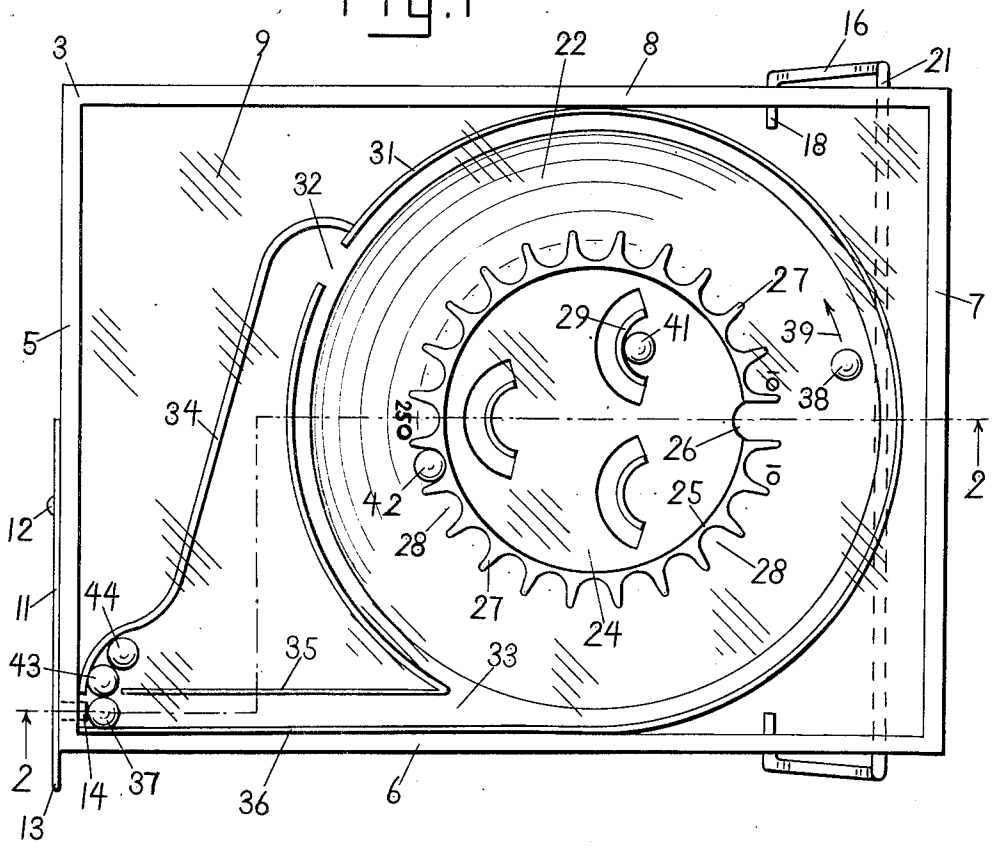
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BALL PROJECTING GAME

Filed July 5, 1947

Fig. 1



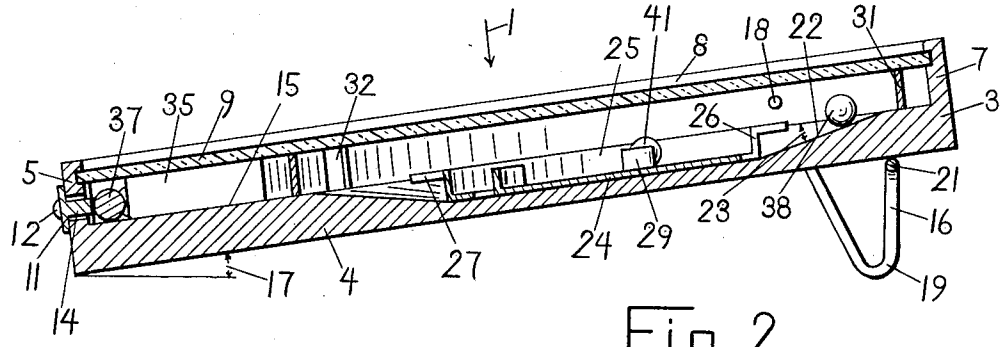


Fig. 2

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BALL PROJECTING GAME

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5 Claims. (Cl. 273—121)

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My invention relates to that type of games where rolling balls are projected on a sloping surface provided with recesses for interception of the balls and where the score of the player is determined by the individual recesses into which the balls fall.

Objects of my invention are to provide a game of the mentioned type with novel and interesting features, to provide a relatively large number of ball receiving recesses in a relatively small area, and to vary gradually the sloping angles leading into these recesses whereby the probabilities of drops into the individual recesses vary gradually and particular skill is required in order to make the balls enter those recesses that are assigned to higher scores.

