Feb. 9, 1932. H. H. ATWATER 1,844,141

AMUSEMENT DEVICE

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Fig 1

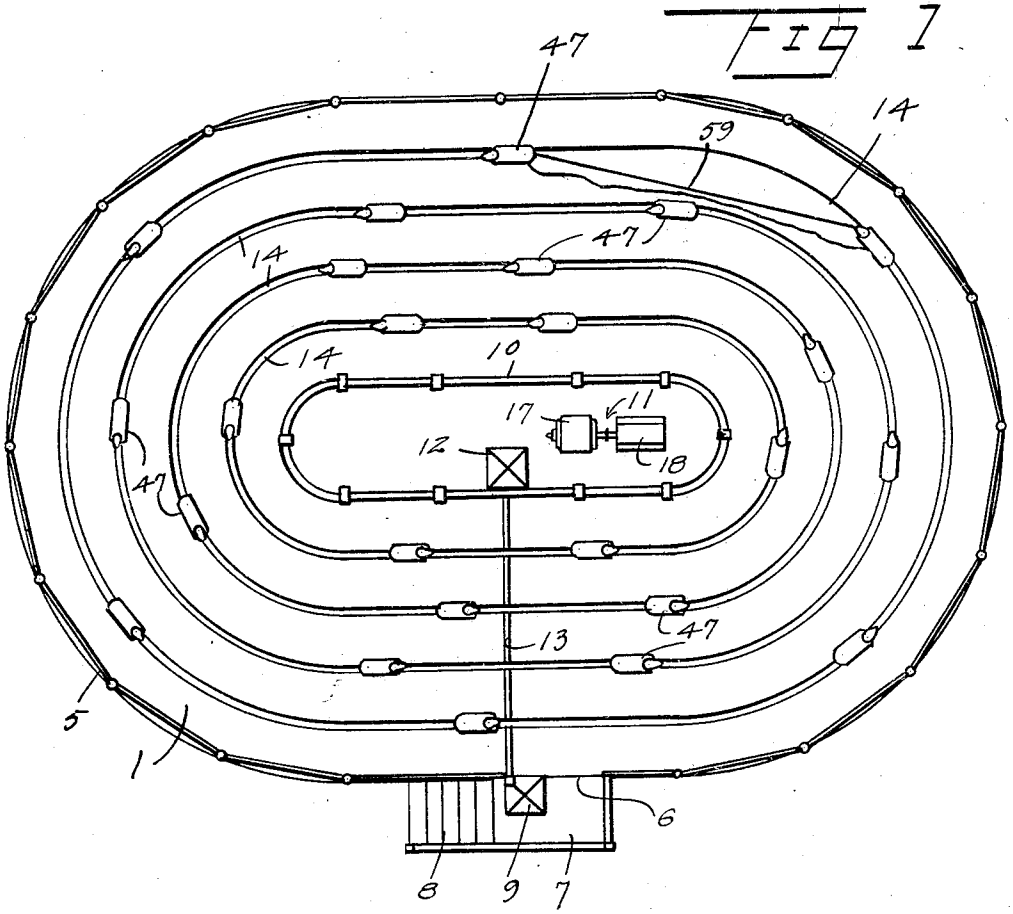
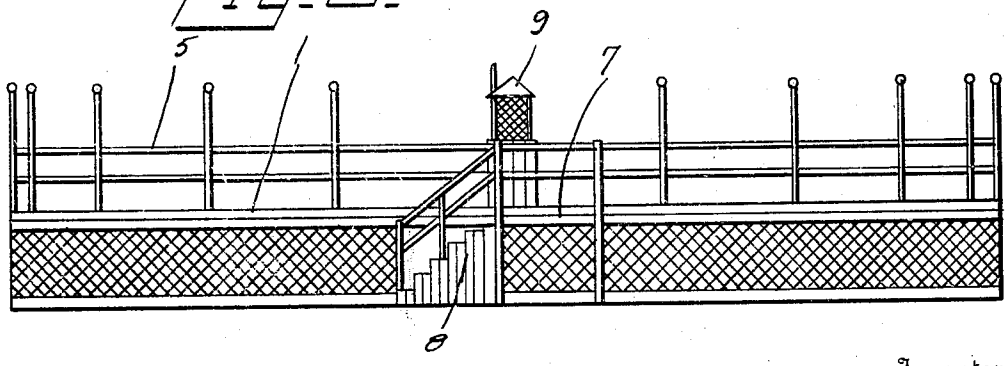


Fig 2



Inventor

H. H. Atwater

By Watson E. Coleman

Attorney

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Fig. 3.

