

Aug. 12, 1924.

H. F. MAYNES

1,504,366

AMUSEMENT RAILWAY

Filed Dec. 18, 1922

3 Sheets-Sheet 1

Fig. 1,

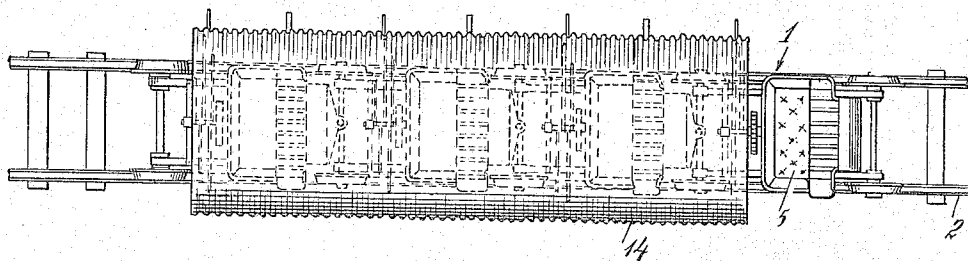
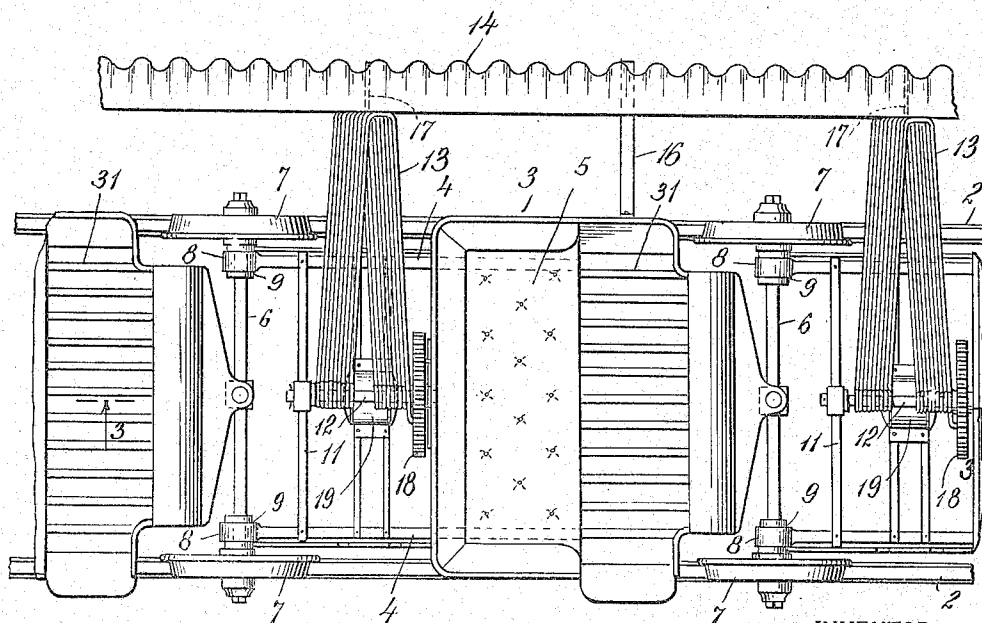


