June 5, 1934. W. W. HARRIS 1,961,147

MARBLE GAME

Filed Aug. 5, 1931

Fig. 1.

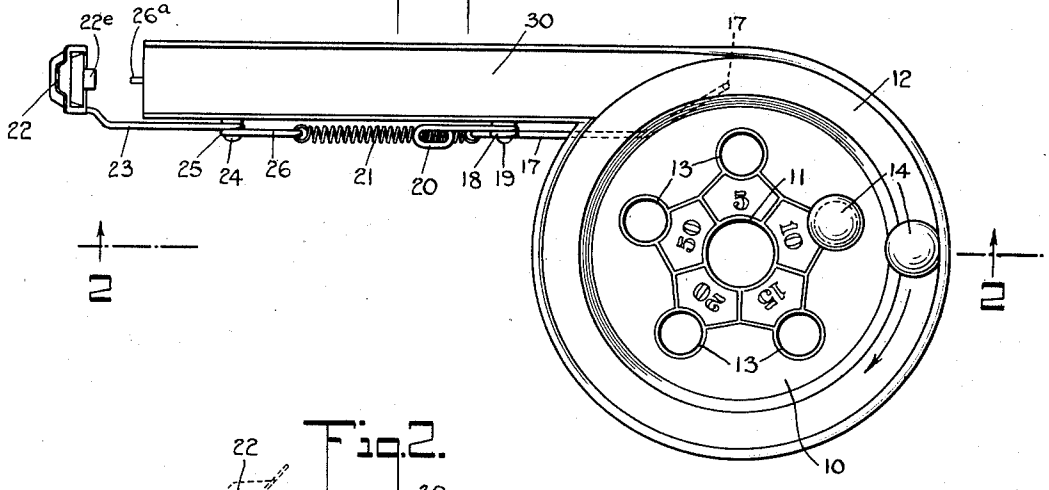


Fig. 2.

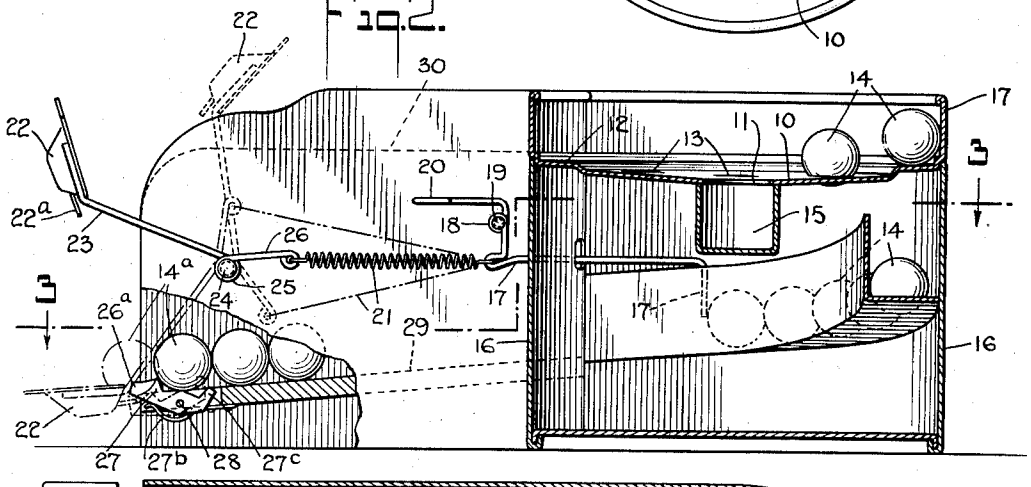


Fig. 3.

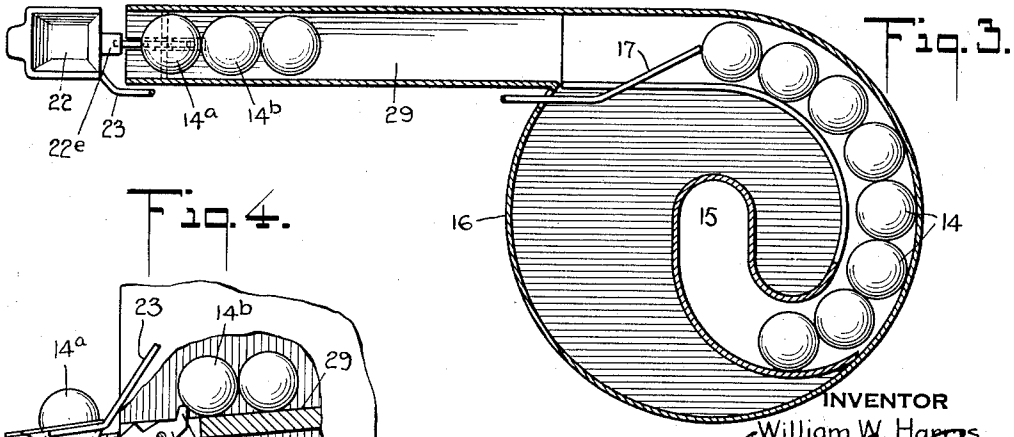


Fig. 4.

