Sept. 16, 1952 M. A. LIVINGSTON 2,610,853

MARBLE GAME APPARATUS

Filed Nov. 23, 1949 2 SHEETS—SHEET 1

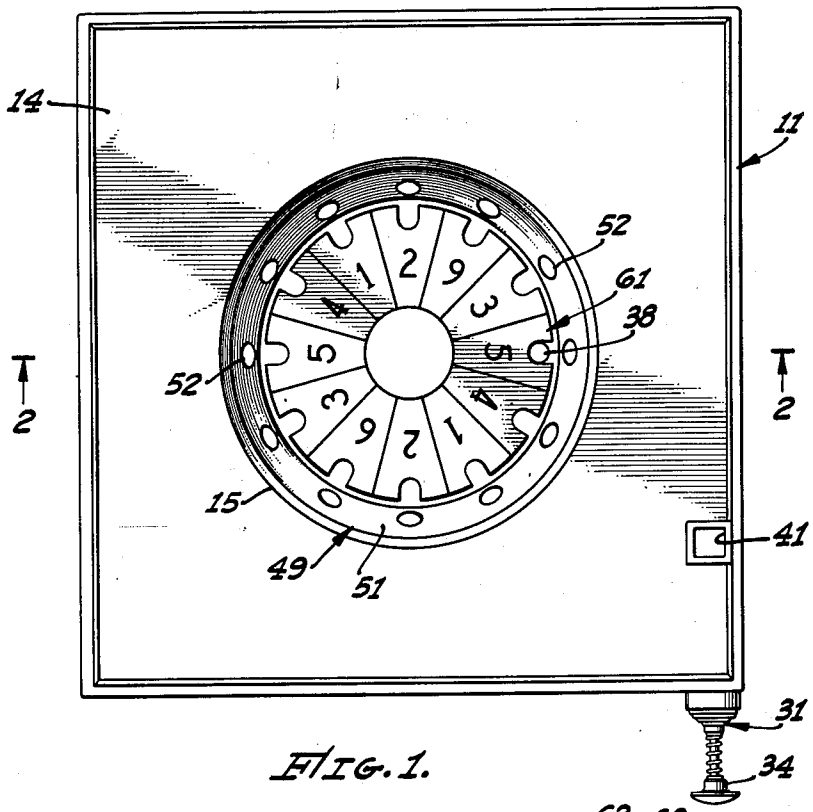


FIG. 1.

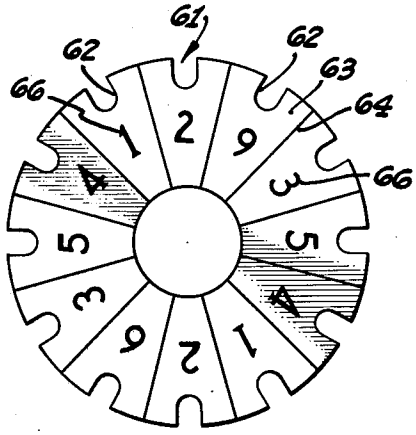


FIG. 5.

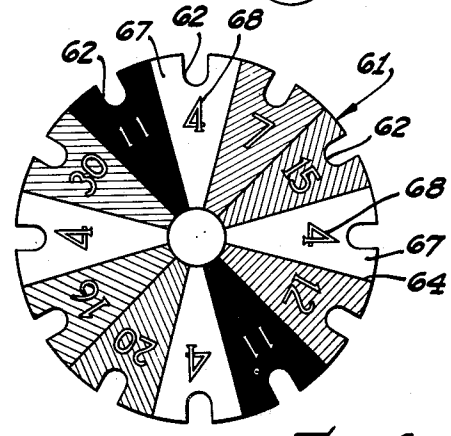


FIG. 6.