Fig. 2,



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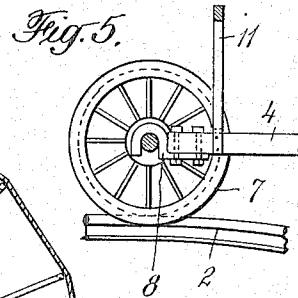
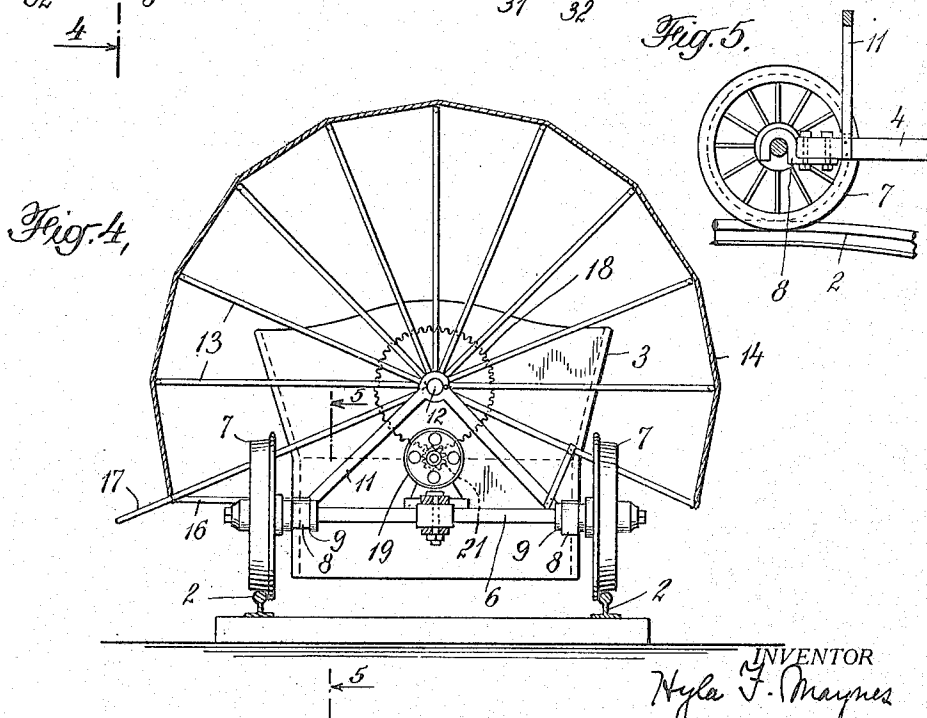
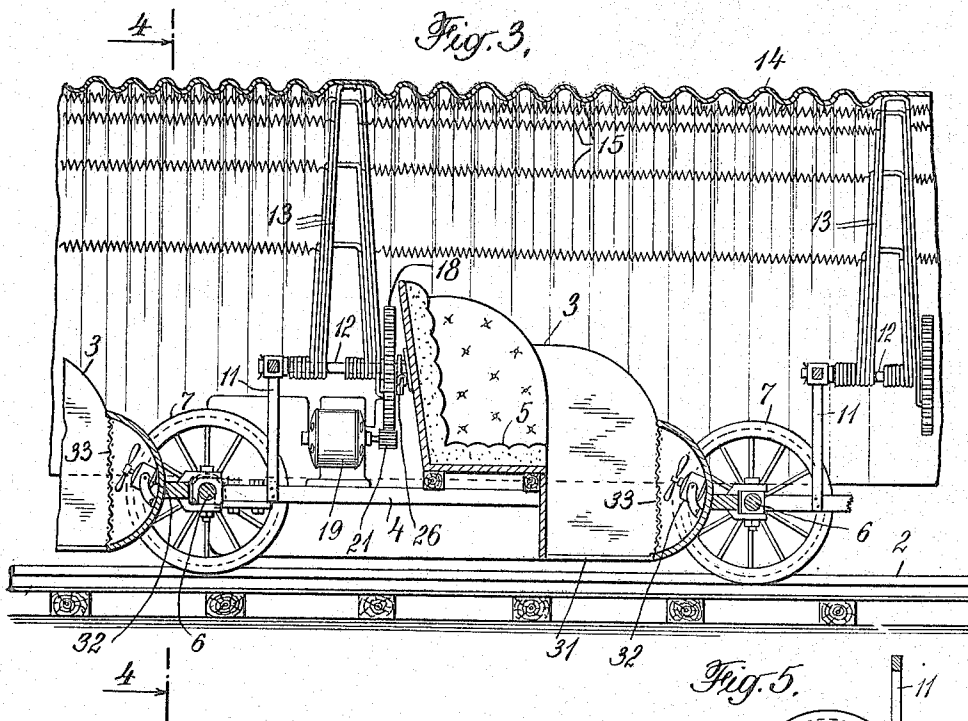
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3 Sheets-Sheet 2



