Nov. 1, 1949 F. R. MICHAEL 2,486,752

ROTATING POINTER RACING TOY OR GAME APPARATUS

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Fig. 4.

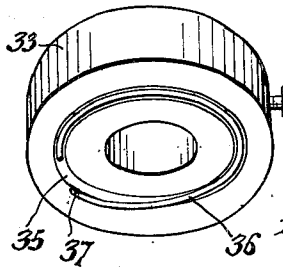


Fig. 1.

Fig. 2.

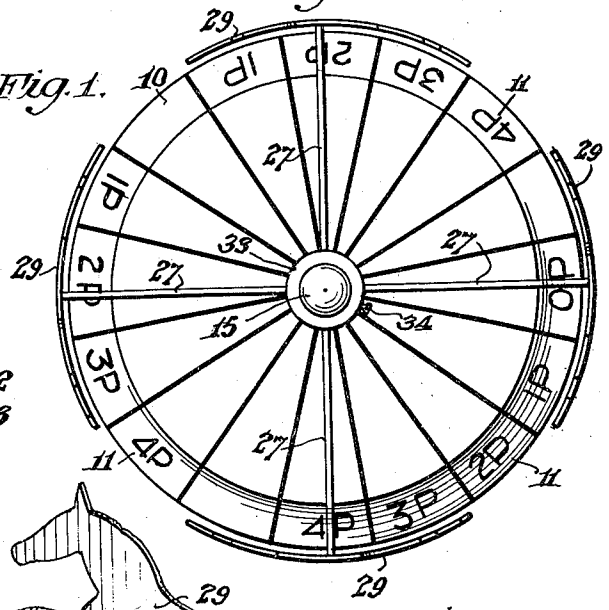


Fig. 5.

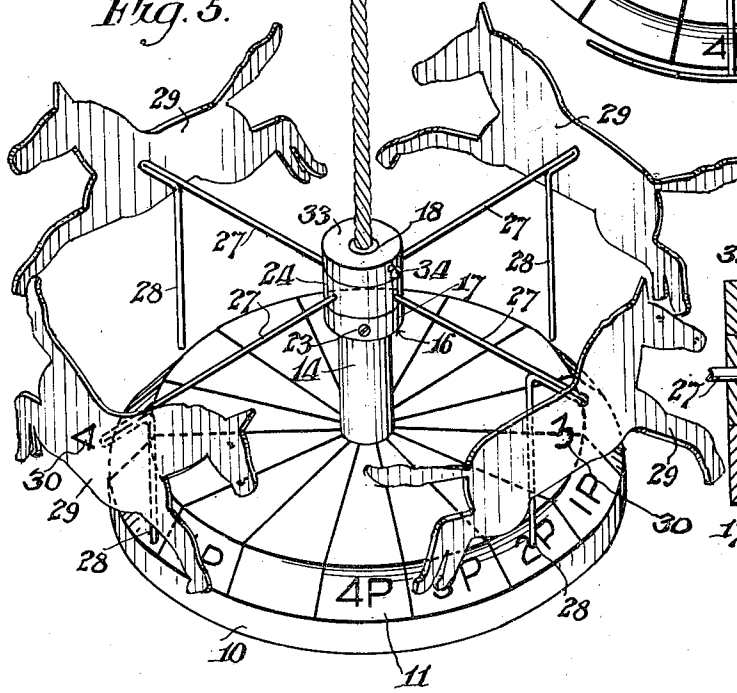
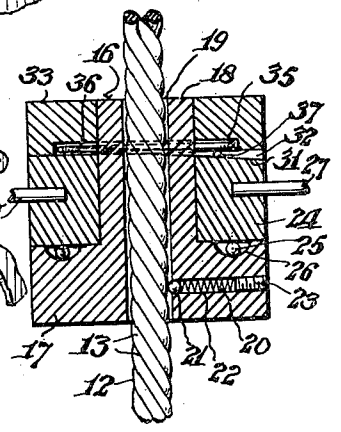


Fig. 3.



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ROTATING POINTER RACING TOY OR GAME APPARATUS

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3 Claims. (Cl. 273—141)

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My invention relates to a new and useful toy or game apparatus and has for one of its objects to slidably and revolvably mount a rotary element on an upright so fashioned as to produce a spiral groove or grooves whereby the rotary element will revolve while descending along the upright and continue to revolve by inertia after reaching the limit of its descent to provide an amusing appearance and which can be used as a game of chance.

Another object of the invention is to provide a member slidably mounted on an upright having spiral grooves or tracks and said member including a spring clutch means whereby said member may be caused to revolve as it freely moves down the upright and permitted to be slid along the upright without revolving for resetting, said member carrying a rotary element revolvably mounted, and said member and rotary element having coacting means to cause said rotary element to revolve with the member while the latter descends and release said element so that it may revolve independently after the member and element have reached their limit of descent.

A further object of the present invention is to provide an upright having spiral grooves or tracks mounted on a base provided with indices, a sleeve member mounted on the upright and including means to cause said sleeve member to revolve while it descends and permit it to be raised without revolving, a rotary element carried by the sleeve member and supporting figures and pointers, and said sleeve member provided with a ratchet for coaction with a tooth on the rotary element to revolve said member and element together while the two are descending and permitting said element to revolve free of the member when the descent is arrested.

With the above and other objects in view this invention consists of the details of construction and combination of elements hereinafter set forth and then designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same its construction will be described in detail, referring by numerals to the accompanying drawing forming a part hereof, in which—

Fig. 1 is an isometric view of a toy or game apparatus constructed in accordance with my invention.

Fig. 2 is a top plan view thereof.

