Dec. 13, 1955 L. G. SCHULTE 2,726,868

RACE TRACK GAME

Filed April 16, 1952 2 Sheets-Sheet 1

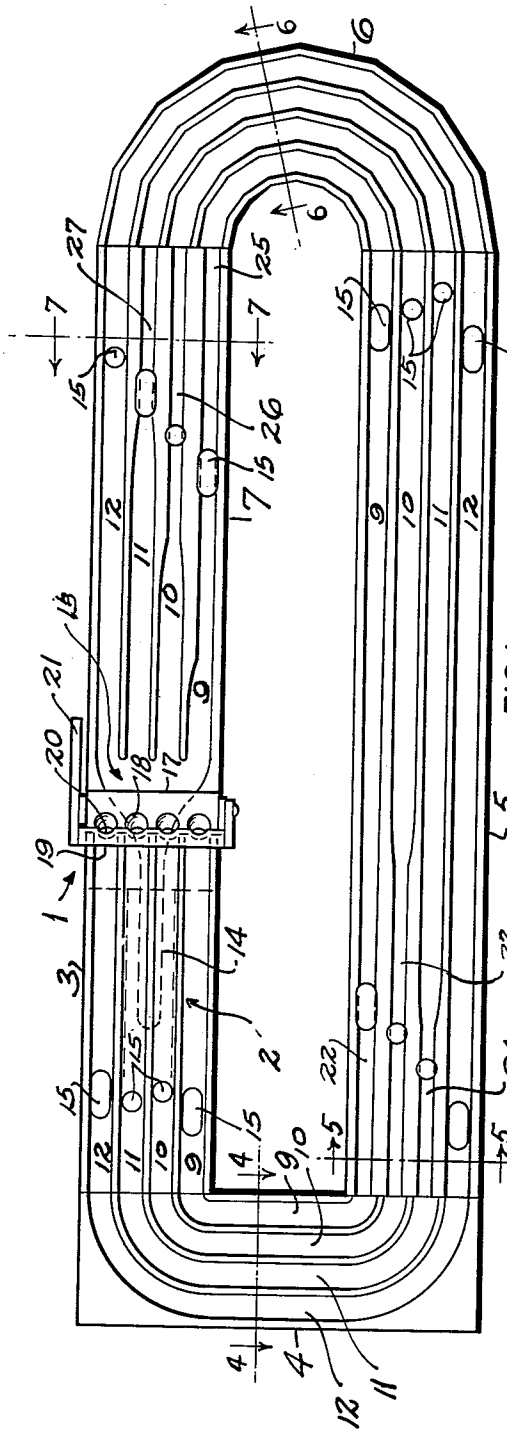


FIG. 1

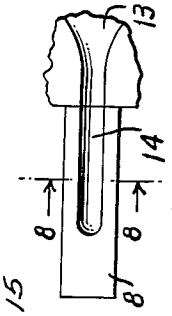


FIG. 2

FIG. 3

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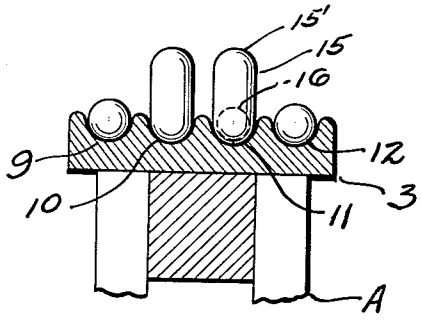


FIG. 4

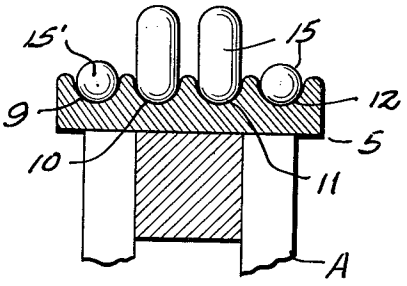


FIG. 6

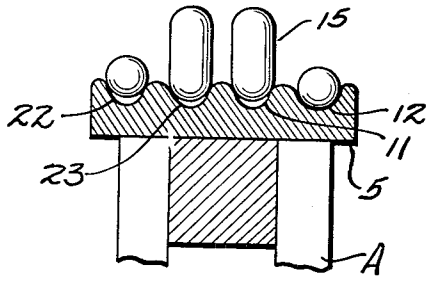


FIG. 5

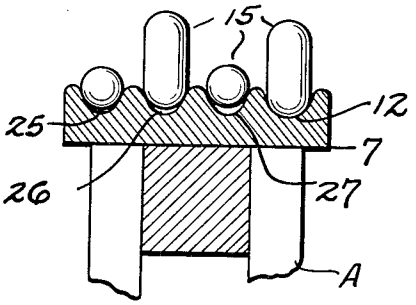


FIG. 7

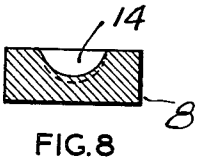


FIG. 8

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RACE TRACK GAME

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7 Claims. (Cl. 273—86)

