May 26, 1925. 1,539,418

E. N. JOHA

CHANCE CONTROLLED RACING GAME

Filed March 30, 1922

FIG. 1.

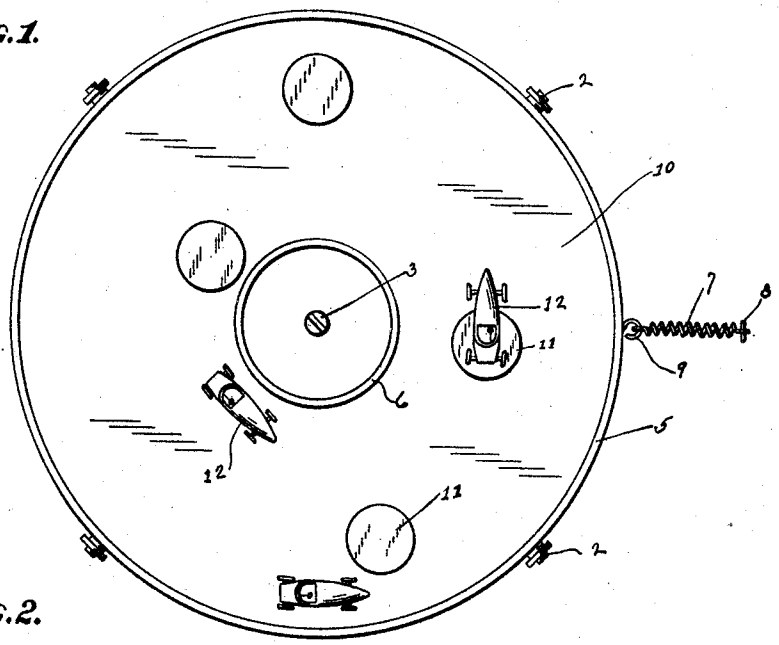


FIG. 2.

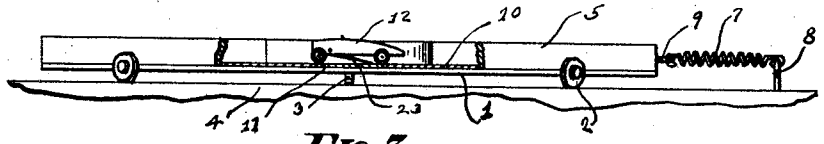


FIG. 3.

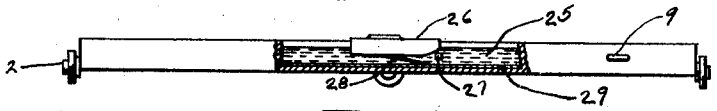


FIG. 4

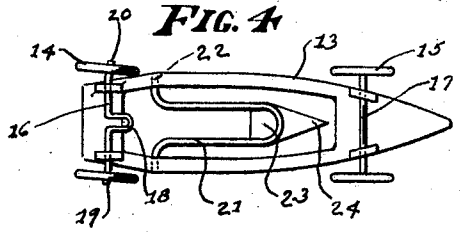
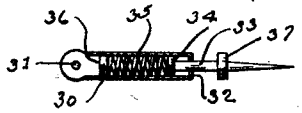


FIG. 5.



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UNITED STATES PATENT OFFICE.

ELMER N. JOHA, OF MILWAUKEE, WISCONSIN.

CHANCE-CONTROLLED RACING GAME.

Application filed March 30, 1922. Serial No. 547,969.

To all whom it may concern:

Be it known that I, ELMER N. JOHA, a citizen of the United States, residing at Milwaukee, county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Chance-Controlled Racing Games, of which the following is a specification.

This invention relates to toys, and is particularly directed to animated toys.

Objects of this invention are to provide a device in which a racing game may be played; to provide such a device with a plurality of moving units, such for example, as toy racing automobiles or boats; to provide means for actuating said devices in a simple and effective manner; and to provide means which will impart varying speeds to the different traveling units so that their courses cannot be predetermined.

