P. B. TYLER.

TOY.

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1,039,617.

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Fig. 1.

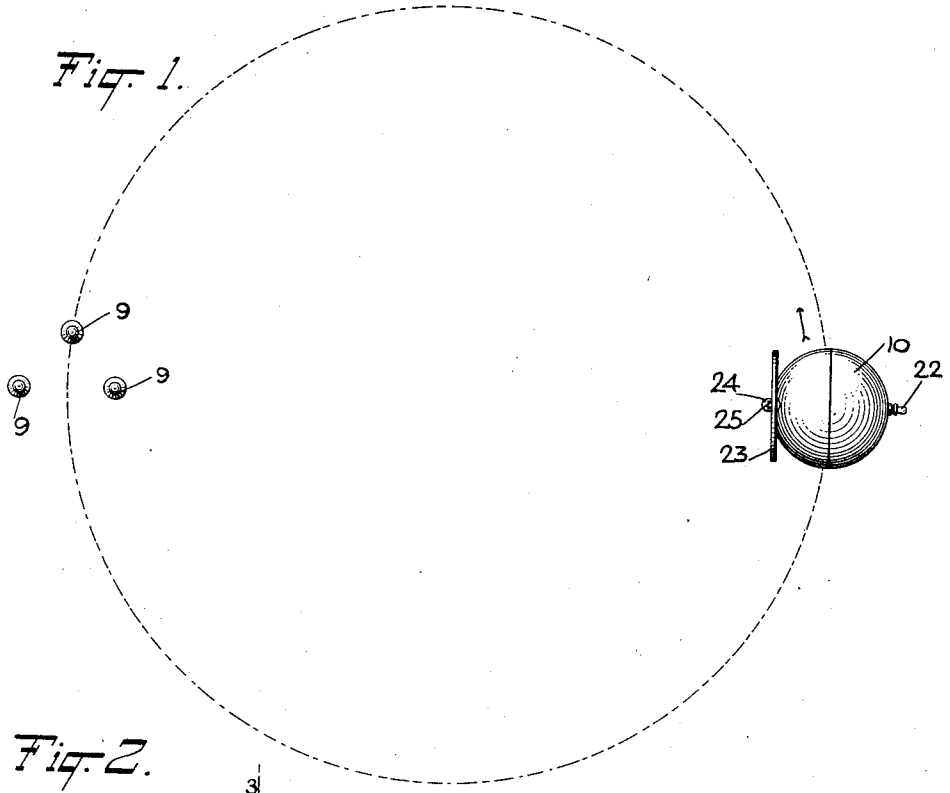

Fig. 2.

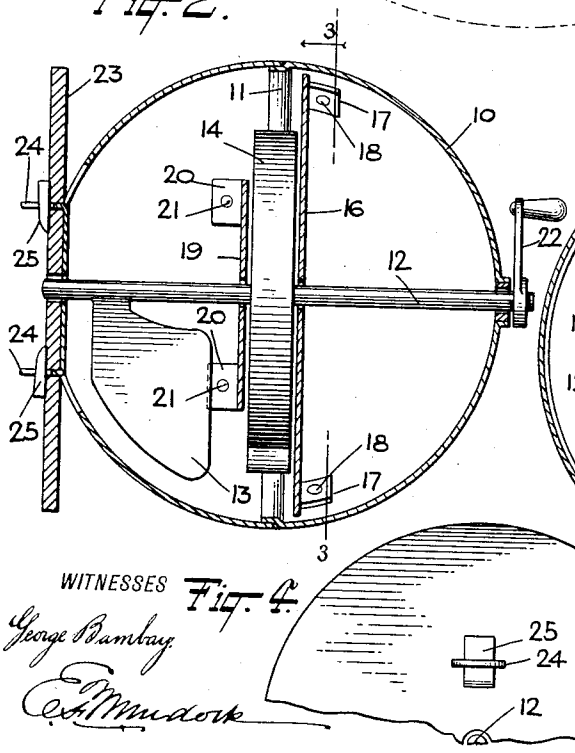

Fig. 3.

