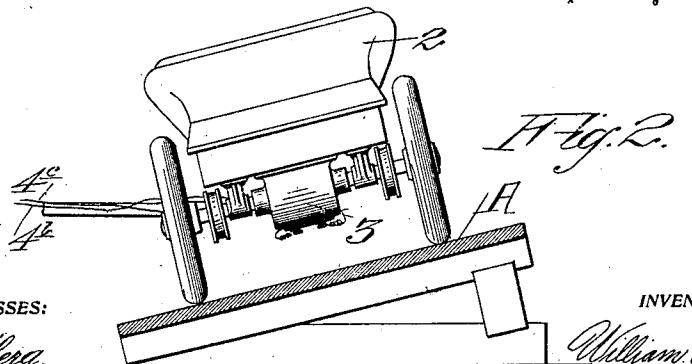
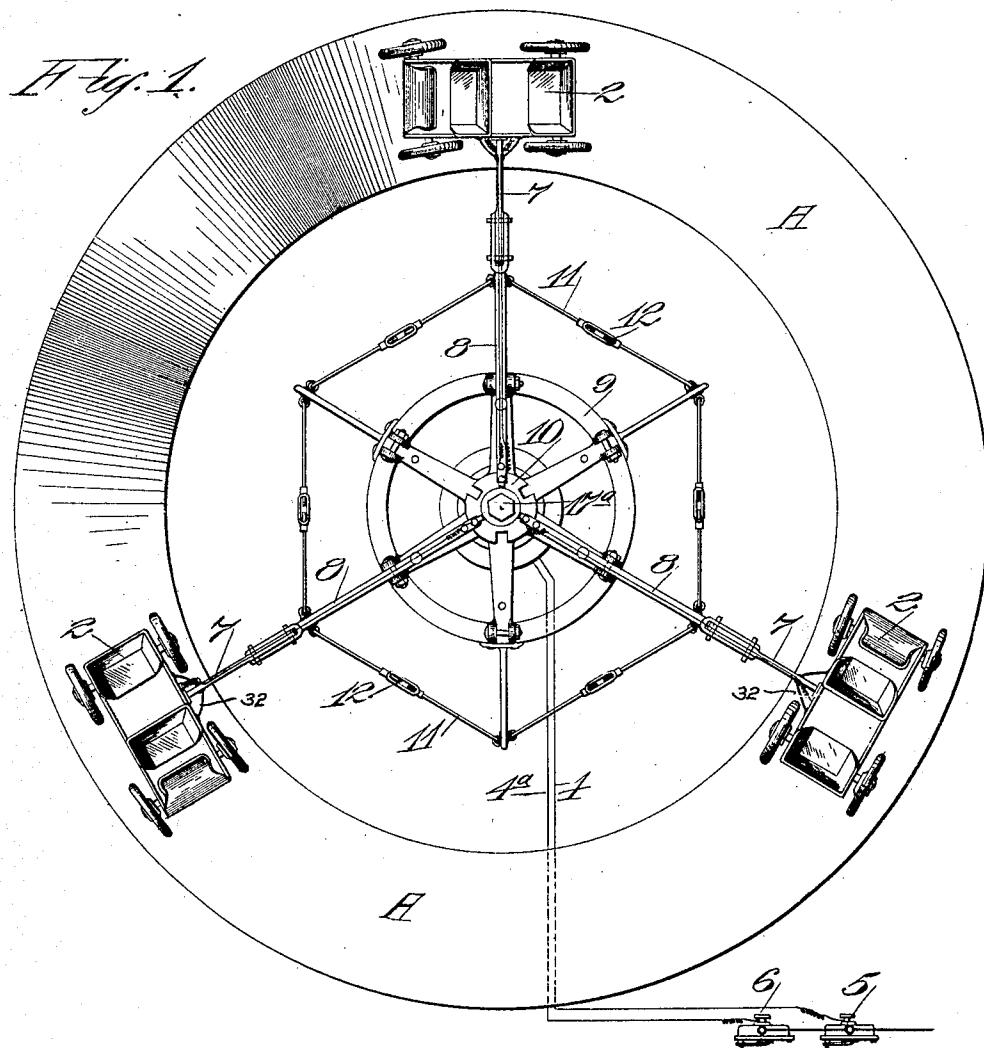


No. 885,406.

PATENTED APR. 21, 1908.

W. H. VANCE.
PLEASURE CAR AND TRACK.
APPLICATION FILED JAN. 22, 1907.

2 SHEETS—SHEET 1.



WITNESSES:

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No. 885,406.

