Aug. 19, 1952 M. F. FINNERTY 2,607,592

GRAVITY PROJECTOR BALL GAME DEVICE

Filed March 2, 1948

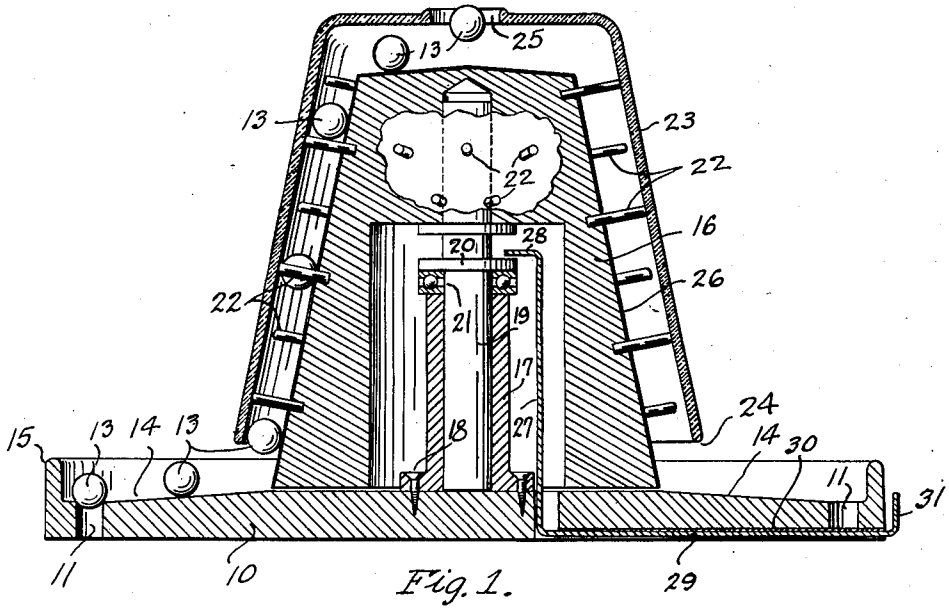


Fig. 1.

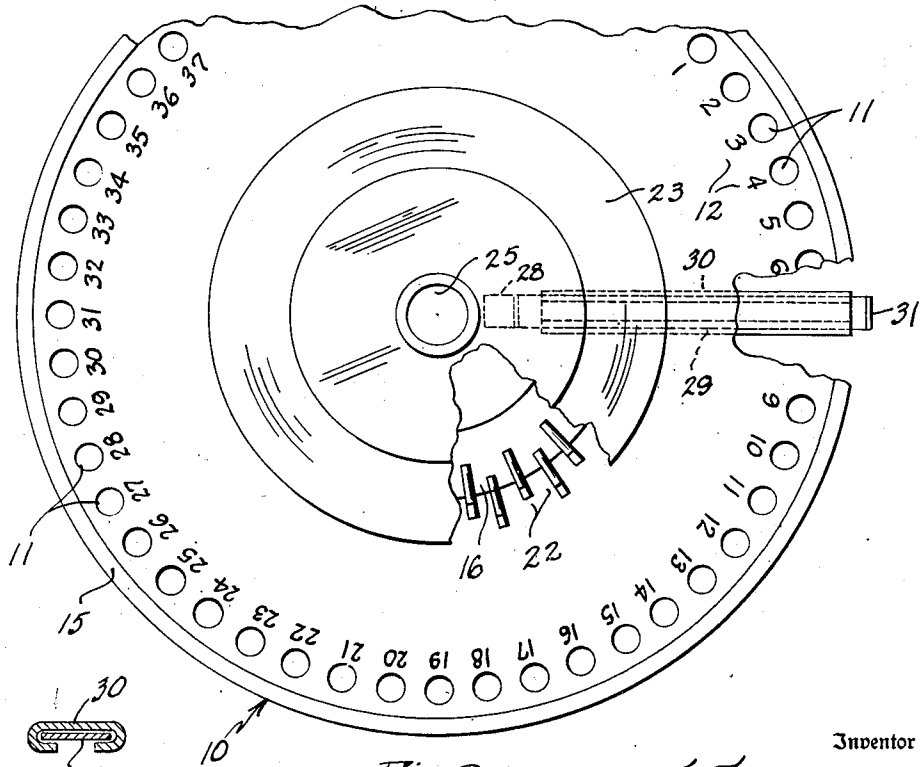


Fig. 2.

Fig. 3.

Inventor

By Martin F. Finnerty

Hooster & Davis Attorneys.

Patented Aug. 19, 1952

2,607,592

UNITED STATES PATENT OFFICE

2,607,592

GRAVITY PROJECTOR BALL GAME DEVICE

Martin F. Finnerty, New Haven, Conn.

Application March 2, 1948, Serial No. 12,500

1 Claim. (Cl. 273—120)

1

This invention relates to an amusement device of the type where rolling elements pass through an irregular and undetermined path and finally are deposited in numbered compartments or recesses to indicate a score, and it has for an object to provide a simple and effective device which may be manufactured and sold at small cost, which will be attractive in appearance, and in which the path of the rolling elements may be readily followed and observed by the player.

A further object is to provide a device of this character in whcih the structure having the irregular paths for the rolling elements is rotatable by the operator to still further complicate the movement of the elements and to thoroughly distribute them about the recording and indicating means.

With the foregoing and other objects in view, I have devised the construction illustrated in the accompanying drawing forming a part of this specification. It is, however, to be understood the invention is not limited to the specific details of construction and arrangement shown, but may embody various changes and modifications within the scope of the invention.