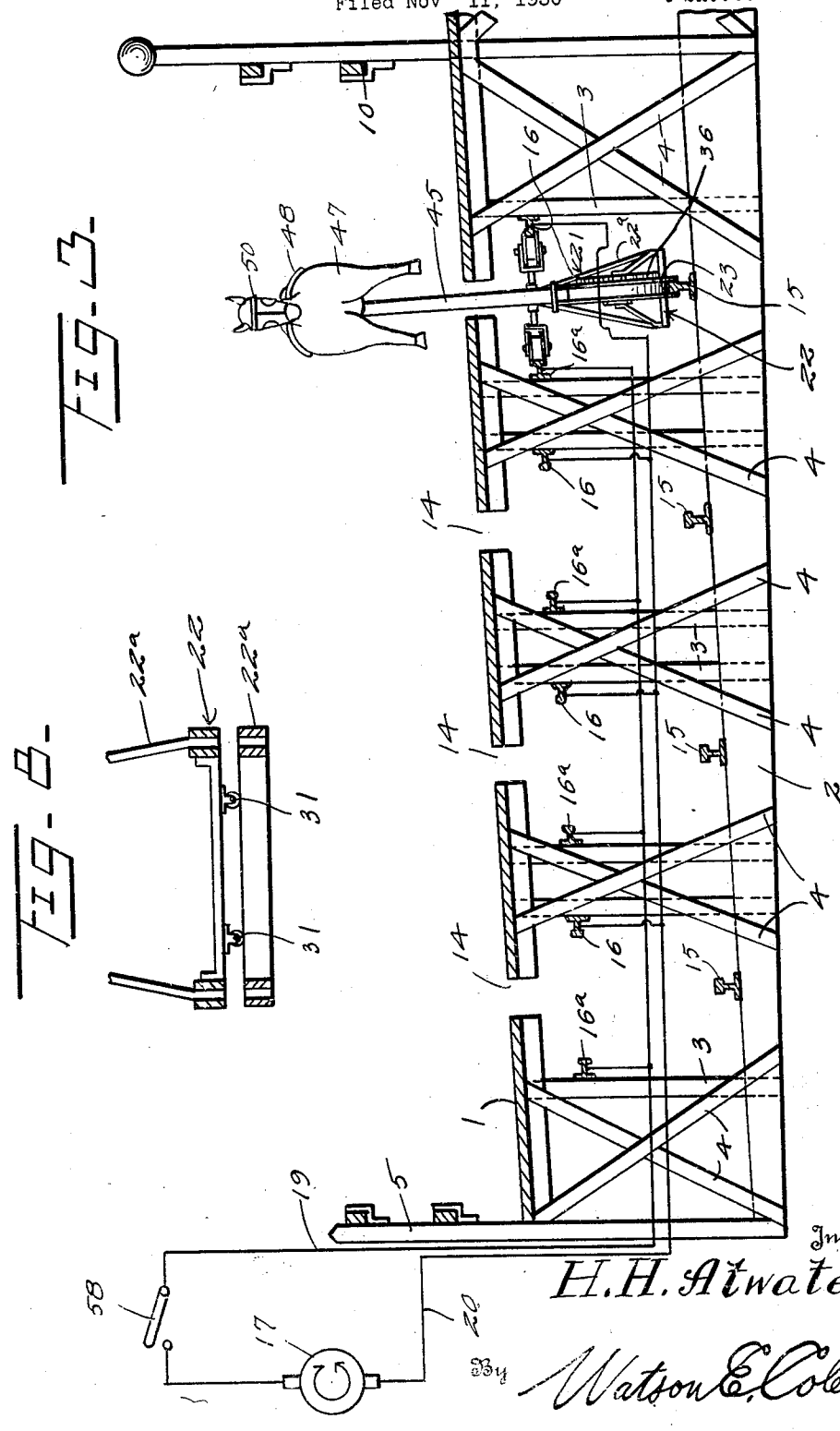

Fig. 8.