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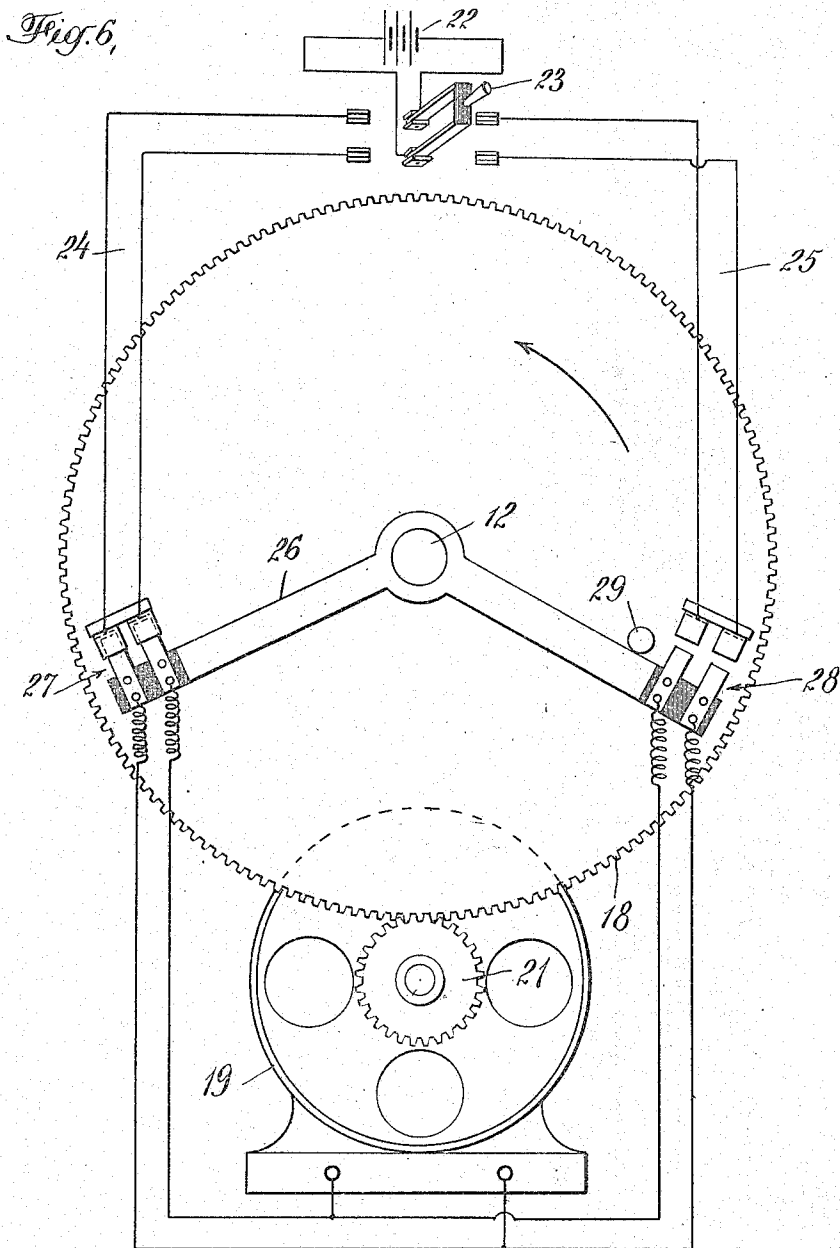
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AMUSEMENT RAILWAY

Filed Dec. 18, 1922

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

HYLA FREDERICK MAYNES, OF GAINES, PENNSYLVANIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO MAYNES CORPORATION, OF DOVER, DELAWARE, A CORPORATION OF DELAWARE.

AMUSEMENT RAILWAY.

Application filed December 18, 1922. Serial No. 607,521.

To all whom it may concern:

Be it known that I, Hyla Frederick Maynes, a citizen of the United States, residing at Gaines, in the county of Tioga, State of Pennsylvania, have invented certain new and useful Improvements in Amusement Railways; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an amusement ride. In my copending application, Serial No. 559,986, filed May 11, 1921, I have described and claimed broadly an amusement ride comprising a car or a train of cars carrying a canopy adapted to be closed over the passengers to conceal them from the spectators, and opened again. In that application, this canopy was shown in connection with a merry-go-round, and the specific canopy collapsing mechanism described was particularly adapted for use on such a ride.