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MARBLE GAME APPARATUS

Filed Nov. 23, 1949 2 SHEETS—SHEET 2

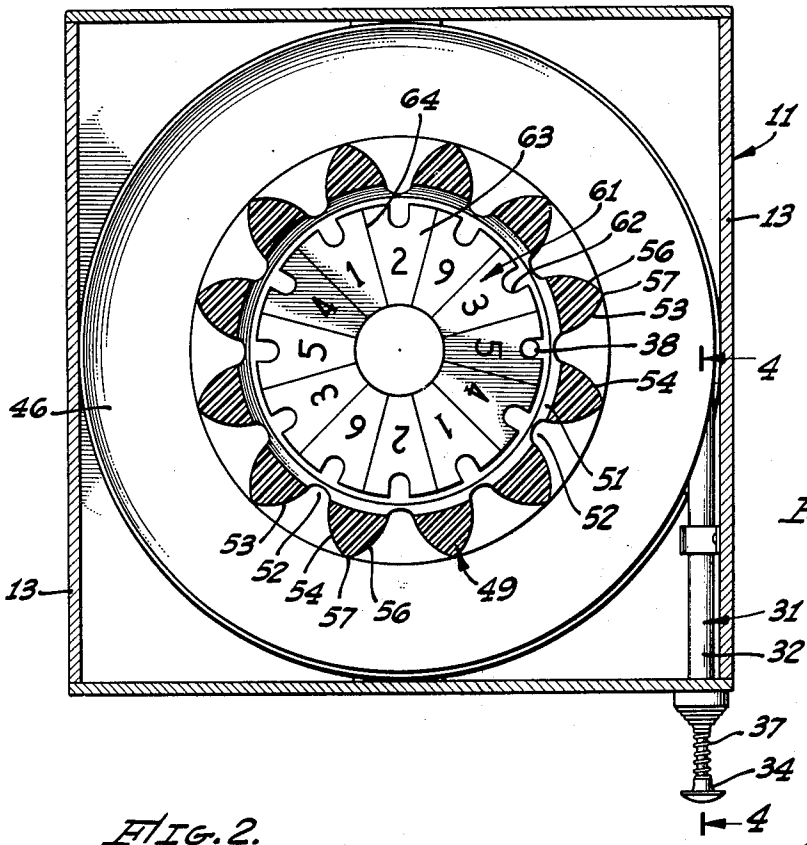
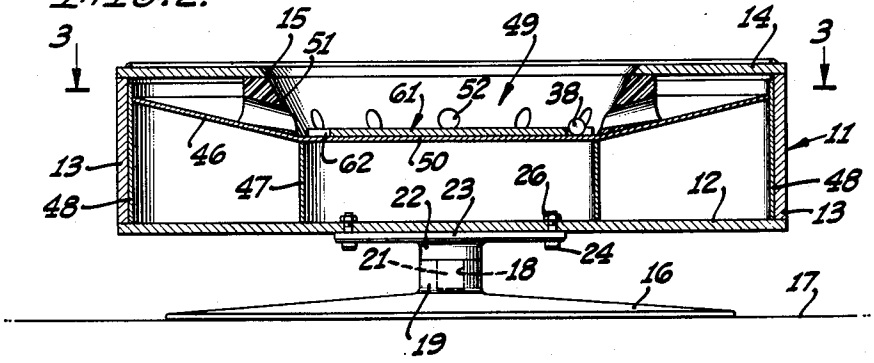


FIG. 3.

FIG. 2.



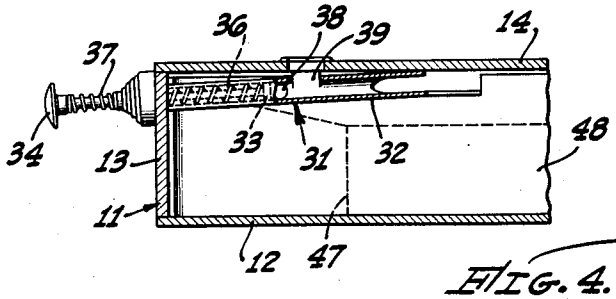


FIG. 4.

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UNITED STATES PATENT OFFICE

2,610,853

MARBLE GAME APPARATUS

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Application November 23, 1949, Serial No. 129,126

2 Claims. (Cl. 273—121)

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This invention relates to amusement devices, and more particularly to games of the type in which small balls such as marbles are projected along a surface toward a selected target.

An object of the present invention is to provide apparatus whereby a marble game of a novel and highly entertaining nature may be played.

A more detailed object in this connection is to provide game apparatus of the general character indicated wherein marbles are projected tangentially onto a course of circular form which is upwardly concave so that its sides flare upwards and outwards similarly to those of a shallow bowl, causing each projected marble to follow a substantially circular path around the course, gradually spiraling down as the marble loses velocity, until it enters one of a plurality of target openings arranged in position to receive it adjacent the central, lowest portion of the course.

A further object is to enhance the suspense accompanying each shot by so constructing the apparatus that each marble is concealed from view after it has been played and until it finally arrives in scoring position.

A still further object is to construct the game of the present invention in the form of a relatively light, readily portable piece of apparatus adapted for use upon a table or similar support, and thereby presenting the device in the form of a parlor game.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of my invention which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood that I do not limit myself to the showing made by the said drawings and description, as I may adopt variations of the preferred form within the scope of my invention as set forth in the claims.

Referring to the drawings:

Figure 1 is a top plan view of a marble game incorporating the principles of the present invention.