Further objects are to provide a game for racing toy devices in which means are provided for transmitting motion to all of the devices simultaneously, but in different degrees; to provide means for causing an erratic travel of the devices; and to provide means whereby the general direction of travel or course of the devices may be variated at the will of the operator.

Further objects are to provide an apparatus for racing toy devices which is of extremely simple and cheap construction; which is of light weight, and which may be operated by an unskilled person.

Embodiments of the invention are shown in the accompanying drawing, in which:—

Figure 1 is a plan view of the device.

Figure 2 is a side elevation partly in section.

Figure 3 is a view corresponding to Fig. 2, showing a modified form.

Figure 4 is a bottom plan view of one of the toy automobiles.

Figure 5 is a view of a modified propelling arm.

Figs. 1, 2, and 4 showing one form of the invention will first be described. The apparatus comprises a circular base member 1 which is movably supported in any desired manner, as for example, by means of a plurality of spaced supporting wheels 2. These wheels may be secured to the base member as illustrated, or may be mounted beneath the base member, and may allow the base member to travel thereon in a well known manner. A central pin, such for example, as a screw 3, passes through the base member 1 and is secured to any desired support 4. An outer flange 5 extends upwardly from the base member and defines the outer margin of the track, and an inner flange 6 extends upwardly from an intermediate portion of the base member and defines the inner margin of the track. A tension spring 7 may be secured at one end to an eyelet 8, fixed upon the support, and its other end may be secured to an eyelet 9 secured to the apparatus. In this manner a relatively quick oscillating motion may be given the device with more ease than if the spring is not used. Between the outer and inner flanges 5 and 6 a piece of fabric 10 is stretched. This fabric is preferably secured only at its inner and outer margins, and is loose between such margins. It may be woven, knitted, or otherwise formed so as to present a fibrous, somewhat rough surface. At different points along the surface of the fabric, disks 11 of metal, or celluloid are either permanently secured, or are merely loosely positioned.

A plurality of toy automobiles 12 are placed within the raceway, formed between the flanges 5 and 6. These toy automobiles comprise a body portion which may be integrally cast, if desired, as indicated at 13 in Fig. 4, and is provided with front and rear wheels 14 and 15 carried upon spindles 16 and 17. The forward spindle is provided with an intermediate U-shaped portion 18 and with angularly bent, parallel end portions 19 and 20 upon which the wheels 14 are mounted. It will be seen that by turning the U-shaped portion 18 either forwardly or backwardly, that the angularity of the forward wheels, with reference to the axis of the body of the machine may be varied, so as to vary the path taken by the toy car. Means are provided for temporarily attaching the car to the fabric 10 during one direction of motion of the apparatus, and for freely disengaging therefrom during the other direction of motion. This means may comprise an arm pivotally mounted upon the automobile and provided with a point adapted to engage the upper surface of the raceway. This arm may conveniently be formed by means of a relatively long U-shaped member 21 provided with pivot arms 22. A weight at the free end is conveniently secured by casting material about the bottom

or end of the U-shaped member as indicated at 23 and providing a relatively sharp point 24 at the extreme end.

The cars are placed upon the raceway between the flanges 5 and 10, and the board is given a relatively short rapid oscillatory motion about its pivot pin 3. When the board is moved in the direction in which the cars are pointed, the levers beneath the car will cause the points 24 to engage the fabric and will thereby transmit the oscillatory motion in one direction to the cars. Upon the rearward movement, or oscillation, of the board, the points 24 of the lever freely slide over the fabric and allow the cars to travel forwardly, due to their acquired momentum. It will be seen, therefore, that the cars will travel around the raceway and will take varying courses, depending upon the setting of the forward wheels. It will also be seen that when any of the points 24 stop upon the disks 11, the corresponding car will be accordingly stalled, as the point cannot secure a hold upon the smooth surface of the disk. It will be dislodged in time by the oscillatory motion of the pivotally mounted board or similar oscillatory apparatus or may be dislodged by another car's striking it. It will be seen, therefore, that an extremely erratic travel of the cars is assured, and that it will be impossible to predetermine the outcome of the race. The fact that some of the cars may be nearer the center of oscillation than others, and, therefore, may have a shorter path of travel does not give these cars too much advantage in the race, as the oscillatory motion is less as the center is approached, and, therefore, the cars acquire less momentum from the oscillating apparatus.