The object of the present invention is to adapt the canopy of the earlier application to use in connection with an amusement railway, as distinguished from a merry-go-round, and to devise new means for operating the collapsing mechanism.

The accompanying drawings disclose a preferred embodiment of the invention. In these drawings, Fig. 1 is a plan view of a train of cars equipped with a canopy in accordance with this invention, the canopy being in its enclosing position; Fig. 2 is another plan view of part of the train showing the canopy in folded position; Fig. 3 is a longitudinal vertical section through the train and its canopy, taken along line 3—3 of Fig. 2, but with the canopy in its enclosing position; Fig. 4 is a transverse vertical section taken along line 4—4 of Fig. 3 and showing the canopy in its enclosing position; Fig. 5 is a detail showing the means whereby the cars of the train are linked together; and Fig. 6 is a detail of the motor starting, stopping and reversing mechanism with a diagrammatic showing of the wiring for one motor.

The train of cars 1 shown in these drawings is mounted to run upon a trackway 2. This trackway may be of any desired contour, but preferably is made both winding

in a horizontal plane and undulating in a vertical plane, so that the passengers are given a slight rolling and pitching motion. I shall use the word "tortuous" to define this kind of trackway, and shall intend that term to mean any suitably curved track.

The train is made up of a number of cars 3, the intermediate ones comprising a supporting frame 4, a seat 5, a pivoted front axle 6 and a pair of front wheels, 7. At the rear ends of the side members of each frame are bolted inverted U-shaped irons 8, which are designed to fit over the forward axle 3 of the following car, these axles being provided with suitable annular channels 9, designed to receive them. It is thus obvious that each car need be provided with but 2 wheels, as the forward wheels of any succeeding car serve as the rear wheels for the one just ahead. The rear car must, of course, be provided with four wheels, and the axle 6 of the first car is rigidly secured to its frame 4 as shown in Fig. 1.

Mounted upon the frame of each car, somewhat to the rear of the seat, is an inverted V-shaped standard 11, which supports one end of a rod 12, the other end of which is supported by the back of the seat. Pivotaly mounted upon this rod are a series of U-shaped supports 13, which are designed to open and close fan-like, and are fastened at their outer ends to a folding canvas canopy 14, which normally lies in folded position along one side of the train. Connecting each set of supports 13, near their outer ends, are series of springs 15, which assist in supporting the canopy. When the train is rounding curves or passing over undulations, these springs contract and expand as necessary, always supporting the canopy and preventing its collapse. When the canopy is in its folded position, these springs prevent sagging, although, if desired, arms 16 and extensions 17 on the lowermost supports 13 may be employed for this purpose.

Journaled upon the rod 12 between the supports and the back of the seat is a gear wheel 18, to which one arm of the upper support is secured. Below the rod 12 and mounted upon the frame of the car is a reversible motor 19, carrying upon its shaft a pinion 21, which meshes with the gear wheel 18. This motor through the above de-

scribed gearing causes the supports to open out and close, carrying with them the canopy. The lowermost support is fixed in position so that the canopy cannot follow the movement of the uppermost support, and be completely thrown to the other side of the train.

The motor starting, stopping and reversing mechanism is shown in Fig. 6. The armature of the motor is provided with a source of electrical energy 22, connected to a double throw switch 23. When this switch is thrown to the left, current to the armature passes through leads 24, and runs the motor in one direction, and when this switch is thrown to the right, the current passes through leads 25 and runs the motor in the reverse direction. The field coils of the motor are separately excited. In order that the motor shall be disconnected when the canopy is in either its completely folded or completely unfolded positions, the following mechanism can be used: a two armed reversing lever 26 is loosely journaled for limited oscillation upon rod 12. The left hand arm of this lever as shown in Fig. 6 is provided with two contacts 27 which complete the circuit thru leads 24, and the right hand arm is provided with contacts 28, which similarly complete the circuit thru leads 25. A lug 29 projects outwardly from the face of gear 18 and contacts with the arms of the lever 26 when the canopy is in its completely folded and unfolded positions, this contact causing sufficient movement of the lever to break the circuit through the then energized leads. In the position shown in Fig. 6, the contacts 27 are completing the circuit through leads 24, and if in this position, switch 23 is thrown to the left, the motor will operate to rotate the gear 18 counter-clockwise. Assuming that this movement unfolds the canopy, when the unfolding is complete, lug 29 engages the left hand arm of lever 26 and breaks the circuit thru leads 24, thus stopping the motor. At the same time, the right hand arm of the lever is moved to complete the circuit thru leads 25. To fold the canopy, it is then necessary only to throw the switch 23 to the right, thus reversing the rotation of the motor and moving the gear 18 clockwise. The above description refers to one motor alone. It is clear, however, that all of the motors can be readily wired parallel to operate simultaneously upon the throw of the one switch. It is also clear that other mechanism and wiring might be employed to effect this starting, stopping and reversing.