Figure 2 is a vertical, medial sectional view taken upon the line 2—2 of Fig. 1, with the direction of view as indicated.

Figure 3 is a horizontal sectional view taken upon the line 3—3 of Fig. 2, with the direction of view as indicated.

Figure 4 is an enlarged detail view in vertical section taken upon the line 4—4 of Fig. 3, with the direction of view as indicated.

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Figure 5 is a plan view showing one face of the reversible disc adapted to be used upon the target area of the game apparatus of the present invention.

Figure 6 is a view similar to Fig. 5, but showing the opposite face of the disc.

Specifically describing that embodiment of my invention which has been chosen for illustration and description herein, my improved marble game apparatus is contained within a suitable cabinet 11 preferably rectangular and comprising a bottom 12, four side walls 13 and a top 14. A relatively large circular opening 15 is provided centrally in the top 14 affording access to and visibility of portions of the interior of the game apparatus, as will be described in detail herein below.

In the preferable form of the game apparatus, the cabinet 11 is sufficiently small and light to be disposed and used upon a table inasmuch as it is adapted for use as a parlor game. Furthermore, in order to facilitate use of the game by a plurality of players, as well as to add a further element of novelty thereto, the cabinet 11 is mounted upon a base 16 adapted to rest upon the table or other supporting surface 17 and having a socket 18 in an upstanding, central column 19 thereon. Within the socket 18 a pin 21 is journaled and this pin is a cylindrical extension of a base 22 on the under side of a plate 23 rigidly secured to the under surface of the bottom 12 of the cabinet 11, as by a plurality of machine screws 24 and nuts 26, in such position that the pin 21 is mounted with its axis intersecting the center of the cabinet 11.

This type of mounting for the cabinet 11 makes it possible for a single marble ejector, indicated in its entirety at 31, to be used successively by each of a plurality of players inasmuch as it permits turning the cabinet 11 to any desired position about the vertical axis of the pin 21 so as to dispose the marble ejector 31 in the most convenient location for whichever player whose turn comes next.

This marble ejector 31 comprises a tube 32 extending through one side wall 13 adjacent one end thereof, thus disposing the tube 32 closely adjacent and substantially parallel to the inner surface of the proximal side wall 13. A plunger 33, reciprocable within the outer end of the tube 32 is operable by means of a knob 34 accessible exteriorly of the cabinet 11 and a coil spring 36 engaging the under side of the head of the plunger 33 urges the plunger 33 to the inner end of its stroke. Preferably, a considerably short-

er spring 37 engages the under side of the knob 34 when the plunger 33 reaches the inner end of its stroke so as to cushion and substantially silence operation of the marble ejector. Marbles 38 are adapted to be loaded one at a time into the tube 32 through an entrance tube 39 which opens downwardly into the ejector tube 32 from the top 14 of the cabinet 11 where the upper end of the tube 39 is provided with a relatively large mouth 41 to assist in manually depositing the marbles therein.

The tube 32 of the marble ejector 31 is arranged substantially tangentially of a circular upwardly concave plate 46 mounted within the cabinet 11 upon the inner and outer tubular members 47 and 48 which support the plate 46 above the cabinet's bottom 12 and slightly below its top 14. The outer tubular support 48 extends beyond and above the outer peripheral edge of the plate 46, thus presenting a circular wall adapted to exert a centripetal force against marbles traveling in a circular path upon the inwardly sloping, frusto-conical upper surface of the plate 46 at such velocity that they otherwise would be thrown by centrifugal force off the marble course which the plate 46 and wall 48 thus co-operate to define.

The bottom of the plate, or marble course 46, is closed by a flat, circular field 50; and a screen 49 extends upwards from the circular line defined by the intersection of the field 50 with the lower end of the frusto-conical marble course 46. This screen 49 is of generally tubular form, with its wall 51 of substantial thickness. The inner surface of the wall 51 preferably flares upwards and outwards so that its upper edge merges into the opening 15 in the cabinet's top 14 which preferably is of substantially greater diameter than the circular field 50 so as to afford easier access and less restricted view of the field 50 from any side of the cabinet 11.