Fig. 3 is an enlarged vertical sectional view through the working mechanism.

Fig. 4 is an isometric view of the collar looking at the underside thereof.

Fig. 5 is a similar view of the ring forming a part of the rotary element, viewed from the top.

In carrying out the invention as herein embodied, 10 represents a suitable base with indicia

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11, such as numerals and letters, depicted on any desirable portion thereof, for example, on its side edge or periphery. These indicia represent certain game designations or score signs.

Projecting from the center of the base 10 is an upright 12 having spiral grooves or tracks 13 and a convenient way to construct said upright is to twist together a number of wires as illustrated. At the bottom of the upright is a hub or stop 14 that may be a tubular device slipped over the upper end of the upright or fixed to the base. This stop 14 projects a short distance above the base to limit the downward movement of the rotary parts as will be apparent from the following description. On top of the upright is detachably mounted a knob 15 to prevent accidental withdrawal of the moving elements of the apparatus.

On the upright is slidably and revolvably mounted a sleeve 16, including an enlarged lower end or flange 17 and a stem 18. An axial bore 19 through the sleeve is larger than the greatest diameter of the upright so that said sleeve can slide freely under certain conditions.

For automatically clutching the sleeve with the upright to cause the former to revolve about said upright, a radial hole 20 is provided in the lower enlarged end or flange 17 of the sleeve and a ball 21 or other suitably rounded clutch member is mounted in the inner end of said hole for registration with any groove or track 13 on the upright. Said clutch member is urged towards the axis of the sleeve or towards the upright so as to normally remain in engagement with the latter by a spring 22 located in the hole 20 and held in place by a screw 23 threaded into the outer end of the hole 20. This screw can be also used for adjusting the tension of the spring 22.

It will now be apparent that if the sleeve is prevented from rotating it may be moved in a longitudinally straight line along the upright because the spring actuated clutch member 21 will ride over the ridges or side walls of the tracks but when the sleeve is released in an elevated position the clutch member will engage in a spiral track and cause said sleeve to revolve as it descends.

A ring 24 is rotatably mounted on the shank 18 of the sleeve 16, preferably supported by bearing balls 25 located in a raceway 26 in the form of an annular groove in the top face of the enlarged end or flange of the sleeve.

Any desirable number of arms 27 are fixed to the ring 24 and project radially therefrom. The outer ends of said arms, preferably, are fashioned into pointers 28 which coact with the indicia 11 to indicate scoring designations. Said arms 27 may also support figures 29 of horses, other animals, persons or other devices. It is to be understood that the figures might be eliminated and only the pointers used or said pointers might be

dispensed with and the apparatus used as a miniature carousel for amusing children. The figures 29 may be differently colored or have designation marks 30, such as numerals, thereon, to indicate the playing piece of an individual using the apparatus as a game device.

The top end of the ring 24 is fashioned to provide an inclined surface 31 terminating at a shoulder or ratchet tooth 32. Mounted on the upper end of the shank 18 of the sleeve 16, directly above the ring 24, is a collar 33 fixed to the sleeve by a screw 34. A circular groove 35 is formed in the underneath face of the collar 33 and a spring 36 is secured in said groove with one end 37 free in opposition to and for coaction with the shoulder or tooth 32 when the sleeve member is revolving but said tooth rides under the free end of the spring when said sleeve member stops and the rotary element is revolving forwardly as indicated by the heads of the horse figures.

In practice, the movable parts of the apparatus, including the sleeve structure and the rotary element, can be raised along the spiral track upright without rotating the parts because the clutch member will ride over the track ridges. When said movable parts have been elevated the desired distance, they are released and the clutch member will revolve as said movable parts descend by gravity. The spring ratchet pawl 37 will engage the tooth 32 and cause the rotary element, including the ring 24, to revolve with the sleeve member. When the descent of the movable parts is arrested by contact with the stop or hub 14, the rotary element, including the ring 24, will continue to revolve by the imparted inertia and because the tooth 32 will ride under the spring pawl but the friction of said pawl on the ring will finally cause the rotary element to stop. If the base is provided with indicia, either the pointers or some parts of the figures will designate the score at the termination of each operation of the apparatus.

Of course I do not wish to be limited to the exact details of construction herein shown and described as these may be varied within the scope of the appended claims without departing from the spirit of my invention.

Having described my invention what I claim as new and useful is:

1. A toy or game apparatus comprising a base, indicia thereon, an upright mounted on said base having spiral tracks, a stop surrounding the lower end of said upright, a sleeve mounted to independently slide and revolve on said upright and including a shank and an enlargement at its lower end, a spring clutch in the enlargement of said sleeve and urged towards the upright to ride over the walls of said tracks when the sleeve is held against rotation and moved longitudinally of the upright and registering with said tracks to cause said sleeve to revolve when the latter is free to descend by gravity, a ring revolvably mounted on the shank of said sleeve and resting on the enlargement, a tooth on the upper end of said ring, a collar secured to said sleeve shank above the ring, a spring pawl fixed to the under side of the collar and having a free end to engage the tooth and revolve the ring with the sleeve, said tooth riding under the spring pawl when the movements of the sleeve are arrested by contact with the stop to permit the said ring to revolve for some time by inertia, radial arms carried by the ring, and pointers on the outer ends of said arms coacting with the indicia on the base.

2. The toy or game apparatus of claim 1 wherein the spring pawl is mounted in a groove in the underneath face of the collar.

3. The toy or game apparatus of claim 1 wherein the enlargement at the lower end of the sleeve has a ball race in its upper surface, in combination with bearing balls in said race and on which the ring rests.

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