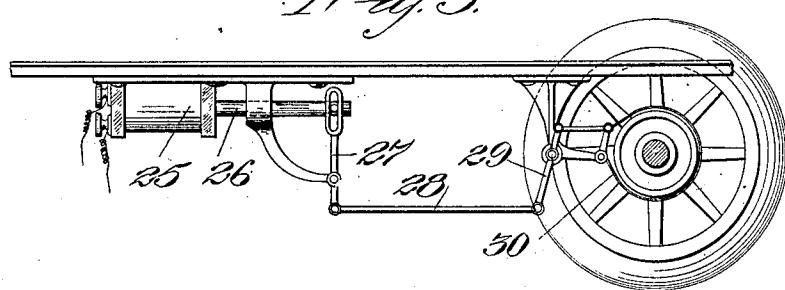
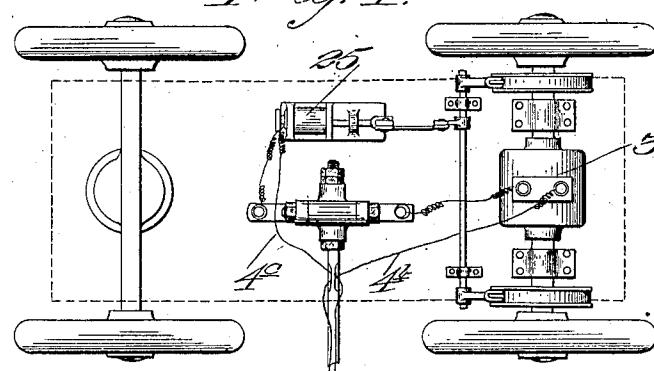
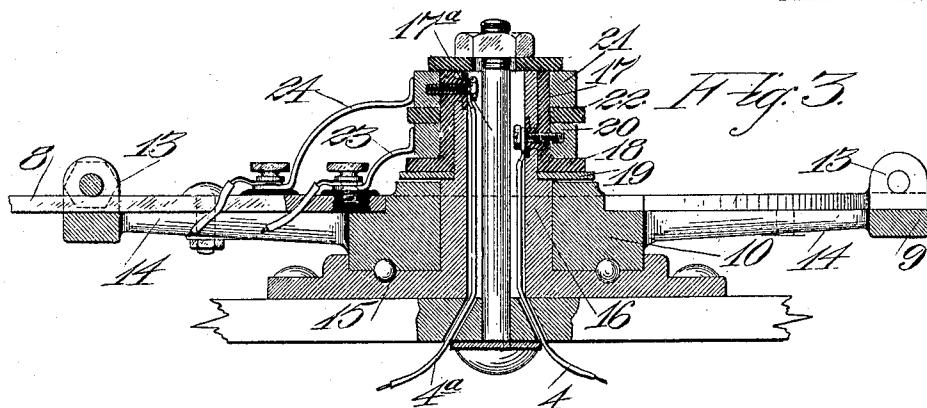
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2 SHEETS—SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM H. VANCE, OF SAN FRANCISCO, CALIFORNIA.

PLEASURE-CAR AND TRACK.

No. 885,406.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed January 22, 1907. Serial No. 353,439.

To all whom it may concern:

Be it known that I, WILLIAM H. VANCE, citizen of the United States, residing in the city and county of San Francisco and State 5 of California, have invented new and useful Improvements in Pleasure-Cars and Tracks, of which the following is a specification.

My invention relates to a pleasure car and track therefor, with means whereby the movements of the car may be controlled from an 10 exterior station.

It consists in a combination of parts, and in details of construction which will be more 15 fully explained by reference to the accompanying drawings, in which—

Figure 1 is a plan view of the apparatus. Fig. 2 is a transverse section of one portion of the track showing an end view of the vehicle. Fig. 3 is a sectional view of the centrally located hub and connections. Fig. 4 is a bottom view of the car showing motor and brake connections. Fig. 5 is a partial side elevation of a car showing brake mechanism.

25 It is the object of my invention to provide a circular track with a surface adapted to receive the wheels of cars, and a means by which said cars are driven from a station preferably located outside of the track, with 30 means whereby the movements of the cars may be controlled.

A is a circular track having any desired or available diameter, with a suitable surface inclined to such a degree as the proposed 35 speed of cars thereon will require to maintain the proper centrifugal and centripetal relations. This surface may, if desired, be made undulating in the direction of its length so that cars propelled over it will follow the undulations.

The cars 2 are here shown in the form of automobiles, the front and rear wheels being so set with relation to each other as to maintain the proper curvature of travel to fit the 45 curve of the track.

Several cars may be made to travel upon the same track, the number being only limited by the radius and length of the track. In order to propel these cars I have shown 50 electric motors, as at 3, mounted upon each of the cars, and an electric current is supplied from any distant source through conducting wires as at 4^b by which to energize the motor and propel the cars.