Although the apparatus is shown as adapted to be oscillated by hand, it is readily apparent that any desired mechanical means may be provided for oscillating it.

The device is equally applicable to racing boats, and may be slightly modified to secure this result, as indicated in Fig. 3. It becomes merely necessary to provide a waterproof construction, and to partially fill the raceway between the flanges 5 and 6 with water as indicated at 25. A plurality of boats, such as indicated at 26 may be floated in this water and may be guided in their passage by means of adjustable rudders 27. A lever 28 may be pivoted to the forward portion of the boat and may have its point projecting downwardly to engage the surface 29 of the apparatus so that the boat will acquire a certain momentum when the apparatus is oscillated.

A modified form of lever is illustrated in Fig. 5, in which a cylindrical casing 30 is provided with a pivot opening 31 and with inturned flanges 32. A pointed plunger 33 is loosely mounted within this casing and terminates within a loosely fitting piston, or end 34. A very light compression spring 35 is positioned within the casing 30 between the piston 34 and a stop 36 carried by such casing and tends to press the pointed plunger outwardly. The plunger may be provided with a weight 37 adjacent its free end to aid in causing engagement between its point and the fabric sheath of the apparatus.

This last described form of lever may be used to vary the motion imparted to the cars, boats or other vehicles, as it will allow a slight give of the spring, or compression, to occur and will give a prolonged thrust or push to such traveling device, thereby modifying its motion.

It will be seen, therefore, that an amusement device has been provided in which various traveling units may be raced or caused to travel either in opposite directions or in the same directions as desired. It will also be seen that the particular shape of the apparatus may be varied as, for example, under certain conditions it may be desirable to provide an elongated straight raceway.

I claim:

1. A game comprising a board supported for to and fro movement and providing a raceway having an engageable surface in combination with a series of movable units adapted for movement over said raceway, means for supporting said units from said raceway for travel thereon, and a trailing propulsion arm associated with each unit and independent of said supporting means, and adapted to engage the surface of said board to transmit to each unit the movement in an opposite direction between the board and the units.

2. A game comprising a board supported for to and fro movement and providing a raceway having an engageable surface, in combination with a series of movable units adapted for movement over said raceway, means for supporting said units from said raceway for travel thereon, and a trailing propulsion arm associated with each unit and independent of said supporting means and adapted to engage the surface of said board to transmit to each unit the movement of the board in one direction, while permitting relative movement in an opposite direction between the board and the units, said board having a portion surfaced to be nonengageable by said arms.

3. As a new article of manufacture, a board pivoted for oscillation about a given axis and providing a curved raceway having surface areas of differing texture, a certain area being comparatively rough and another area being polished.

4. As a new article of manufacture, a board pivoted for oscillation about a given axis and providing a curved raceway hav-

ing surface areas of differing texture, the major portion of the surface being comparatively rough, and relatively small areas at differing radial distances from said axis being polished and having a relatively low frictional characteristic.

5. A game comprising a raceway adapted to be oscillated and having a roughened surface, a movable unit positioned within said raceway, a tongue pivoted at one end to said unit and having a weighted free end adapted to engage such raceway and to operatively couple said raceway and unit when said raceway is moved in one direction and to uncouple when said raceway is moved in the other direction.

6. A game comprising a raceway having a roughened surface and adapted to be oscillated, a plurality of smooth discs positioned upon said roughened surface, a series of movable units mounted within said raceway, and means carried by each of said units for intermittently engaging said raceway to propelling said units when said raceway is oscillated, said means adapted to slip when engaging said discs, whereby an erratic travel of said units is secured.