Other objects are to attain these results with simple and inexpensive means and with a structure that can be easily made and assembled, and to provide an amusing game of the mentioned type that is not bulky and that is easily transportable.

More specific objects are to provide the sloping surface over which the balls roll with a cavity having a substantially frusto-conical shape whereby the inclination of the excavated area varies and is largest at the upper part of the surface, to provide this cavity with such a side angle, that each side of this cavity has an inclination, relatively to a horizontal plane, which slopes toward the center of the cavity whereby gravity tends to move the balls toward this center from all sides, this tendency having an intensity varying around the cavity, to arrange in the center of the cavity a wall provided with radial or star-like projections whereby recesses are formed all around this wall for the reception of balls, to provide other intercepting recesses in the interior of this wall which has an opening for the passage of balls, and by these means, to provide recesses which can be filled with balls more or less easily whereby a certain skill is required to bring balls into those recesses which are co-ordinated to higher scores.

Still other objects and advantages will appear from the following description of an exemplifying embodiment of my invention, from the appended claims and from the accompanying drawing in which:

Fig. 1 shows a top view of an exemplifying embodiment of my invention, seen in the direction of the arrow 1 in Fig. 2.

Fig. 2 shows a cross-section of the same embodiment, taken along the broken line 2—2 in Fig. 1.

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Referring to the drawing, numeral 3 indicates a casing having a bottom 4 and four side walls 5, 6, 7 and 8. The space surrounded by these side walls is visible from the upper side and may be covered by a pane 9 of glass or any other transparent material. A flat spring 11 is affixed to the outer side of the wall 5, for example, by a rivet 12, and extends along this wall beyond a corner of the casing, the projecting part 13 of the spring 11 forming a handle by which the adjoining part of the spring can be spaced from the wall temporarily. The spring 11 carries a projection 14 passing through an opening of the wall 5.

The bottom 4 has an upper surface 15 forming the ground surface of the casing's inner space. The surface 15 is so tilted that the general inclination of this surface is toward that side where the wall 5 is situated. This sloping position of this surface may be obtained by an oblique position of the entire bottom or casing. For example, the casing 3 may be placed on a table or any other horizontal surface, and may have a support 16 positioned near the wall 7 whereby this wall is raised while the opposite edge of the casing which is near to the wall 5 rests immediately on the horizontal surface. Thereby, the bottom and the horizontal direction include an angle 17 which measures the general inclination of the surface 15.

In the shown embodiment, the support 16 is constituted by a wire hinged to the casing 3 by ends 18 passing through bores of the walls 6 and 8. This wire is so bent that feet 19 are formed which are connected by a wire part 21 contacting the lower surface of the bottom 4.

The surface 15 is provided with a shallow cavity 22 having a circular circumference and having frusto-conical sides. The angle 23 between the sides of the cavity and the remaining part of the surface 15 is substantially uniform whereby the inclination of the cavity, that is the angle between these sides and the horizontal direction, varies. For example, at the right side of the drawing, this inclination is equal to the sum of the angles 17 and 23 while at the opposite side, the inclination is equal to the difference between these angles. The angle 23 is slightly larger than the angle 17 whereby the cavity 22 is inclined relatively to the horizontal in all directions, sloping slightly to the right side at the left side of the cavity and sloping at a higher degree to the left side of the right side of the cavity. At all sides, the cavity slopes toward its center.

A body 24 shaped like a shallow cup is positioned at the center of the cavity 22 and has a

circular side wall 25 interrupted by an opening 26. A number of radial projections or teeth 27 extend from the wall 25 like rays of a star and are preferably uniformly distributed over the circumference of the body 24. The opening 26 is positioned between two of the projections 27. The remaining spaces between these projections form recesses 28, each of which is adapted to receive a ball. The probability that a ball will drop into an individual recess 28 depends on the inclination of the respective part of the cavity 22 and is smallest at the left side of the body 24. The recesses 28 situated at this side indicate higher scores than the other recesses 28. For example, a ball dropped into the uttermost left recess may count two hundred and fifty points while each of the two uttermost right side recesses indicates ten points. The remaining recesses may indicate scores gradually increasing from right to left.

Additional recesses or corners for the interception of balls may be arranged inside of the wall 25. For example, the shown embodiment comprises three arc-shaped walls 29 stamped out of the material of the body 24 and pressed into an erect position whereby each of these walls forms an obstacle adapted to intercept a ball which has passed through the opening 26. The walls 29 may indicate particular scores.

