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3,202,426

WHIRLING BALL RUNWAY

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FIG-1

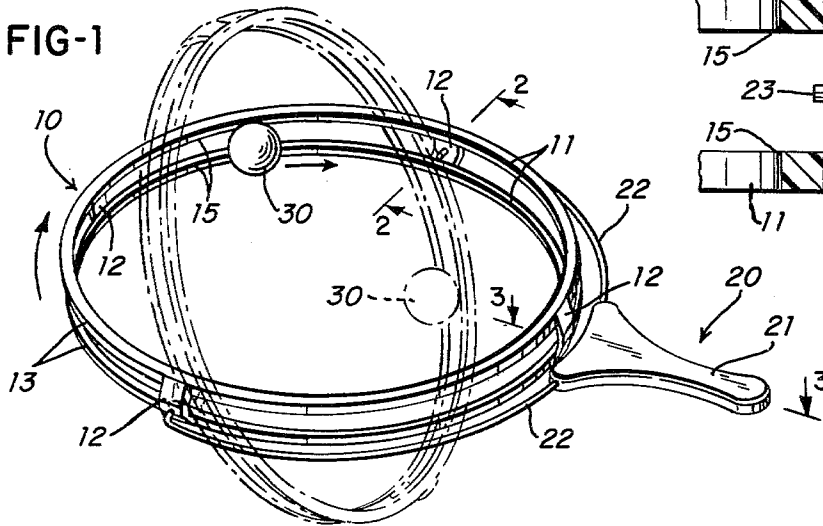


FIG-2

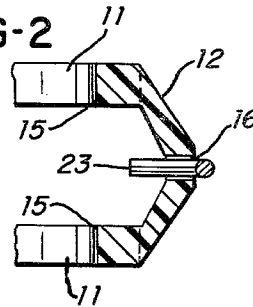


FIG-3

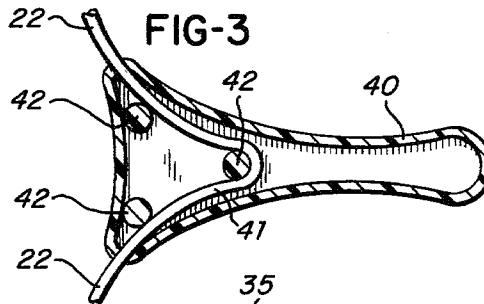


FIG-4

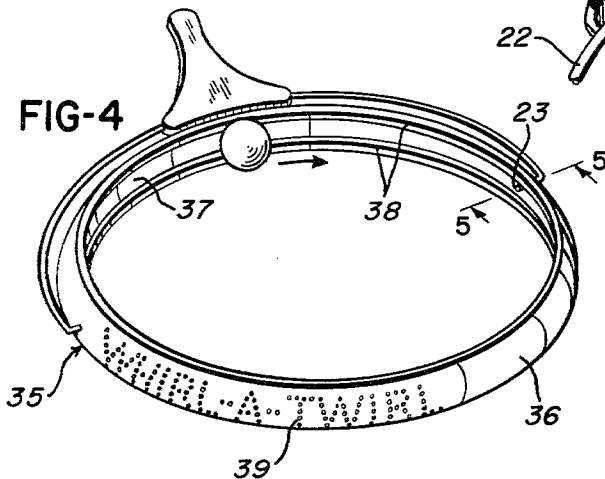
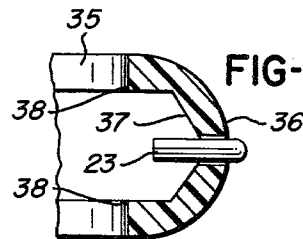


FIG-5



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WHIRLING BALL RUNWAY

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3 Claims. (Cl. 273-110)

This invention relates to games of skill, and more particularly to an improvement in the type of toy in which the player causes a ball to whirl within an annular track by manipulating the track in a gyratory path.

Various forms of devices of this type have long been known, as exemplified by the patent to Jack 625,680 issued May 23, 1899. These forms have been relatively easy to master, however, because the track has been secured in a fixed position with respect to the handle and the player soon acquires skill in the particular motions required for controlling the whirling movement of the ball and tends to lose interest in the game.

The present invention adds, in effect, a new dimension to games of this type by including rotating movement of the track around an axis transverse to the axis around which the ball is caused to whirl. This adds substantially to the interest of the game and calls for a degree of skill of different order from that of the simple whirling ball-in-track device.

It is accordingly a principal object of the invention to provide a rotating ball-in-track game adapted to develop a high degree of skill in the player by providing for simultaneous rotating movement of the track in a handle and whirling motion of the ball throughout all angular positions of the track with respect to the handle.

It is a further object of the invention to provide such a game which may be played by a single player and which is also adapted to a variety of forms of competition between players concurrently manipulating the devices, or doing so consecutively.

Other objects and advantages will be apparent from the following description, the accompanying drawings and the appended claims.

In the drawings:

FIG. 1 is a perspective view of a preferred form of the game, in which the dot-dash lines indicate a different angular position of the track with respect to the handle;

FIG. 2 is a sectional view on an enlarged scale taken on the line 2-2 of FIG. 1, showing details of the mounting construction for the track;

FIG. 3 is a sectional view on an enlarged scale taken on the line 3-3 of FIG. 1;

FIG. 4 is a perspective view of a different embodiment of the invention; and

FIG. 5 is a sectional view on an enlarged scale taken on the line 5-5 of FIG. 4.

Referring to the embodiment of the invention shown in FIGS. 1, 2 and 3, FIG. 1 shows a form of game comprising an annular track indicated generally by 10, having a pair of concentric equidistantly spaced loops 11 affixed to each other by a plurality of webs 12 positioned on the outer edges 13 of the loops, and shaped to extend outwardly of such loops. They thus provide on their interior faces a pair of concentric equidistantly spaced rails 15 providing an interior annular track entirely free from obstruction.