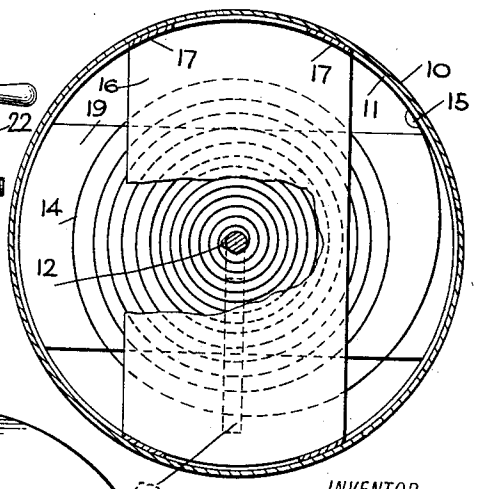

Fig. 4.

WITNESSES

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PARDON BENTLEY TYLER, OF BUTTERFIELD, MINNESOTA.

TOY.

1,039,617. Specification of Letters Patent. Patented Sept. 24, 1912.

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To all whom it may concern:

Be it known that I, PARDON B. TYLER, a citizen of the United States, and a resident of Butterfield, in the county of Watonwan and State of Minnesota, have invented a new and Improved Toy, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide a toy which may be controlled to vary the path of travel thereof, the variation being a matter of skill, whereby the article is aimed at a target; to provide means for determining the path of an automobile toy to cause the same to impinge upon, or glide with, articles disposed in the path thereof; and to provide a toy of the character mentioned, the construction of which is durable, simple and economical.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a pictorial view in plan, showing a toy constructed and arranged in accordance with the present invention, and in conjunction therewith, the lay-out of a game in the playing of which said toy is employed; Fig. 2 is a vertical cross section of the toy constructed and arranged in accordance with the present invention, the section being taken on the median line; Fig. 3 is a vertical section taken on the line 3—3 in Fig. 2; and Fig. 4 is a view showing a fragment of one of the controlling wheels of the toy.

The game, as seen in Fig. 1 of the drawings, for the playing of which the toy is peculiarly adapted, is what may be styled a miniature ten-pin game. In playing this, a set of ten-pins 9 or other suitable objects are arranged in any suitable manner in a possible path in which the toy may be influenced to travel. The number of pins overturned by the toy in its travel is the count of the individual player. To render the playing of the game somewhat more difficult, the toy is compelled to follow a circular path. This educates the child to judge the curved line of travel of a moving object.

The toy, as shown in the accompanying drawings, consists primarily of a spherical casing 10. The casing 10 is preferably made in two parts, having an inwardly-struck annular flange 11. The flange 11 provides a seat for the guidance and support of the free edge of the opposite side or hemisphere of the casing 10. Extending through the center of the sphere 10, and in line with one of the diameters thereof, is a shaft 12. The shaft 12 is loosely mounted in suitable bearings provided in said casing, and is provided with a pendent weight 13 fixedly connected thereto. Coiled upon the shaft 12 is a long coiled spring 14. The spring 14 is fixedly attached by a pin 15 to the spherical casing 10. The cross plate 16 is provided with structural tabs 17, through which are extended rivets 18, which are passed through the wall of the casing 10 and there secured.

The spring 14 is housed and guided between the cross plate 16 and a cross plate 19. The cross plate 19 is similar in construction to the plate 16, and is disposed in perpendicular relation thereto. The plate 19 is provided with tabs 20, which are secured by means of rivets 21 to the half section of the casing 10 which is fitted upon the flange 11. By dividing the casing 10 in this manner, and by mounting the cross plates 16 and 19 on the opposite divisions of the casing, it is permitted that the spring shall be mounted upon the shaft 12, while the halves of the casing are separated, the shaft 12 being thereafter threaded through the perforation in the plate 16 and the bearing in that half of the casing 10 having the flange 11, or at the end of the shaft where it is designed the crank handle 22 shall be applied. The crank handle 22 is fixedly mounted upon the shaft 12. As shown in the accompanying drawings, and as preferred by me, said handle is permanently attached to the shaft 12. It will, however, be understood that if this construction is not desired, it may be changed by removably mounting or attaching the handle 22 upon the shaft 12.

