

No. 804,314.

PATENTED NOV. 14, 1905.

C. E. HARRIS.

PUZZLE.

APPLICATION FILED SEPT. 13, 1904.

Fig. 1.

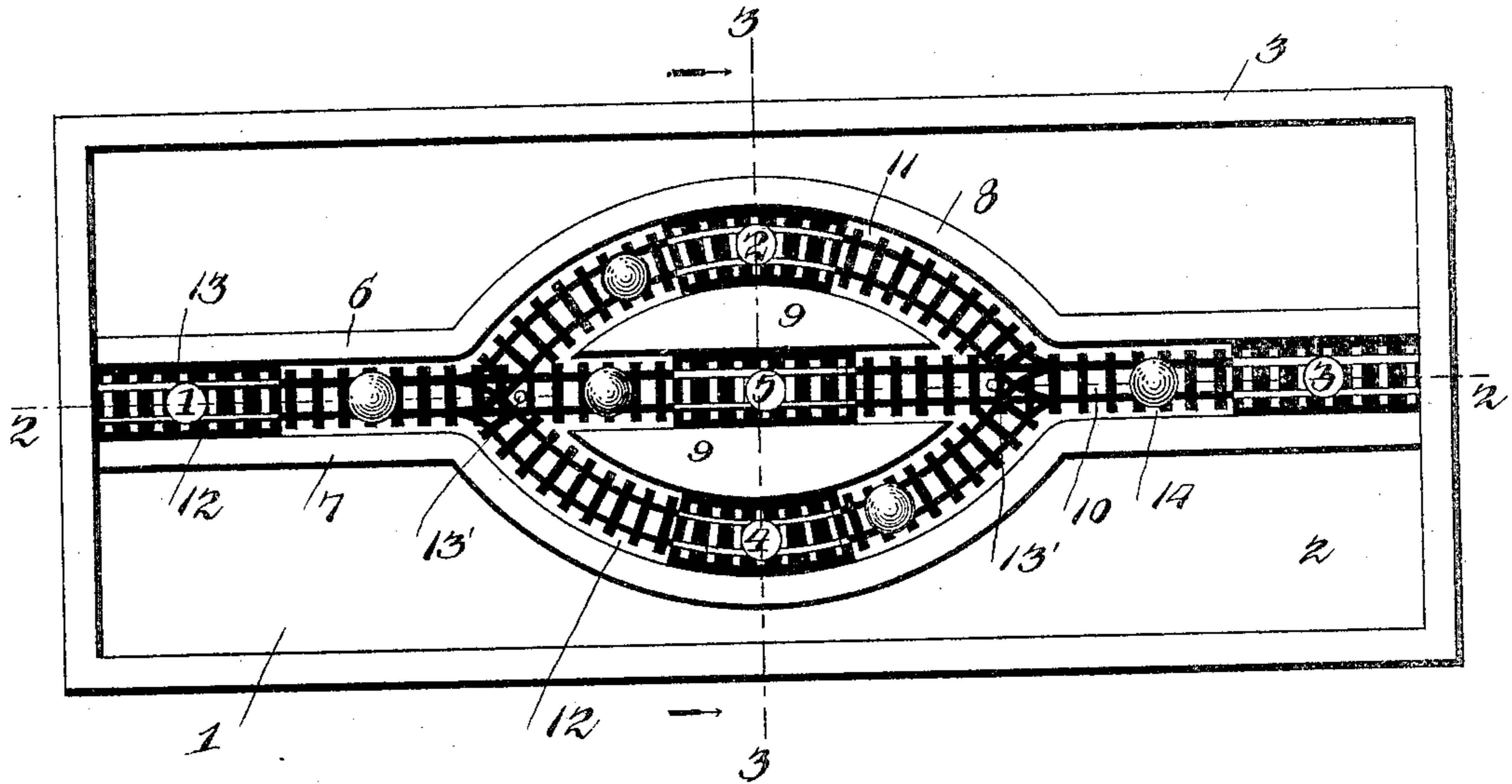


Fig. 2.