Inventor

H. H. Atwater

By Watson E. Coleman

Attorney

Feb. 9, 1932. H. H. ATWATER 1,844,141

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Fig. 4.

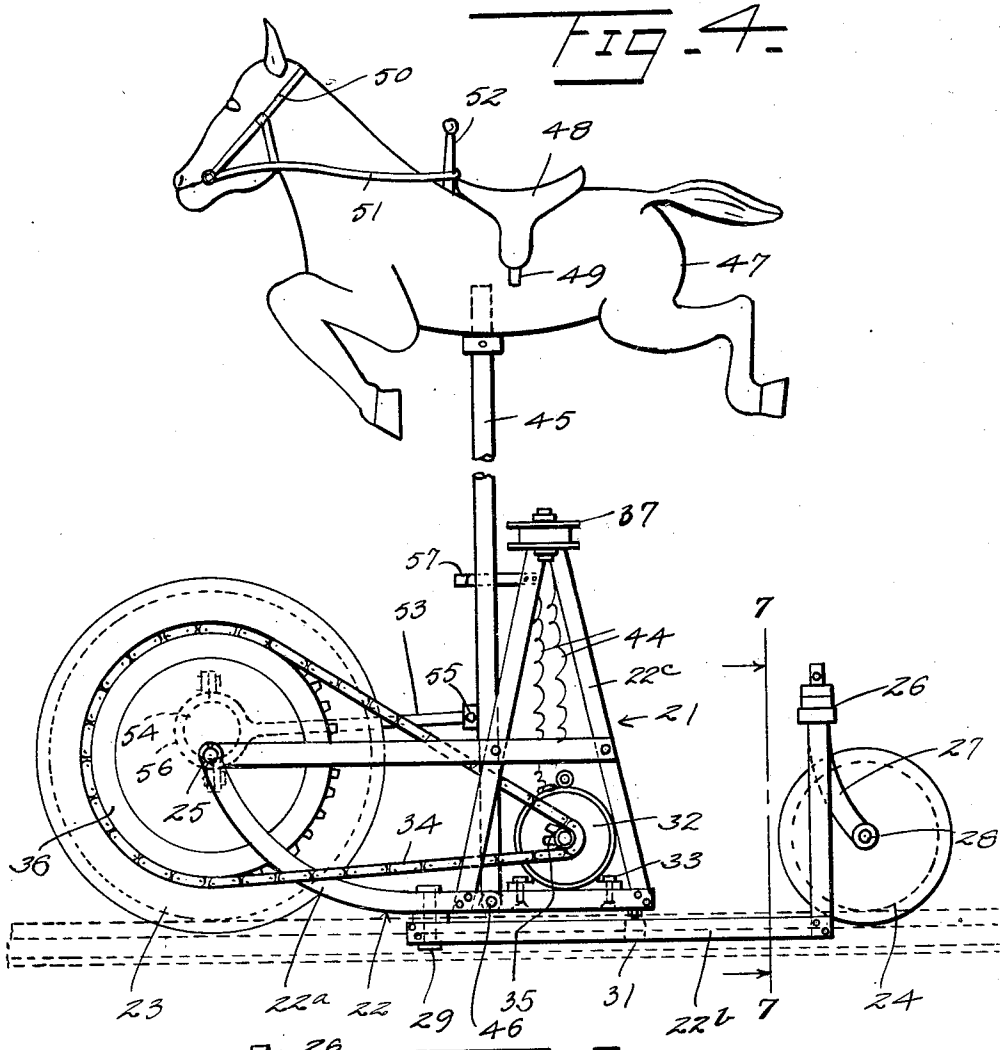
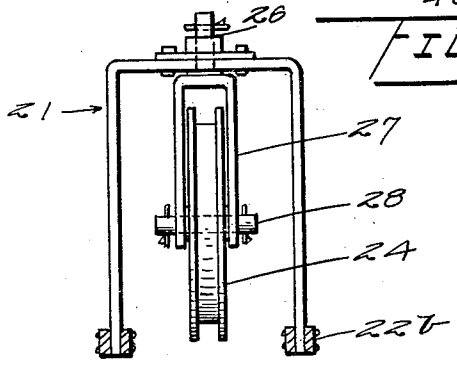