INVENTOR
William W. Harris
BY
Henry J. Lucker
HIS ATTORNEY

Patented June 5, 1934

1,961,147

UNITED STATES PATENT OFFICE

1,961,147

MARBLE GAME

William W. Harris, Brockton, Mass.

Application August 5, 1931, Serial No. 555,204

6 Claims. (Cl. 273—119)

This invention relates to games.

More particularly, this invention relates to games wherein marbles, or other spherical objects, are propelled by mechanical force about the circumferential rim of a depressed disc having a downward incline toward a central opening of a diameter larger than each marble, or the like; the said disc also having a multiple of counting pockets disposed between its circumferential rim and its central opening and into which marbles may come to rest and be scored in accordance with the variably numbered value thereof.

A particular object of this invention is to provide in a game of this character means for an automatic magazine supply of marbles, limited to a predetermined number, beyond which the player cannot exceed until an interposing cut-off is manually manipulated.

Another object of the invention is to provide mechanical propelling means, the force of which may be varied by the player, for the purpose of controlling the speed of the propelled marble, or the like, and thereby its momentum will be effective at some approximately particular point on the circumferential rim of the disc and gravitate toward some particularly desirable counting pocket, or dislodge a trapped previously propelled marble, and for other scoring purposes.

These and other important features and objects of the invention will be more fully understood from the following detail description and the accompanying drawing in which

Fig. 1 is a top plan view of a preferred embodiment of the invention;

Fig. 2 is a vertical sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a horizontal sectional view taken on line 3—3 of Fig. 2, and

Fig. 4 is a detail side elevation, partly broken away, of the discharge opening of the marble number limiting means, illustrating a stage of operation subsequent to the stage illustrated in Figs. 2 and 3.

Referring to the drawing, the count-scoring disc is illustrated at 10, which as appears from Fig. 2 is depressed at or toward its central portion, and provided with an opening 11 at such central portion. Preferably, the disc 10 is provided with peripheral path 12, the bottom face of which is preferably also slightly inclined radially toward its center. Between the peripheral path 12 and its central opening 11 are disposed pockets 13, which may be perforations, having a diameter less than the diameter of a marble 14 or other spherical object. These pockets 13 bear count values, such as "5", "10", "15", etc., as appears in Fig. 1.

The central opening 11 has a diameter exceeding the diameter of each marble 14, to serve as a receiving opening for each marble, in the event that a marble traverses such opening 11.

Disposed below such opening 11, as illustrated in the drawing, is a return guide for the marbles which are received through the central opening 11; such guide may be conveniently formed as a U-shaped chamber 15, which for compactness of over-all dimensions may be spirally arranged within a hollow casing 16. The count-scoring disc 10 is conveniently mounted at the upper end of the casing 16, and provided with a peripheral rim 17, forming a boundary for its peripheral path 12. For simplicity of construction the peripheral rim 17 and the count-scoring disc 10 may be formed of material which may be integral with one another, and shaped to contour illustrated in the drawing, or other suitable contour. Similarly, the casing 16 and the guide 15 may be formed of like material.

The guide 15 serves as a return runway for the marbles received through the central opening 11.

Cooperating with such guide 15, I provide a limiting device, in the form of a trapping member 17, its body portion projecting within a lower portion of the guide 15 at a location corresponding to the predetermined number of marbles of a given diameter. The trapping member 17 may be operated in any suitable manner, as by manual operation, and arranged to be automatically returned to its trapping position after manual release, as by forming said trapping member 17 of wire which may be pivoted at the location 18, as by bending the wire to form a pivot eye at such location, such pivot eye 18 being mounted on pivot pin 19 suitably fixably secured, the free end 20 of the trapping member 17 extending exteriorly of the casing 16 to afford manual operation. The trapping member 17 is biased to its trapping position by the retractile spring 21 which connects the trapping member 17 with any suitable fixed part, or preferably cooperates with the marble projecting means as appears more fully hereinafter.

Preferably, the projecting means propels the marbles at variable speeds, for the purpose of introducing skill in the operation of the game. Preferably, such projecting device is constructed to propel one marble only at a time. As illustrated in the drawing, the projecting device comprises a cup-like member 22, adapted to receive

but one marble at a time, the cup-like member being mounted on the arm 23, which may be of wire; such arm 23 is suitably pivoted on a fixed pivot pin 24. The arm when made of wire may be turned upon itself to form a pivot eye 25; the opposite end 26 of the arm 23 may be connected to any suitable resilient means, but preferably to an end of the retractile spring 21, whereby the spring 21 coacts jointly with the manual release member 17 and the marble propelling member 22.