Further walls form borders for the run-ways of the balls. A circular wall 31 is positioned around the cavity 22 at a small distance therefrom. The wall is interrupted by gaps 32 and 33. A wall 34 forms an oblique ramp leading from the gap 32 to a place before the inner surface of the spring projection 14. Two parallel walls 35 and 36 lead from this latter place to the gap 33. The walls 31, 34, 35 and 36 extend perpendicularly to the surface 15 from this surface to the pane 9.

One or several balls are confined in the space positioned between the surface 15 and the pane 9 and surrounded laterally by the walls 31, 34, 35 and 36. There may be, for example, six balls. In the shown condition of the game, a ball 37 is positioned before the spring projection 14. By operation of the spring, the ball 37 is propelled or projected to the right side. The projected ball will then pass the gap 33 and will move further in a way depending on its speed or on the force applied to the spring. For example, a previously projected ball 38 is shown rolling in the direction of the arrow 39. Finally any ball projected will either come to rest in one of the scoring recesses as, for example, the balls 41 and 42 or on a non-scoring spot or will return through the gap 32 to the position of the balls 43 and 44. These latter balls form a store for future operations. As soon as the ball 37 has been projected, the ball 43 will take its place and so on until all balls of the store have been projected and have come to rest in an intercepting spot. Then, the player adds up the scores indicated by the balls.

In order to start the game anew, the casing is so tilted that the balls leave their resting places and return into the positions proper for projection or storage.

I desire it understood that my invention is not confined to the particular embodiment shown and described, the same being merely illustrative, and that my invention may be carried out in other ways without departing from the spirit of my invention as it is obvious that the particular embodiment shown and described is only one of the many that may be employed to attain the objects of my invention.

Having described the nature of my invention, what I claim and desire to protect by Letters Patent is:

1. A casing for a ball projecting game comprising a planar ground surface, means supporting said casing so that said surface is disposed at a predetermined angle of inclination to the horizontal, a circular cavity formed in said surface, said cavity having inclined sides disposed at an angle relative to said ground surface greater than said predetermined angle of inclination of the latter, a circular body in said cavity and formed with outwardly opening recesses about the entire circumference thereof so disposed as to receive a ball on said inclined sides.

2. A casing for a ball projecting game comprising a planar ground surface, means supporting said surface at a predetermined angle of inclination to the horizontal, a cavity formed in said ground surface and having inclined side walls communicating said cavity with said ground surface, said side walls being disposed at an angle relative to said ground surface greater than said predetermined angle, a body in said cavity having an upstanding wall formed with an outwardly directed flange extending along the top edge thereof and overlying said inclined side walls, and a plurality of outwardly opening recesses formed in said flange, at least one of said recesses facing the lowermost portion of said cavity.

3. A casing for a ball projecting game comprising a planar ground surface, means supporting said surface at a predetermined angle of inclination to the horizontal, a circular cavity formed in said surface and having inclined side walls communicating said cavity with said ground surface, said side walls being disposed at an angle relative to said ground surface greater than said predetermined angle, and a circular body in said cavity and concentric therewith formed with outwardly opening recesses in the circumference thereof so disposed as to receive a ball on said inclined side walls, at least one of said recesses facing in the direction of the lowermost part of said surface.

4. A casing for a ball projecting game comprising a planar ground surface, means supporting said surface at a predetermined angle of inclination to the horizontal, a circular cavity formed in said surface and having inclined side walls communicating said cavity with said ground surface, said side walls being disposed at an angle relative to said ground surface greater than said predetermined angle, a cup-shaped body disposed in said cavity and having an upstanding wall formed with an opening therethrough and a plurality of radial projections distributed along the entire circumference of said wall and overlying said inclined side walls whereby recesses are formed between said projections except where said opening is situated for receiving a ball on said inclined side walls, at least one of said recesses facing the lower part of the circumference of said cavity.

5. A casing for a ball projecting game comprising a planar ground surface, means supporting said surface at a predetermined angle of inclination to the horizontal, a circular cavity formed in said surface and having inclined side walls communicating said cavity with said ground surface, said side walls being disposed at an angle relative to said ground surface greater than said predetermined angle, a cup-shaped body having a bottom disposed in said cavity and an upstanding peripheral wall formed with an opening there-

through, radially extending projections formed about the circumference of said upstanding wall and overlying said inclined side walls to provide recesses therebetween for receiving a ball on said side walls, at least one of said recesses facing in the direction of the lowermost part of said ground surface, and arc-shaped walls extending from said bottom within said upstanding wall to provide additional ball receiving recesses.

HARRY ZIMMERMAN.

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