7. A game comprising a raceway adapted to be oscillated, a plurality of movable units positioned within said raceway, said units having angularly adjustably mounted wheels, and means for intermittently operatively joining said raceway and said units, whereby by adjusting the angularity of said wheels an erratic mode of travel of said units is secured when said raceway is oscillated.

8. In a game of the character described, a movable unit comprising a miniature vehicle including a body portion and provided beneath said body portion with a trailing lever having a sharpened point, said lever being so mounted as to permit a relative vertical movement between said body portion and said point whereby said point may engage a surface beneath said body portion to prevent relative rearward movement of said vehicle with respect to such a surface.

9. In a game of the character described, a movable unit comprising a vehicle having a body portion, wheels rotatably connected with said body portion and adapted to support and guide the vehicle for movement, and a trailing propulsion arm connected at one end with said vehicle and extending rearwardly therebeneath, said arm being adapted to engage at its free end a surface beneath said vehicle.

10. In a game of the character described, the combination with a board providing a raceway having an engageable surface, of a vehicle provided with guiding means adapted normally to keep it aligned upon a determinable path of movement on said raceway, and a propulsion arm connected at one end with said vehicle and rearwardly inclined therefrom for engagement at its other end with the surface of said raceway in one direction of relative movement between said vehicle and said raceway.

11. In a game of the character described, the combination with a board providing a raceway having an engageable surface, of a vehicle provided with guiding means adapted normally to keep it aligned upon a determinable path of movement on said raceway, and a propulsion arm connected at one end with a forward portion of said vehicle and rearwardly inclined from said portion of the vehicle for engagement at its other end with the surface of said raceway in one direction of relative movement between said vehicle and said raceway.

12. In a game of the character described, the combination with a toy vehicle body of an axle mounted for limited rotation upon its axis with respect to said body and having end portions angularly inclined in substantial parallelism, together with wheels upon said end portion and rotatable therein in substantially parallel planes angularly deviating from parallelism with a longitudinal axis of the vehicle body, the direction of said deviation being reversible upon movement of said axle through the limited rotation aforesaid, whereby said vehicle may be made to turn either to the right or left in the course of its forward movement.

13. In a game of the character described, the combination with a board supported for oscillation upon an axis and providing a raceway extending about said axis, of a set of pieces guided for arcuate movement about said raceway and provided with trailing propulsion arms adapted for engagement with said raceway in one relative direction of movement whereby to transmit unidirectional movement to said pieces during the oscillation of said board.

14. In a game of the character described, the combination with a board supported for oscillation about a given axis and providing an endless raceway concentric with said axis, of a plurality of pieces provided with wheels set to determine the movement of said pieces in a given arc, and trailing propulsion arms connected with said pieces and adapted for engagement with said raceway in one direction of relative movement of said board whereby to propel said pieces in said arc.

15. In a game of the character described, the combination with a game board supported for oscillation upon a given axis and providing an arcuate raceway substantially concentric with said axis, of a toy vehicle having a rotatably adjustable axle shaft with bearing portions angularly formed in mutual parallelism, and wheels mounted on said bearing portions and adapted to guide

said vehicle in an arcuate course of a curvature determined by the angularity of said bearing portions, said vehicle being adapted to receive movement from said board during the oscillation thereof and said axle being adjustable through 180° whereby to reverse the angular setting of said bearing portions and to direct said vehicle upon a course of opposite curvature.

16. In a game of the character described, the combination with a game board supported for oscillation upon a given axis and providing an arcuate raceway substantially concentric with said axis, of a toy vehicle having a rotatably adjustable axle shaft with bearing portions angularly formed in mutual parallelism, and wheels mounted on said bearing portions and adapted to guide said vehicle in an arcuate course of a curvature determined by the angularity of said bearing portions, said axle being adjustable through 180° whereby to reverse the angular setting of said bearing portions and to direct said vehicle upon a course of opposite curvature.

ELMER N. JOHA.