail structures. Preferably the timbers are of square cross section so that their horizontal and vertical flexibility will be equal, this being desirable where the track is to form a spiral, helical or similar course for the cars. As the beams are bent to curvature they are secured to the cross ties as by bolts 18, and they may also be secured to the blocks, and with the blocks gained and secured as described maintenance of the correct gauge will be assured so that the cars can accurately, easily and safely ride the track.

The car C shown comprises the longitudinal chassis beams 19 on which is supported the body 20 providing seats 21. Secured to the sides of the car and under the running boards 22 are the bearing frames 23 for the axles 24 of the car wheels 25. The wheels travel on the flat rails 26 secured on top of the rail structures. As shown these rails are on top of the inner tiers of beams 14, 15 and being flexible they can readily and accurately follow the beams throughout their various curvings.

Associated with each car wheel is a horizontal guide or safety wheel 27 carried on an axle 28 journaled in a bearing frame 29 secured to the respective chassis beam. Secured against the inner side of each rail structure are angle bars 30 with whose vertical flanges a the guide wheels 27 engage to limit the lateral play of the car wheels on their rails 26. Extending laterally outwardly from each bearing frame 29 below the guide wheel therein is a projection or abutment 31 which may be afforded by a plate secured to the underside of the frame. The horizontal flanges b of the angle bars 30 extend below the guide wheels and above the paths of these projections and limit the upward play of the car as it travels over the rails. The cooperation of the guide wheels and the projections or shoes 31 will hold the car to the rails. There is sufficient clearance between the guide wheels and shoes 31 and the angle bar to avoid binding and unnecessary friction. Such clearance, by permitting slight lateral and vertical surging of a rapidly moving car, will add greatly to the sensation. However, the car cannot leave the track and safety is always assured.

Having described my invention, I claim as follows:

In a coaster apparatus of the character

described, the combination of track beams, a car having supporting wheels for traveling along the tops of said track beams, horizontally disposed wheels carried by said car for preventing the lateral movement of said car on said track beams, an angle bar rail being fixed along the inner side of each of said track beams, the vertically disposed portions of said rails constituting a track for said horizontally disposed wheels, the horizontally disposed portions of said rails extending inwardly to be disposed below said horizontally disposed wheels, and retainer elements detachably secured to said car and extending below and being normally spaced from the horizontally disposed portions of said rails, said retainer elements being adapted for engaging the underside of said horizontally disposed rail portions for limiting the vertical displacement of said car from said track beams.

In witness whereof, I hereunto subscribe my name this 4th day of May, 1929.

JOHN A. MILLER.