Fig. 7.



Inventor

H. H. Atwater

By Watson E. Coleman

Attorney

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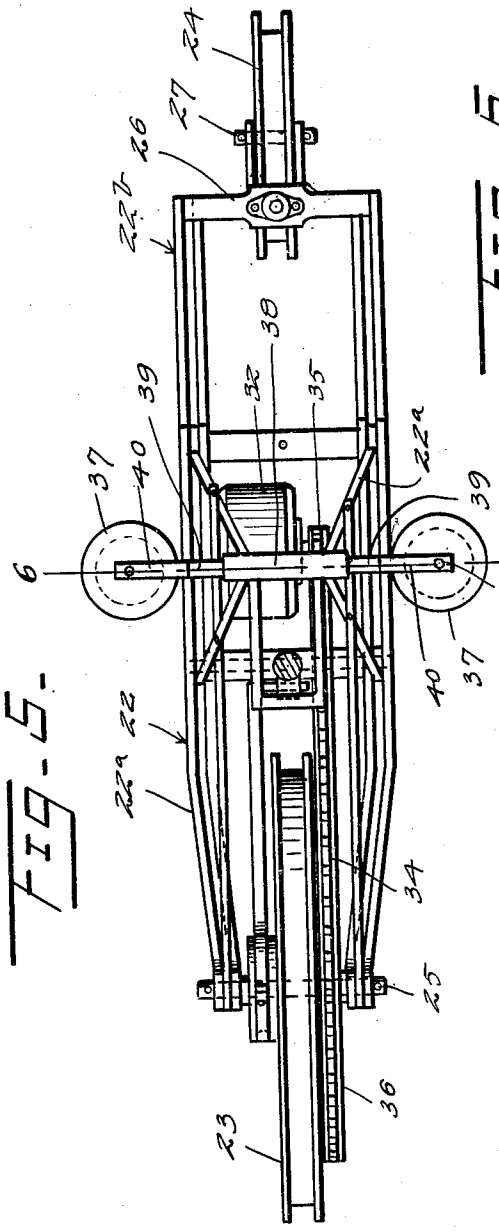

FIG. 5.

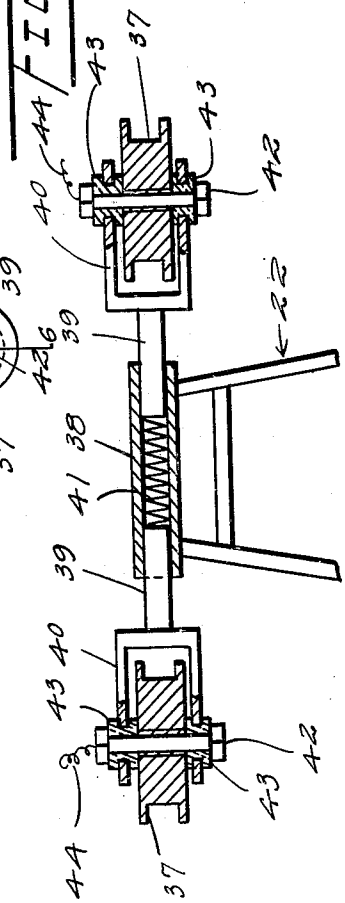

FIG. 6.