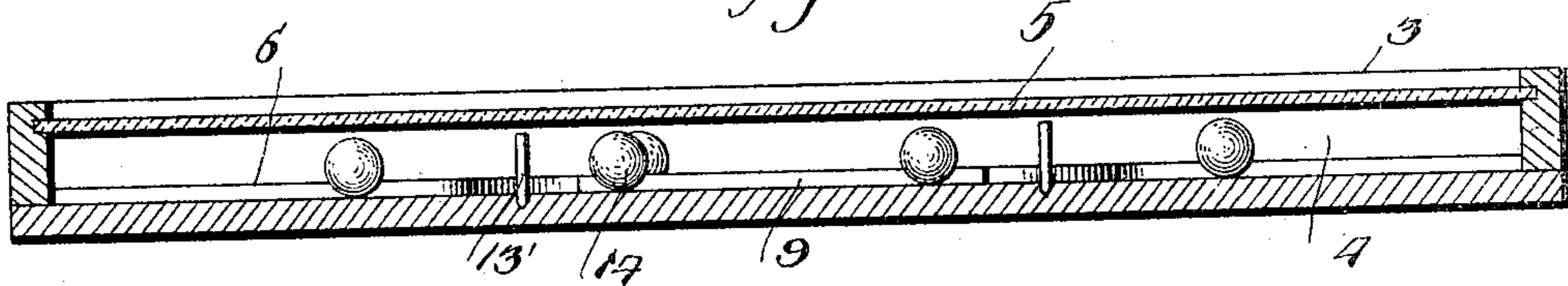
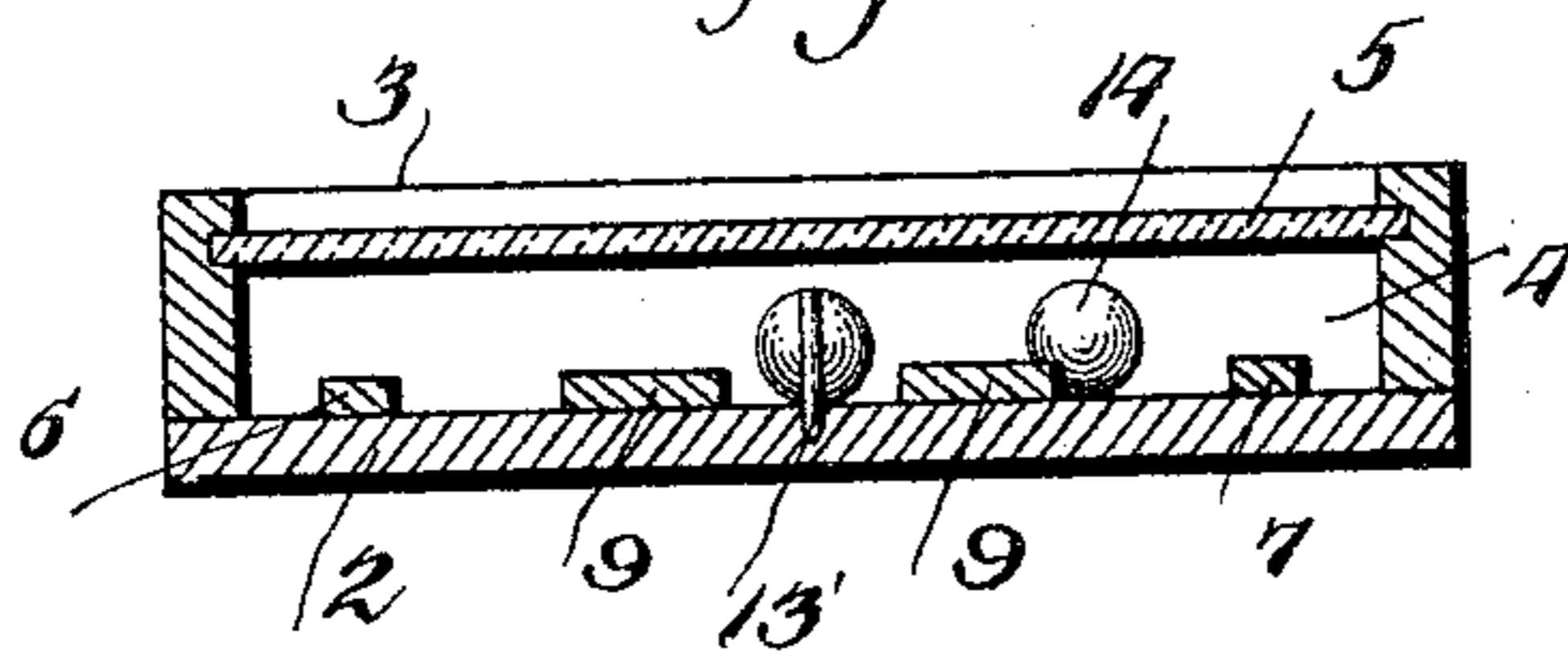


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## PUZZLE.

No. 804,314.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed September 13, 1904. Serial No. 224,282.

*To all whom it may concern:*

Be it known that I, CHARLES E. HARRIS, a citizen of the United States, residing at Alcott Station, Denver, in the county of Denver and State of Colorado, have invented new and useful Improvements in Puzzles, of which the following is a specification.

This invention relates to puzzles of that type comprising a box or casing provided with runways for balls or other movable objects which are designed by tilting or otherwise manipulating the box or casing to be rolled into certain predetermined positions, obstacles being provided to render the direction of the balls to such positions more or less difficult, so as to afford interest and amusement and require proper training and education of the hand and eye of the operator to solve or accomplish the object of the puzzle.