The end of the shaft 12 adjacent the weight 13 and opposite that whereon is mounted the handle 22, is extended through a bearing in the casing 10 and through a perforation formed in the temporary wheel 23. To assist in mounting the wheel 23, the casing 10 has formed thereon two lugs 24. The lugs 24 are perforated to permit the introduction of wedge pins 25 therethrough, which operate to force the wheel 23 into holding relation with the casing 10.

It will be understood, there are a number

of wheels 23 furnished for each of the spherical casings 10, each of said wheels differing in diameter. It is obvious that the diameter of the spherical casings remaining constant and the diameter of the wheels 23 being optional, the travel of the toy will be represented by a curved path, resulting from the difference in travel around bodies of different diameters, or in other words, if a small wheel 23 is used, the path of travel of the toy will have a slight short radius, while if the wheel 23 employed is of large diameter, the curvature of the path of travel will be diminutive.

The operation is as follows:—The starting point having been determined, the toy is deposited on the floor or table at this point, after the player has selected the wheel 23 and equipped the spherical casing 10 therewith. The handle 22 is now revolved to wind the spring 14. In rotating the shaft 12 to wind the spring 14, it will be understood, the weight 13 is revolved within the casing 10 with the shaft 12. When, however, the handle 22 is removed from the shaft 12, or is released, the expansion of the spring pulls equally upon the anchorage at the pin 15 and upon the shaft 12. The weight 13 requiring a greater power to lift than is required to rotate the casing 10, the casing is consequently rotated. The weight 13 also serves to overbalance the casing 10, and to cause a part of the weight of the toy to be carried on the wheel 23, to prevent slippage of either the wheel 23 or of the casing 10. As above explained, the trajectory of the toy is dependent on the diameter of the wheels 23, and dependent upon the trajectory of the toy is the striking of the mark or the collision of said toy with the ten-pins 9.

As the texture of the material forming the plane on which the toy is moved forms an element in controlling the path followed by the toy, the element of chance and skill enters into the game. In other words, it becomes necessary to try the various wheels 23 in order to find the path required to hit the pins 9. The contest thereby becomes an interesting one, uncertain in issue.

It will be understood that the weight 13 operates to hold the shaft 12 from rotating, while the spring revolves the casing 10 and wheel 23 mounted thereon.

When at any time it is desired to remove a wheel 23, this is accomplished by pulling the pins 25 and then removing the wheel 23, to be replaced by another.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. A toy, comprising a spherical rotary body; a circular disk removably mounted on said spherical body; means for securing said disk on said body; and means for rotating said body and said disk.

2. A toy, comprising a hollow spherical body; a disk, having a diameter differing from the diameter of said spherical body; means for removably securing said disk on said body; and a driving mechanism mounted within said spherical body, to rotate the same.

3. A toy, comprising a hollow spherical body; a disk, having a diameter differing from the diameter of said spherical body; means for removably securing said disk on said body; and a spring-actuated mechanism mounted within said body to rotate the same.

4. A toy, comprising a hollow spherical body; a disk, having a diameter differing from the diameter of said spherical body; means for removably securing said disk on said body; a coiled spring mounted within and engaging said body; a rotary shaft mounted in said body and operatively engaging said spring to wind the same; and a weight controlling said shaft to prevent the rotation thereof.

5. A toy, comprising a hollow spherical body; a disk, having a diameter differing from the diameter of said spherical body; means for removably securing said disk on said body; and a weight member fixedly mounted upon said shaft to prevent the rotation thereof.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PARDON BENTLEY TYLER.

Witnesses:

J. KALLER,

ELSIE AUSTIN.