Inventor

H. H Atwater

By Watson E. Coleman

Attorney

Patented Feb. 9, 1932

1,844,141

UNITED STATES PATENT OFFICE

HARRY H. ATWATER, OF PUEBLO, COLORADO

AMUSEMENT DEVICE

Application filed November 11, 1930. Serial No. 494,964.

This invention relates to an amusement device embodying mechanical horses, means movably supporting the horses on concentrically related orbital tracks, and electric means for propelling the horses.

The invention has for one of its objects to provide an amusement device of the character stated wherein the horses shall be propelled in a manner to permit a horse race to be simulated, to the end that interest in the device may be stimulated by awarding a small prize, such as a box of candy or the like, to the rider of the horse reaching the finishing line or post after the current to the electrical propelling means is cut off.

The invention has for a further object to provide a device of the character stated wherein each of the means for movably supporting the horses on the tracks shall embody a frame supported by front and rear wheels and comprising front and rear sections connected for movement about a vertical axis so that the wheels may readily follow the curvature of their track.

The invention has for a further object to provide a device of the character stated wherein the front section of each frame shall be provided with a standard pivoted at its lower end to the frame and having a horse fixed to its upper end, the pivoting of the standard to the front frame section permitting the horse to be moved forwardly and rearwardly with respect to the frame, and wherein this movement shall be imparted to the horse by means connected to the front wheel and standard.

The invention has for a further object to provide a device of the character stated wherein each of the means for propelling the horses shall embody an electric motor mounted upon the front frame section of each supporting means and having a driving engagement with the front wheel of such means, electric conductors similar in configuration to and arranged at opposite sides of each track, and current collecting wheels mounted on the front section of each frame and contacting with the conductor rails and connected to the motor.

With the foregoing and other objects in view, the nature of which will appear as the description proceeds, the invention consists in the construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, wherein:—

Figure 1 is a top plan view of an amusement device constructed in accordance with my invention;

Figure 2 is a view in side elevation of the amusement device;

Figure 3 is a sectional view on an enlarged scale taken on a vertical plane extending transversely and centrally through one side portion of the amusement device;

Figure 4 is a view in side elevation of one of the carriages of the amusement device;

Figure 5 is a view partly in top plan and partly in horizontal section of one of the carriages;

Figure 6 is a detail sectional view taken on the vertical plane indicated by the line 6—6 of Figure 5;

Figure 7 is a sectional view taken on the vertical plane indicated by the line 7—7 of Figure 4, and

Figure 8 is a detail sectional view illustrating the means for supporting the rear end of the front carriage section from the rear carriage section.

The amusement device comprises an elevated platform or floor 1 of substantially elliptical formation in plan and inclining downwardly and outwardly from its longitudinal center. The platform 1 is supported from transverse sills 2 by studs 3 and crossed struts 4. The upper sides of the sills 2 incline downwardly and outwardly from a plane coincident with the longitudinal center of the platform 1 and are arranged in parallel rela-

tion to the platform. A guard 5, similar in contour to the platform 1, extends upwardly from the edge of the platform, and is provided with an opening 6 by way of which patrons enter and leave the platform. A landing 7 is arranged at the exit and entrance openings 6, and a flight of steps 8 lead from the ground to the landing. A booth 9 is mounted upon the platform 7 for the person who will have charge of the entrance and exit opening 6. A guard 10 similar in contour to the platform 1 is arranged at the center of the platform, and arranged upon the platform within the guard is an electric power plant 11 and a booth 12 for the engineer in charge of the power plant. The booths 9 and 12 are arranged at the transverse center of the platform 1, and a finishing line 13 extending between the booths is painted upon the platform.

The platform 1 is provided with endless slots 14 of elliptical formation and concentrically related. Endless tracks 15 similar in contour to the slots 14 are mounted upon and secured to the sills 2 in alinement with the slots. Endless conductor rails similar in contour to the tracks 15 are secured to the studs 3 in a plane above the tracks 15.

A pair of positive and negative conductor rails 16 and 16^a, respectively, is provided for each track 15 and the rails of each pair are located laterally beyond the track with which they are associated. The power plant 11 comprises an electric generator 17 and a gasoline engine 18 for operating the same. Each pair of the conductor rails 16 and 16^a is connected to the generator 17 by leads 19 and 20.