This invention relates in general to amusement devices and, more particularly, to race-simulative games which incorporate a track with "turn" and "straightaway" sections having lanes for movement therealong of gravity-impelled racing elements.

The main object of this invention is to provide means for compensating for the differential in the distances traveled by the various racing elements about the turns, whereby those elements moving in the inner lanes will be decelerated on the straightaways to substantially nullify the special advantage gained on the turns.

It is a further object to provide means for substantially equalizing the opportunity of each racing element to win the race without causing any change in relative positioning or normal lengths of the lanes.

It is another object to provide a game which is highly entertaining and amusing embodying a track structure which may be economically made and be, if desired, of the knock-down type for facilitating transportation and storage thereof.

These and other detailed objects of the invention will be apparent from the following description and accompanying drawings, in which:

Figure 1 is a top plan view of the track structure constructed in accordance with and embodying the present invention.

Figure 2 is a fragmentary top plan view of the finish terminal section.

Figure 3 is an elevational view of the track structure.

Figures 4, 5, 6, and 7 are transverse sectional views taken along lines 4—4, 5—5, 6—6, and 7—7 of Figure 1.

Figure 8 is a transverse sectional view taken along line 8—8 of Figure 2.

Referring to Figure 3, A generally designates a base structure for disposition upon a table top or like surface and being of suitable character and design for supporting a race track B which descendingly progresses in the manner of a series of ramps from an elevated starting point indicated by the numeral 1 to a finish or terminal point 2 in a downwardly spaced relation thereto. Track B which may be made of wood, plastic, or the like is composed preferably of easily assembled sections and comprises an initial inclined straight section 3, which merges with or abuts a downwardly curving or first turn section 4. Section 4, which has a slight pitch or bank to assist the racing objects thereabout, merges with or abuts, at its lower end, a main straight track section or so-called straightaway 5 which is reversely inclined with respect to initial section 3 and is downwardly and laterally displaced therefrom. The lower end of straightaway 5 merges with or abuts a second turn section 6 which curves downwardly in a reverse direction to that of turn section 4 and merges with or abuts the upper end of a homestretch-forming straight track section 7 which is inclined in a reverse manner to that of straightaway 5 and, at its lower end, communicates in a manner to be described hereinafter with a terminal or end section 8 disposed upon the table top or like surface.

The upper face of track B is corrugated to form a plurality of ridges with the channels or valleys therebetween defining groove-like lanes 9, 10, 11, 12, which begin at the starting point 1 and terminate spacedly from the lower end of home-stretch section 7 for discharging into the enlarged portion of a funnel-shaped, common recess 13 for communication with a closed end trough 14, formed in terminal section 8. In straight track sections 3, 5, 7, lanes 9, 10, 11, 12 are in parallel relation and in turn sections 4, 6 they are substantially concentric. Track B may be provided with as many lanes as desired but the four lanes shown adequately illustrate the present invention.

Provided for travel along the lanes 9, 10, 11, 12 are gamepieces 15 in the form of gelatinous or plastic capsules with hemispherical end portions 15'. Each capsule contains a ball 16 (Fig. 4) of steel or other relatively heavy material having a radius slightly less than the hemispherical ends 15' so that the ball will be relatively free to roll and thereby impart end over end movement to the gamepieces in a well-known manner. Since the ball is loose in the envelope, the movement of the gamepieces will have a slight lateral component or wobble but insufficient to cause them to cross the ridges between lanes. The gamepieces have some ready visual-identifying means, such as being finished in different colors so that the players may more easily follow the course of their respective choices. Or the gamepieces may be numbered or named.