Through the wall 51 of the tubular screen 49 a plurality of target openings 52 extend. Each of these openings is so disposed that its axis extends radially outwards from the inner surface of the wall 51 adjacent its lower edge and upwards at such inclination that the outer end of the opening is closely adjacent the upper surface of the marble course 46 where the lower edge of the tube's outer wall is in engagement therewith. However, instead of being of uniform width throughout its length through the wall 51, each of these target openings 52 preferably flares outwardly, i. e., the two side walls 53 and 54 (see Fig. 3) of each target opening diverge or flare to such an extent that each intersects the proximal side wall 56 of the next adjacent opening in a relatively sharp line 57. This is in contradistinction to the construction that would be presented if the side walls 53 and 54 of the openings intersected the cylindrical surface at the outer face of the screen's wall 51 and is of importance in that it avoids the possibility of a marble becoming lodged upon any one of the substantially flat surfaces which otherwise would remain between the outer ends of each two adjacent side walls of the target openings 52.

Consequently, when a marble 38 is projected onto the marble course 46 by means of the marble projector 31, it will follow a substantially circular path thereon until it loses sufficient velocity to overcome the centrifugal force which maintains it adjacent the upper edge of the course 46. Thereafter, the rolling marble will travel in a path in the nature of a gradually decreasing spiral until it strikes the outer surface of the screen 49 and thereafter the marble will enter the tapering entrance throat at the outer end of one of the target openings 52, and by rolling down the inclined lower side of that opening will pass through the screen 49 and onto the surface of the field 50, where it will become visible to the players through the opening 15 in the cabinet's top 14.

In order to retain each marble in position closely adjacent the lower end of that particular target opening 52 through which the marble has reached the field 50, I provide a disc 61 adapted to rest flat upon the upper surface of the field 50 and having a plurality of notches 62 in its edge. These notches 62 correspond in number to the target openings 52 and they are similarly angularly separated from each other so that the disc 61 may be placed upon the field 50 with each of the notches 62 closely adjacent one of the target openings 52 and adapted to receive a marble therefrom and to retain that marble in position so closely adjacent that particular opening 52 that after the marble has come to rest it is an easy matter to ascertain through which opening 52 the marble has entered the range of vision of the players.

Means are provided for ascribing significant value to each of the openings 52 so that a certain score is attained by the player whose marble passes through that opening. The values ascribed to the several openings being suitably differentiated from each other, the entertainment value of the game is increased by its being given a highly competitive nature in this manner. The plurality of substantially sector-shaped areas 63 are delineated as by lines 64 upon the surface of the disc 61 in such position thereupon that each such area 63 has one of the notches 62 located therein. The score ascribed to each area 63 and accordingly to the associated entrance opening 52 is conveniently indicated by calibrations 66, as illustrated in Fig. 5, in the form of numerals, one of which is marked in each of the sector-shaped areas 63. However, in order to make it possible to play a greater variety of games with the same apparatus, I prefer to provide on the opposite face of the disc 61, another series of preferably sector-shaped areas 67, one for each notch 62, as in the case of the first mentioned areas 63, but respectively identified by a different series of calibrations 68 the numerical value of which differs from that of the calibrations 66. Moreover, the sector-shaped areas of either or both sets 63, 67 may be respectively differentiated from each other by colors, thus adding to the attractive nature of the apparatus and still further increasing the number of games that can be played therewith.

I claim:

1. Marble game apparatus comprising a flat, circular field, an annular marble course encircling said field, the surface of said course flaring upwardly and outwardly from the edge of said field, a tubular screen extending upwards from said course and arranged concentrically thereof adjacent the peripheral edge of said field, an outer wall encircling said course to define the circular outer edge thereof, an annular cover extending across the space between the upper edge of said screen and the upper edge of said outer wall, the wall of said tubular screen being of material thickness and having a plurality of angularly spaced tunnels extending downwardly

and inwardly therethrough providing paths for marbles from the surface of said course to the surface of said field, and means for projecting a marble along the surface of said course, said screen, outer wall, and cover being of opaque material whereby a marble on said course is concealed from view until it enters one of said tunnels.

2. Marble game apparatus comprising a flat, circular field, an annular marble course encircling said field, the surface of said course flaring upwardly and outwardly from the edge of said field, a tubular screen extending upwards from said course and arranged concentrically thereof adjacent the peripheral edge of said field, an outer wall encircling said course to define the circular outer edge thereof, an annular cover extending across the space between the upper edge of said screen and the upper edge of said outer wall, the wall of said tubular screen being of material thickness and having a plurality of angularly spaced tunnels extending downwardly and inwardly therethrough providing paths for marbles from the surface of said course to the surface of said field, and means for projecting a marble along the surface of said course, said screen, outer wall, and cover being of opaque material whereby a marble on said course is concealed from view until it enters one of said tunnels, the said walls of each of said tunnels flaring laterally and outwardly to define an entrance throat tapering into that tunnel, and the proximal flaring side walls of each two adjacent tunnels intersecting each other and thereby leaving no circumferential outer surface of said screen upon which a marble might lodge.

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