In this drawing:

Fig. 1 is a vertical section through an amusement device involving my invention;

Fig. 2 is a top plan view thereof with parts broken away to more clearly show the construction, and

Fig. 3 is a transverse detail section through the guide for the retaining means for the rotary element.

The device comprises a base member 10, preferably substantially circular in outline, provided adjacent its periphery with a series of openings or recesses 11 which may be numbered, as indicated at 12, to indicate a score or for counting purposes, by means of a series of rolling elements, such, for example, as a series of balls or marbles 13 which in operation of the device may come to rest in these recesses. These elements may be deposited on the base from a distributing device located above the center of the base, the upper wall 14 of the base being preferably inclined downwardly and outwardly toward these openings, as indicated in Fig. 1, to facilitate passage of the rolling elements from the distributing means to these recesses. The base is also provided with an upwardly extending peripheral flange 15 to prevent the elements rolling off the base.

Mounted above and in the center of this base is the distributing means for the rolling elements.

2

In the present case this distributing means comprises a rotatable block 16 having an upwardly and inwardly inclined side wall. Preferably the block is substantially conical or frusto-conical, and is mounted for rotation on its vertical axis by any suitable means. In the present construction an upright bearing sleeve 17 is mounted on the base member and secured by any suitable means, such, for example, as the screws 18. Mounted in this sleeve is an upright shaft 19 provided with a flange or collar 20 resting on an antifriction bearing 21 to permit the device to rotate freely. The block 16 is mounted on the upper part of this shaft so as to rotate with it. This block 16 is provided with deflecting means for causing descending circular elements, such as the balls or marbles 13, to take irregular and undetermined paths as they pass downwardly over the tapered surface of the block. These may comprise pegs or pins 22 projecting outwardly from the surface of the block and arranged in any desired arrangement, such, for example, as an irregular staggered arrangement, to provide the irregular and undetermined paths for the rolling elements. The members 22 may be wooden or metal pegs or pins, or nails or similar elements, or could be of other shapes if desired. Spaced outwardly from and covering the block is a cover or dome 23, preferably of glass or other transparent material, and this may if desired rest on the outer ends of the pins or pegs 22 or be carried by any other suitable support. Therefore, with this arrangement the irregular paths of the rolling elements are located between the block 15 and the cover or dome 23, and the elements are guided and retained in these paths by these members. The lower edge 24 of the cover or dome is spaced sufficiently above the top wall 14 of the base member to permit the rolling elements 13 to pass outwardly under this edge as they reach the lower ends of the paths provided by the pins and reach the top wall of the base member. The top wall of the cover or dome 23 is provided with an entrance opening 25 for feeding of the rolling elements 13 into the device in playing it. The surface of the block 16 may be covered with green or other colored felt 26 to give a better appearance and reduce the noise of the rolling elements.

There may be a catch for preventing removal of the rotary block by the player. In the present instance this comprises a sliding catch 27 including a hooked portion 28 extending over the top of the flange 20 to prevent upward lifting of the block and shaft 19, and it includes a horizontal

portion 29 in a suitable guide member 30 mounted in a recess in the under side of the base member and terminating in a hand grip 31 at its outer end adjacent the periphery of the base member where it is easily accessible for operation by an authorized person. If desired, a lock or other securing means (not shown) may be provided to prevent release of this catch by any except an authorized person.

The game is played by the player or players taking any number of rolling elements 13, preferably spherical elements, such as balls or marbles, the number being anything desired for each player, say five for example, and feeding them one at a time through the opening 25 and giving block 16 and cover 23 a twirl. The ball passes down between the block and the cover over the series of pins or pegs 22 and passes out under the lower rim or edge 24 of the cover, and rolling outwardly down the surface 14 of the base, eventually lands in one of the pockets or recesses 11. The score is what the five balls, or whatever number it happens to be, add up to as determined by the numbers adjacent the recesses in which the elements come to rest.

This makes a very simple and attractive device and one in which the rolling elements are given an entirely arbitrary and undetermined path from the feeding opening 25 to the receiving recesses 11, but the speed of travel may be varied by varying the speed of rotation of the dome and cover, and the path of the element may be observed and followed at all times by the player.

Having thus set forth the nature of my invention, I claim:

An amusement device of the character described comprising a base provided with a top surface leading outwardly to a series of recesses in said surface and an upwardly extending flange adjacent its outer periphery, an upright tubular bearing member mounted on said base, an upright frusto-conical block above the base provided with a recess leading upwardly from its lower end to enclose said bearing member, an upright shaft secured to the block at its upper end seated at its lower end in the bearing member, a flange on the shaft, a bearing on the bearing member beneath said flange to support the shaft and block, a slide mounted in the base for lateral movement toward and from the shaft and including a retaining shoulder movable to a position over the flange to retain the shaft in the bearing member, a tapered cover over the block spaced outwardly therefrom and spaced above the top surface of the base at its lower edge, a series of deflecting means in the space between the cover and block providing irregular paths for spherical descending elements leading to the space between said lower edge of the cover and said top surface, and said cover being provided with an entrance opening for said elements in its top wall leading to said paths.

MARTIN F. FINNERTY.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
87,410	Hauschied	Mar. 2, 1869
475,067	Risdon	May 17, 1892
588,264	Brennan	Aug. 17, 1897
772,281	Jurado	Oct. 11, 1904
832,533	Cline	Oct. 2, 1906
1,165,798	Messenger	Dec. 28, 1915