The floor of the car, just in front of the seat, is made up of a series of strips 31, spaced apart to admit the entrance of air blasts from blowers situated along the trackway. Or the extreme front end of each car may also be provided with a small electric

fan 32 placed so as to force a current of air upwardly into the faces of the passengers. This fan is hidden from view by a screen 33, which also protects the clothing of the passengers and prevents any contact with the moving blades of the fan.

The operation of the device is as follows: When the passengers enter the cars, the canopy is in folded position; the train is started and proceeds as any ordinary amusement train, when suddenly the operator, by throwing the switch, simultaneously energizes all of the motors 17 and causes the canopy quickly to unfold and envelop the train, with the exception of the first car. The passengers suddenly find themselves in semi-darkness, and, not quite knowing just what has happened, are then further startled by sudden blasts of air, which blow upwardly from the floors of the cars into their faces. While the passengers are still in this dazed condition, the operator reverses the motors and suddenly uncovers the train by collapsing the canopy. To a spectator, the canopy as it winds over the trackway, strongly resembles a giant caterpillar or serpent, and if desired, the external walls of the canopy may be painted to represent such beasts.

I claim:

1. An amusement apparatus comprising the combination of a car, a folding canopy for the car normally lying in folded condition lengthwise of the car and to one side thereof, a fan-like support for the canopy pivoted on the car, a gear wheel secured to one of the radial elements of the support, and means for rotating the gear wheel to open and close the canopy.

2. An amusement apparatus comprising the combination of a car, a folding canopy for the car normally lying in folded condition lengthwise of the car and to one side thereof, a fan-like support for the canopy pivoted on the car, a gear wheel secured to one of the radial elements of the support, and means for automatically arresting rotation of the gear wheel when the canopy is either completely opened or folded.

3. An amusement apparatus comprising the combination of a car, a folding canopy for the car normally lying in folded condition lengthwise of the car and to one side thereof, a fan-like support for the canopy pivoted on the car, a gear wheel secured to one of the radial elements of the support, a reversible motor on the car provided with a pinion meshing with the gear wheel, means for operating the motor to move the canopy over the car, and means for automatically disconnecting the motor when the canopy is either completely opened or folded.

4. An amusement apparatus comprising the combination of a train of cars, a folding canopy for the cars normally lying in folded

condition lengthwise of the train and to one side thereof, fan-like supports for the canopy pivoted on the cars, and means for opening out these supports fanwise to spread the canopy over the cars.

5 5. An amusement apparatus comprising the combination of a tortuous trackway, a train of cars adapted to run upon said trackway, a canopy for the cars, supports for the canopy carried by the cars, and resilient means connecting the supports and bearing against the canopy.

10 6. An amusement apparatus comprising the combination of a train of cars, a folding canopy for the cars, normally lying in folded condition lengthwise of the train and to one side thereof, fan-like supports for the

canopy pivoted adjacent the cars, a gear wheel, coaxial with each support pivot and secured to one of the radial elements of the support, a motor on each car provided with a pinion meshing with the gear wheel, and means for operating the motors simultaneously to open and close the canopy. 20

7. An amusement apparatus comprising the combination of a passenger carrying car, a canopy carried by the car and adapted to enclose it, and an electric fan carried by the car near the floor and positioned to force a current of air upwardly toward the passengers. 25 30

In testimony whereof I affix my signature.

HYLA FREDERICK MAYNES.