Two of the webs 12 are located diametrically opposite each other and are provided with bores 16 for mounting the track in a handle indicated generally by the numeral 20. The handle includes a grip 21 and a pair of divergent arms 22 which have adjacent their outer ends diametrically opposed pivot supports 23 and defining between them an axis diametric of the track. The arms 22 diverge at a relatively wide angle from the grip 21 to

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provide a distance between its outer ends slightly greater than the diameter of loops 11 and are shaped so that the track will be received in the handle without touching it at any point. As clearly appears from the drawings, the track is journaled on the pivots 23 received in bores 16 in freely rotatable spaced relation with the handle 20.

The device includes in combination with the track a ball 30 somewhat greater in diameter than the spacing between rails 15 and adapted to be received on the rails to be whirled around them by centrifugal force when the track is moved in circles by manipulation of the handle to give it a gyrating motion. It is thus clear that the game in use provides for simultaneous rotating motion of the track and whirling motion of the ball throughout all angular positions of the track with respect to the handle.

FIG. 4 shows an alternative embodiment of the invention in which the track is formed of an outwardly curved section of a tube 35, instead of a pair of plastic loops secured to each other. While this form requires somewhat more material and is slightly heavier than the embodiment of FIG. 1, it has the advantage of providing continuous exterior and interior surfaces 36 and 37 on which pictorial or printed matter may be imposed for purposes of decoration or for advertising. In this embodiment the inner edges 38 of the tube provide the track, in the same manner as the inner faces or rails 15 of the loops 11 of the FIG. 1 embodiment. This form has the additional advantage that decorative effects or a desired wording may be produced by molding them into the outer surface of the tube, as indicated at 39. In the drawing, for example, the name "Whirl-A-Twirl" under which the game is sold is lettered on the embodiment of FIG. 4 by holes cast or punched in tube 35.

The form of device shown in FIG. 1 has already been placed on the market, where it has met considerable commercial success. In it the track is comprised of a pair of complementary right and left segments molded of plastic, each segment constituting a rail and one-half of the web, cast as an integral unit. In assembly, the two complementary segments are joined to each other by heat sealing, appropriate adhesive or other means.

In the commercial embodiment the grip 21 is similarly formed of two complementary molded plastic segments 40, with the arms 22 being formed substantially in the form of a semi-circle having its outer ends bent diametrically of the circle to form the pivot supports 23. At its central portion, a flattened outwardly extended loop 41 is provided to secure the arms in fixed position with respect to the grip when the wire portion is received within the complementary segments 40 of the grip, between which the arms are positioned by locating bosses 42 integral with the segments 40. As clearly appears, the alternative tubular embodiment of FIG. 4 may similarly be formed from complementary right and left joined molded segments.

As will be apparent, if the game is formed of plastic, the components may readily be colored differently to provide a pleasing appearance. The track, for example, may be of one color and the handle of a harmonizing different color, with the ball still a third color. Alternatively, the matched segments of the handle may be of different colors, as may those of the track, providing a variety of appearances. If the game is sold in sets, each unit may be colored differently for ready identification by the players.

The game provides a variety of uses. In use by a single player it may be held with the diameter of the track parallel to the length of the grip and the ball placed at the bottom of the track, where it is started in motion by gently rolling it back and forth until it obtains

enough momentum to whirl around the track. At this point the player may by appropriate wrist motion start rotating movement of the track while simultaneously maintaining whirling motion of the ball.

Alternatively, the device may be placed on the floor or other flat surface with the ball inside the track and the grip extending upwardly. By moving the grip, the ball is caused to start whirling in the track, in which it will be held when the device is lifted by the grip from the surface, by the centrifugal force of its movement, following which the track may be caused to rotate.

Two or more players, each having one of the games, can devise a wide variety of competitions. These may include such variations as the longest run, the fastest start, the fastest or the greatest number of simultaneous rotations of the track while the ball continues to be retained thereon, and the like.

It will thus be seen that the invention furnishes an enjoyable game of skill which may be played by one or any larger number of players and has a degree of interest substantially superior to that of the simple whirling ball-in-track devices heretofore available. It calls for and provides for developing a substantial degree of skill. At the same time it is a relatively simple and inexpensive item to manufacture so that if desired it may be given as a premium for promoting sales of other goods, used as an advertising device, or the like.

While the forms of device herein described constitute preferred embodiments of the invention, it is to be understood that the invention is not limited to these precise forms, and that changes may be made therein without departing from the scope of the invention, which is defined in the appended claims.

What is claimed is:

1. A game of skill comprising a pair of concentric equidistantly spaced rails providing an interior annular track free of obstruction, a handle having a grip and a pair of divergent arms, said arms having diametrically opposed pivot supports adjacent their outer ends in contact with said track defining an axis diametric of said track, said track being journaled on said pivot supports in freely rotatable spaced relation with said handle, and in combination therewith a ball of somewhat greater diameter than the spacing between said rails adapted to be received thereon to be whirled therearound by centrifugal force when the track is moved in circles by manipulation of said handle, providing for simultaneous rotating motion of said track and whirling motion of said ball throughout all angular positions of said track with respect to said handle.

2. The device as defined in claim 1 in which said track is comprised of a pair of plastic loops having a plurality of outwardly extending webs positioned exteriorly thereof, at least two of said webs being located diametrically opposite each other and being provided with bores receiving said pivots for journalling said track therebetween.

3. The device defined in claim 1 in which each of said track and said handle grip is comprised of complementary right and left joined molded segments.

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