55 In Fig. 1, I have shown an arrangement in which the source of electrical energy is at

some point exterior to the track, the electrical current being controlled by switches 5 and 6. One of these switches may control the current leading to the motor, and the other may control the current leading to brakes by which the movements of the cars 60 may be controlled.

The cars have each an inwardly extending arm as at 7 and these arms are jointed or connected with radial arms 8 in such a manner as to allow whatever variations in the movement of the car are made necessary, by reason of undulations or other conformation of the track surface. The arms 8 extend inwardly across a circular ring 9 and the inner 70 ends are securely fixed to a hub 10. The outer ends of the arms 8 are preferably connected by stay rods 11 having turn-buckles as at 12, by which the tension of these rods 75 may be regulated and maintained, and the structure is thus sufficiently stiffened to insure the revolution of all the parts in unison without straining.

The radial arms 8 may preferably be connected with a central portion of the apparatus, and the ring 9 by means of lugs 13 projecting upwardly from the ring, and between which lugs the arms 8 are extended, the inner ends fitting into sockets in the hub. 85 By means of bolts passing through the lugs and through radial arms 14, which extend outwardly from the hub and support the ring, the parts are all firmly united and revoluble together.

90 The hub 10 may be supported upon ball or equivalent anti-frictional bearings upon a suitable base as at 15, and this base has an upwardly extending hollow sleeve 16 about which the hub 10 is turnable, and within 95 which the insulated wires 4 and 4^a are led upwardly to a point of distribution.

Around the upper and smaller portion of the sleeve 16 is an insulated sleeve 17; the lower part of which has an outwardly turned 100 flange 18, and below this a washer 19 which serves to separate this stationary insulating portion from the revoluble hub 10.

Around the insulating sleeve 17 are two metallic rings 20 and 21, these rings being 105 separated from each other by an insulating collar 22. The sleeve 17 has a cap through which the bolt 17^a passes centrally through the hub structure and the whole is screwed down and secured together by this bolt 17^a.

110 One of the conducting wires as 4, is connected with the conducting sleeve 20, and

the other 4^a is connected with the conducting sleeve 21. Each of these sleeves has brushes as at 23 and 24, and these brushes are secured to the revoluble arms or hub so as to travel over the respective conducting rings 20 and 21; and the currents conveyed by these two brushes pass outwardly through wires along the arms 7—8 and 14 to the car. One of these wires 4^b connects with the motor 10 as previously described, and the other one 4^c connects with a solenoid 25 of sufficient power so that when energized it will by drawing the core 26 inwardly act through a lever arm 27, a connecting rod 28, a brake lever 29 15 to apply the brake 30, and thus check or stop the movement of the car.

It will be understood that the mechanism here described is representative of any of the well known forms of interior or exterior 20 brakes as ordinarily applied.

Connections may be made with any number of the cars to provide sufficient traction to propel the whole of the apparatus, which propulsion is insured by the connection of 25 the radial arms with the circular ring and stay rods previously described.

With heavy loads, it will be preferable to employ a motor upon a plurality, or all of the cars, and as the momentum of each car is independent of all the others, the control of the 30 cars will be better safe-guarded by employing a brake for each of them.

In order to increase the strength of the car connections, I have shown chains or equivalent stays or braces 32 so attached as to counteract side twisting strains and movements.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

40 1. In an apparatus of the character described, a circular track, cars adapted to travel thereon, each car having a motor and brake mechanism, a central vertical fixed sleeve, a hub revoluble thereon having radial

arms connecting with the cars, stationary 45 conducting rings insulated from the central sleeve and from each other, an exterior source of electrical energy and independent connection between it and the conducting rings, independent brushes carried by the 50 revoluble portion of the apparatus connecting respectively with the two rings, insulated conductors leading from said brushes to each of the cars, one connecting with the motor, and the other with the brake mechanism and 55 switches whereby either of said conductors may be energized.

2. An apparatus of the character described said apparatus comprising a circular track-surface; motor-cars adapted to travel thereon; a central revoluble hub, said hub having radial-arms with lugs on the outer ends and sockets at the inner ends; radial-arms lying upon said arms having inner ends fitting said sockets and outer portions fitting 65 between said lugs; other radial-arms pivotally-connected to and forming extensions of the second-named arms and connected to the cars whereby the latter are allowed a vertical movement; adjustable stay-rods connecting 70 the outer ends of the hub-arms, diagonally-disposed stay-chains extending divergently from the last-named radial-arms to the sides of the car, and attached thereto at points distant from the arm-connections, electrical 75 connections with the cars; a distant switch-mechanism for controlling the current to the cars; brake-mechanism on the cars; and a separate and independent distant switch-mechanism for controlling said brake mechanism.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM H. VANCE.

Witnesses:

S. H. NOURSE,
FREDERICK E. MAYNARD.