Disposed transversely across the upper end of section 3 is a retaining block 17 simulative of the "post," having provided on its forward face a plurality of vertical hemicylindrical recesses 18, each of which is aligned with one of lanes 9, 10, 11, 12. Mounted upon the block 17 is a barrier or starting gate 19 for pivotal movement between an operative position immediately across the forward face of the block 17 and an inoperative position rearwardly thereof. Barrier 19 is provided on its inner face with a plurality of recesses 20 complementary to recesses 18 on block 17 so that gamepieces 15 may be received within the openings thereby defined preparatory to commencing the race. Depression of a lever arm 21 integral with the barrier 19 effects pivoting thereof into inoperative position for liberating the gamepieces 15 for movement through gravity along lanes 9, 10, 11, 12.

Lanes 9, 10, 11, 12 are arcuate in cross section, each having a normal radius slightly greater than the hemispherical end portions of a gamepiece 15 so that the latter may travel along the lane with relative freedom and characteristic wobble. Since the path followed by lanes 9, 10, 11, 12 about the turns 4, 6 are respectively about increasingly greater arcs, the overall or total lengths of the lanes throughout the course of the track will be different. Thus, inner lane 9 will be the shortest and outer lane 12 the longest. Referring to Figure 1, it will be seen that after the first turn 4 has been negotiated by the gamepieces 15, the one in lane 9 will be in the lead with the competing gamepieces 15 following a different distance, with the one in outer lane 12 furthest in the rear. To substantially equalize the opportunity of each gamepiece 15 to win the race and to compensate for the advantage gained by travel along the shorter arcs about turns 4, inner lanes 9, 10, 11 are constricted or narrowed throughout portions of their lengths in straightaway section 5, as at 22, 23, 24 respectively, wherein, see Figure 5, the opposing sides of the ridges are relatively close together so that the grooves therebetween are of less effective width than the diameter of the hemispherical ends 15' of the gamepieces. Thus, the gamepieces will be constrained to move along the lanes as though along spaced rails wherein increased friction is developed and the effective length of each gamepiece, for a complete end over end movement, is less than when it rests upon the longitudinal

center line of the capsule. The close spaced ridge sides exert a slightly compressive force on envelope **15** so that friction is transmitted directly to the ball **16** which restrains the free rolling thereof and thereby effects a deceleration or retardation of the gamepieces.

Since the total distance of the outer lane **12** through the turns **4**, **6** is the greatest, the cross-section radius thereof may be constant throughout the course of the track so that the gamepieces may move therealong in unimpeded style without subjection to the decelerating stretches. The constricted portions **22**, **23**, **24** are respectively of increasing extent, with the lengths thereof being inversely proportional to the arc distances of their associated lanes **9**, **10**, **11** about the turn **4** to thereby compensate for the differences in said arcs. Thus, the constricted portion **22** on the inner and shortest lane **9** is the longest and the constricted portions **23**, **24** are of decreasing extent so that the gamepieces traveling over the longer lanes will be permitted to resume accelerated travel before the gamepiece on the shorter lanes. In other words, the shorter the arc travel about the turn, the greater must be the duration of the period of deceleration in the straightaway **5** to permit the racers to regain a substantially abreast relationship. The gamepieces traveling along lanes **9**, **10**, **11** will thus be each subjected to a handicap to compensate for the relative advantage obtained on the turn. At the moment the gamepiece on inner lane **9** has completed travel of the constricted portion **22** and is ready to resume accelerated movement, the gamepieces in the other lanes should be approximately in lateral alignment so that the race will be substantially even at that juncture. Thus, the velocity of the gamepieces in the inner lanes will not be constant or have constant acceleration but will vary due to the decelerating effect of constricted portions **22**, **23**, **24**.

Since a similar advantage will be attained by the gamepieces on the inner lanes during movement about the second turn **6**, lanes **9**, **10**, **11** are provided in the homestretch section **7** with constricted portions **25**, **26**, **27**, respectively, which are in character and extent similar to constricted portions **22**, **23**, **24** and serve to compensate for the differences in the paths of the lanes through turn **6**. Thus, the gamepieces on the inner lanes are subjected to a second decelerating period by constricted portions **25**, **26**, **27** so that when all of the pieces have arrived at the ends of their lanes and are ready to move downwardly through funnel-like recess **13**, they will be substantially abreast. The gamepiece **15** which first moves through the narrow neck of the funnel-shaped recess **13** and into the end of the trough **14** is the winner. There is no chance of a tie since the trough **14** is sufficiently narrow to prevent two gamepieces **15** from moving side-by-side therethrough.