A plurality of carriages 21 are mounted upon each track 15. Each carriage comprises a frame 22 which is supported by a front wheel 23 and a rear wheel 24 provided in their peripheries with track receiving grooves. Each frame 22 comprises a front section 22^a in the front end of which the front wheel 23 is journaled, as at 25, and a rear section 22^b in the rear end of which is swivelled, as at 26, the upper end of a fork 27 in which the rear wheel 24 is journaled, as at 28. The intermediate portions of the frame sections 22^a and 22^b which are located below the wheel journals 25 and 28 rest one upon the other and are connected together by a bolt 29 for relative swinging movement about an upright axis, the relative movement of the frame sections 22^a and 22^b permitting the wheels 23 and 24 to readily follow the curvature of the track. Rollers 30 journaled on the frame section 22^a and resting upon a bar 31 carried by the frame section 22^b permit the frame sections to move easily about their pivot 29. A standard 22^c is carried by that portion of the frame section 22^a that is arranged in overlapped relation to the frame section 22^b. The standard 22^c is located rearwardly of the pivot 29.

The front wheel of each carriage 21 is larger than the rear wheel 24 and is driven by an electric motor 32 to effect the propulsion of the carriage. The motor 32 is mounted upon and fixed, as at 33, to the frame section 22^a, and is connected to the front wheel 23 by a noiseless sprocket chain 34 passing about a sprocket wheel 35 fixed to the armature shaft of the motor and a sprocket wheel 36 fixed to the front wheel.

Current collecting wheels 37 which are carried by the standard 22^c contact with a pair of the conductor rails 16 and 16^a and are provided with peripheral grooves for the reception of the rails. A horizontal tube 38 is secured to the upper end of the frame section 22^a and extends transversely thereof. Rods 39 are slidably mounted in the tube 38 and are provided at their outer ends with forks 40 in which the collector wheels 37 are journaled. A spring 41, arranged in the tube 38 between the inner ends of the rods 39, holds the collector wheels 37 in contact with their conductor rails. The collector wheels 37 are journaled on and electrically connected to axles 42 which are insulated from the forks 40 by bushings 43. Leads 44 extend from the axles 42 to the brushes of the motor 32, and establish electrical connection between the conductor wheels 37 and the motor.

A standard 45 is pivotally connected at its lower end, as at 46, to the frame section 22^a, and extends upwardly through the slot 14 in alinement with the track 15 upon which the carriage is mounted. A seat 47 in the form of a horse is positioned upon and fixed to the upper end of the standard 45. The horse 47 is provided with a saddle 48, stirrups 49, bridle 50, reins 51 and a handle bar 52. The standard 45 is arranged on the carriage 21 rearwardly of the front wheel 23 of the carriage, and is connected by a rod 53 to an eccentric 54 fixed to the axle of this wheel. The rod 53 is pivoted at its rear end, as at 55, to the standard 45 and is connected at its front end to a strap 56 surrounding the eccentric 54.

It should be apparent from the foregoing description, taken in connection with the accompanying drawings, that when the power plant 11 is in operation, the current generated thereby will be conveyed to the conductor rails 16 and 16^a by the conductors 19 and 20, that the current will be conveyed from the conductor rails to the motors 32 by the collector wheels 37 and leads 44, and that the motors will rotate the front wheels 23 of the carriages 21, with the result that the carriages will be propelled along the tracks 15. The collector wheels 37 serve to maintain the carriages 21 in upright position upon the tracks 15. During the movement of the carriages 21, the standards 45, which support the horses 47, are rocked forwardly and rearwardly with respect to the carriages by reason of

their connection with the axles of the front wheels 23 of the carriages, and the rocking of the standards imparts to the horses a galloping motion. The standards work back and forward in guides 57 carried by the frame sections 22ª. The supply of current to the conductor rails 16 and 16ª is under the control of a switch 58 which may be arranged within the booth 12 for operation by the engineer in charge of the power plant 11. The carriages of each track 15 are connected together by cables 59 in order to maintain them in relatively spaced relation. When the switch 58 is closed, the carriages 21 and the horses 47 carried thereby are set in motion, and when the switch is opened, the carriages and horses gradually come to rest. When the carriages 21 and horses 47 come to rest, the rider of that horse nearest the finishing line 13 is entitled to the prize.