The invention has for its object to provide a puzzle of this character in which the parts are constructed and arranged to represent portions of the trackway of a railway system and to simulate the operation of shifting cars thereon, so that the movements of the balls in the runways will correspond to the skilled operation of "spotting" freight-cars—i. e., shifting the cars to the different positions they are intended to occupy on various portions of the main track or its sidings or branches.

With this and other objects in view the invention consists of the features of construction, combination, and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of a puzzle embodying my invention. Fig. 2 is a vertical longitudinal section of the same on line 2 2 of Fig. 1, and Fig. 3 is a vertical cross-section on line 3 3 of Fig. 1.

In carrying my invention into practice I provide a box, frame, or similar receptacle 1, comprising a base 2, having an upwardly-extending surrounding wall 3, forming an inclosed space or chamber 4, which is closed at the top by a transparent panel 5, of glass or other suitable material, mounted in the upper portion of the wall 3.

The base 2 is provided with channels or guideways forming runways for the balls or other movable objects employed, which runways may be formed by grooving the base or, as shown in the present instance, by providing the base with opposing walls forming

intervening spaces in which the balls are designed to run or roll. In the present embodiment of the invention the base is provided with upwardly-extending walls 6 and 7, the ends of which are straight and parallel and the intermediate portions, as shown at 8, outwardly and reversely curved, and between the curved portions 8 of these walls are arranged blocks or abutments 9, disposed with their inner edges in alinement with the inner sides of the straight ends of the walls 6 and 7 and their outer edges or sides curved to conform to the curvature of the curved portions 8, thus forming a straight longitudinal trackway 10 and oppositely-disposed sidings or branch trackways 11 and 12. The bottom walls of these channels are printed, painted, or otherwise colored to represent the rails and ties of an ordinary trackway, and at certain points in the main line and sidings or branches of this trackway are suitably-colored spaces 12, representing destination-points or portions of the track which the cars to be shifted are intended to occupy. These destination-points are so colored or formed as to be readily distinguished from the other portions of the trackway and, if desired, may be distinguished by providing them with spots or seats 13 of any desired character to indicate the points designated for the reception of the balls or cars. These spots or points of destination are preferably numbered, as shown, the destination-point in the straight end of the track at the left of the sidings being numbered "1," that of the siding 11 "2," that of the straight portion of the track at the right of the sidings "3," that in the siding 12 "4," and that in the intermediate portion of the main part of the track between the siding "5." At the junctions or points where the two sidings 11 and 12 connect with the straight portions of the track are arranged obstacles 13'. (Shown in the present instance in the form of pegs fitted in the base 2.) These pegs are intended to represent switches and to increase the difficulty of rolling the balls to their destination-points.

The cars to be switched are represented by balls or other movable objects 14, which occupy the channels and are adapted by tilting or otherwise manipulating the box or casing 1 to be caused to roll by gravity through the channels at various portions of the trackway to be "spotted" or switched to occupy the spots or destination-points "1," "2," "3," "4," and "5."

In the operation of the game or puzzle the balls are arranged upon one of the straight portions of the trackway and the casing 1 tilted to cause them to pass to the several destination-points, the puzzle being solved or accomplished when all the balls are seated upon said points. This operation is of course rendered amusing and difficult on account of the tendency of any ball when seated on its respective spot to roll away upon the tilting of the casing to manipulate another ball and the opposition caused by the obstacles 13' to the movements of the balls from the straight to the curved portions or siding of the trackway. In practice all five of the balls shown in the present instance may be employed or any number of them, and the game may be varied from the designed intention of seating all five balls on the respective spots to the seating of a less number of balls on certain only of said spots. I do not limit my invention in this particular, as the number of balls and spots employed may vary as desired. In the manipulation of the box or casing 1 to shift the cars represented by the ball to the different portions of the track represented by the spots some degree of skill is required and much interest and amusement afforded from the contrary action of the balls and the unseating of balls previously seated on their spots in tilting the casing to seat the unseated balls. Considerable skill, however, may be acquired in the handling of the device, and the spotting of the entire number of balls may be accomplished and afford amusement and interest for the operator.

From the foregoing description, taken in connection with the accompanying drawings, the construction and mode of operation of the invention will be understood without a further extended description, and changes in the form, proportions, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

Having thus described the invention, what is claimed as new is—

A game or puzzle comprising a tiltable body provided with a playing-surface having a main channel forming the main portion of a trackway, and oppositely-disposed curved channels forming sidings or branches of the trackway, said straight portion of the trackway being provided beyond the sidings and between the same with destination-points, and said sidings also having destination-points opposite the intermediate destination-point of the straight portion of the trackway, obstacles at the junctions of the sidings with the main portion of the trackway, and movable objects adapted to roll by gravity along said main and branch portions of the trackway when the body is tilted and to be seated at the destination-points.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES E. HARRIS.

Witnesses:

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JESSIE M. POLLOCK.