The decelerating sections of lanes **22**, **23**, **24**, **25**, **26**, **27** need not be necessarily presented on track B at the precise locations shown in the drawing but could be provided in other places on track B and serve the indicated purpose equally well. The incorporation in track B of decelerating or constricted portions achieves a result hitherto unknown in the art, since it provides positive means for equalizing differential in the turns without necessitating elaborate and involved structure for altering or changing the relative position of the lanes or making necessary the incorporation of circuitous or tortuous sections on the inner lanes to make up for the shorter path followed thereby.

The playing of the racing game herein described provides an amusing and exciting experience for the players since all the gamepieces have a potential equal chance of winning the race and, by the unique construction of track B, the winner cannot be determined until the very end of the race. Although the gamepiece following the inner lanes may be ahead at various points during the race, their advantages will be substantially nullified or reduced so that the identity of the winner will be in doubt despite such relative positions as they may assume at different points.

The constricted lane portions may be used in a track which is straight from end to end to vary the speed of the gamepieces. If the constricted portions are of equal width and length in all the lanes, the winning gamepiece would be undeterminable prior to the finish, but during the race one or more and then others of the gamepieces would advance or be retarded relative to the remainder of the gamepieces.

The track structure is preferably sectionalized for easy assembly into playing position or dismantling for facile transportation or storage in minimum space. The various sections may be maintained in their respective locations upon the supporting structure A and relative to each other by readily engageable interlocking means, such as by dowels, tongue and groove, and the like.

The details of construction may be varied without departing from the spirit of the invention, and the exclusive use of those modifications coming within the scope of the claims is contemplated.

What is claimed is:

1. A race-simulative game comprising a descending track having in its upper surface a plurality of lanes extending in side by side relation substantially throughout the track, said track having a turn section, elongated capsule-shaped gamepieces provided for rolling movement by gravity through each lane, said gamepieces having rounded end portions, said lanes being normally wider than the diameter of said rounded end portions, more than one of said lanes having constricted portions wherein the width thereof is less than the diameter of said rounded end portions of the gamepieces for reducing the arc of contact with the gamepiece traveling therethrough, said constricted portions varying from lane to lane in inverse relation to the length of the turn section portion of their associated lanes.

2. A race-simulative game comprising a descending track having ridges in its upper surface for defining a plurality of lanes extending in side by side relation substantially throughout the track, said track having at least one turn section, a gamepiece comprising an elongated capsule containing a relatively heavy ball movable therein, said capsule having rounded ends and movable by gravity end over end through each lane, said ridges being normally spaced a distance greater than the diameter of the rounded ends of the gamepieces so that the bottoms of the rounded ends engage the lanes, some of said lanes having constricted portions wherein the opposing sides of the ridges are in relatively closer relation so that the width of the lane therebetween is less than the diameter of the rounded ends of the gamepieces to decelerate the rate of travel of gamepieces moving therethrough, said constricted portions varying in length from lane to lane in inverse relation to the length of the turn section portion of their associated lanes.

3. A race-simulative game track provided with a plurality of groove-like lanes inclined to the horizontal and arranged side by side and each having upwardly facing spaced rails for supporting a rolling gamepiece, at least some of said lanes each being provided with a relatively short portion comprising rails spaced apart a less distance than the spacing of the rails in the remainder of the lane, the lanes differing in total length and the portions of less distantly spaced lanes also differing in length to compensate for the difference in the total length of the lanes, there being elongated, hollow, capsule-shaped, heavy ball-receiving gamepieces movable by gravity along said lanes.

4. A game according to claim 1, in which each gamepiece comprises a hollow capsule of flexible material and a freely rolling ball contained therein.

5. A game according to claim 2 in which each gamepiece comprises a hollow capsule of flexible material and a freely rolling ball contained therein.

6. A race track simulative game apparatus comprising an inclined track having a plurality of continuous lanes of different lengths arranged side by side, rolling gamepieces placeable selectively in said tracks, each of said lanes having a normal width greater than the diameter of a gamepiece, at least one of said lanes including a restricted portion having a width less than the diameter of a gamepiece and thereby shortening the distance traveled for each revolution of the gamepiece.

7. A game apparatus according to claim 6, in which the restricted lengths of the lanes are inversely proportioned to the lengths of the lanes.

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