While I have described the principle of the invention, together with the structure which I now consider the preferred embodiment thereof, it is to be understood that the structure shown is merely illustrative and that such changes may be made, when desired, as fall within the scope of the invention as claimed.

I claim:—

1. An amusement device, comprising an endless track, endless conductor rails located above and laterally beyond the track, a carriage having wheels mounted on the track, an electric motor mounted on the carriage, a tube mounted on and extending transversely of the carriage, rods slidably mounted in the tube, collector wheels journaled on and insulated from the rods, conductors extending from the collector wheels to the motor, a spring mounted in the tube between the rods and urging the collector wheels in the direction of the conductor rails, and a seat mounted upon the carriage.

2. An amusement device, comprising an endless track, a carriage frame consisting of front and rear sections connected together for relative movement about an upright pivot, a wheel journaled on each frame section and mounted on the track, a standard pivoted at its lower end to thefront frame section and provided at its upper end with a seat, an eccentric secured to the front wheel and provided with a strap, a rod secured to the eccentric strap and standard, and means for operating the carriage.

3. An amusement device, comprising an endless track, endless conductor rails, a carriage frame consisting of front and rear sections connected together for relative movement about an upright axis, a front wheel journaled on the front section and mounted on the track, a rear wheel journaled on the rear section and mounted on the track, an electric motor mounted on the front section, means establishing a driving connection between the motor and front wheel, collector wheels carried by the front section and contacting with the conductor rails, leads extending from the collector wheels to the motor, a standard pivoted at its lower end to the front section, a seat in the form of a horse mounted upon the upper end of the standard, an eccentric fixed to the front wheel and provided with a strap, and a rod connected to the strap and standard.

4. An amusement device, including a sectional carriage frame, a supporting wheel journaled on each frame section, the frame sections having portions located between the wheels and below the journals thereof and arranged one upon the other, a vertical pivot connecting said frame section portions, and a seat supported from one of said frame section portions.

5. An amusement device, including a sectional carriage frame, a supporting wheel journaled on each frame section, the frame sections having portions located between the wheels and below the journals thereof and arranged one upon the other, a vertical pivot connecting said frame section portions, rollers carried by one of said frame section portions and contacting with the other of such portions, and a seat supported from the uppermost of said frame section portions.

6. An amusement device, including a sectional carriage frame, a supporting wheel journaled on one of the frame sections, a fork swivelly connected to the other of the frame sections, a supporting wheel journaled in the fork, the frame sections having portions located between the wheels and below the journals thereof and arranged one upon the other, a vertical pivot connecting said frame section portions, and a seat supported from one of said frame section portions.

7. An amusement device, including a sectional carriage frame, a supporting wheel journaled on one of the frame sections, a fork swivelly connected to the other frame section, a supporting wheel journaled on the fork, the frame sections having portions located between the wheels and below the journals thereof and arranged one upon the other, a vertical pivot connecting said frame section portions, rollers journaled upon one of said frame section portions and contacting with the other of such portions, and a seat supported from the uppermost of said frame section portions.

8. An amusement device, comprising a track, endless conductor rails located above and laterally of the track, a sectional carriage frame, a supporting wheel journaled on each frame section and mounted on the track, the frame sections having portions located between the wheels and below the journals thereof and arranged one upon the other, a vertical pivot connecting said frame section portions, a standard mounted upon the

uppermost of said frame section portions, means establishing a driving connection between the motor and one of the wheels, collector wheels supported by the standard and containing with the conductor rails, leads extending from the collector wheels to the motor and a seat supported from the uppermost of said frame section portions.

In testimony whereof I hereunto affix my signature.

HARRY H. ATWATER.