Cooperating with the marble propelling member 22, I provide a marble load controlling and stop means, as in the form of a hook element 27, pivoted at 28 and dished at its upper face to receive a single marble at a time, the single marble illustrated in Figs. 2 and 3 being designated 14*a*. The marble load controlling means 27 is disposed at the discharge end of the return runway 29 which connects at its inlet with the marble limiting chamber 15. Upon the return of the marble projecting member 22 to its lowermost and loading position, indicated in dot and outline in Fig. 2 and in full outline in Figs. 3 and 4, the rearward tongue 22*a* of the projecting member 22 encounters the nose 26*a* of the loaded member 27, thereby tipping the loading member 27, as shown, in counterclockwise direction as viewed in Fig. 2, against its biasing spring 27*b*, thereby enabling the marble, say marble 14*a*, to roll under gravity from the member 27 into the pocket of the marble projecting member 22.

It will be borne in mind that the movement of the loading control member 27 when tripped by the tongue 22*a* of the marble projecting member 22 elevates its rearward nose 27*c* to thereby retard the succeeding marble, designated 14*b* in Figs. 3 and 4, to arrest it along the runway 29 until the preceding marble 14*a* has been loaded within the marble projecting member 22, and after projecting operation of the marble projecting member 22 with its loaded marble 14*a*, the spring 27*b* returns the loading control member 27 to its normal position as shown in Fig. 2 to enable the succeeding marble 14*b* to enter its dished upper face, preparatory for loading into the projecting member 22.

Upon release of the marble projecting member, the marble 14*a* is propelled into and through the discharge chamber 30, see Figs. 1 and 2, the chamber 30 connecting at its discharging end with the peripheral path 12 of the count-scoring disc 10.

From the foregoing description and reference to the drawing it will be seen that the invention provides a game in which the automatic magazine supply of marbles is limited to any given number, say ten, which may constitute a single round of play of the game, and that no score keeping as to the number of shots is necessary. After each round of given number of shots the values of the disc pockets in which marbles have come to rest are added, the total sum constituting the individual score. The pocketed marbles are then dislodged and allowed to gravitate into the central disc opening. A releasive movement of the finger on the cut-off lever permits all the marbles to gravitate to the supply magazine and the game set preparatory for another individual round of shots.

It will be seen that when the marble propelling lever is fully depressed and then suddenly released the maximum propelling force is exerted and the propelled marble will travel the greater number of revolutions in its circumferential path on the disc before gravitating toward the center. By allowing the propelling lever to assume different degrees of partial relaxation before permitting its sudden and complete release, the speed and action of the propelled marble is controlled, thus introducing the element of skill into the game.

Whereas, I have described my invention in reference to a specific form thereof it will be understood that many changes and modifications may be made without departing from the spirit of the invention.

I claim:

1. In a marble propelling game, the combination of a scoring disc provided with a discharge opening, a marble supply magazine communicating with said discharge opening, a marble propelling member, said marble propelling member comprising means for singly receiving marbles and means in said supply magazine for limiting the number of accumulated marbles which may be propelled between the stages of manual manipulations of said limiting means, said marble supply magazine including manually operable means for releasing the marbles accumulated therein for reception therefrom by the marble propelling member.

2. In a marble propelling game, the combination of a depressed disc having a downward incline to a central opening therein and also having a plurality of pockets in which marbles may come to rest disposed between its circumferential limit and its central opening, a certain number of marbles, a downwardly inclined magazine of sufficient length to accommodate twice the said certain number of marbles, the uppermost end of said magazine being in communication with the central opening in said disc, manually operable means for limiting the gravitation of said marbles and so disposed as to be effective at a point intermediate the length of said magazine, and spring actuated means adapted when under tension to receive a marble at the lower end of said magazine and upon release thereof to propel said marble about the circumferential area of said disc.

3. In a marble game, marble propelling means, said marble propelling means including means for singly receiving marbles, a scoring element which is provided with a discharge for the marbles, a return runway communicating with said discharge, means for limiting the number of accumulated marbles in a portion of said return runway to a predetermined number and manually operable means for withdrawing the accumulated marbles for reception by said marble propelling means.

4. In a marble propelling game, the combination of a scoring disc provided with a central opening greater in diameter than the diameter of a marble, said scoring disc being depressed toward said central opening, said scoring disc being further provided with a count-scoring recess disposed between said central opening and the periphery of said disc, a delivery chute leading to the circumferential area of the scoring disc, a return runway in continuous communication with said central opening for receiving and accumulating marbles discharged through the central opening of said scoring disc, marble propelling means arranged for receiving and propelling marbles singly, and manually operable means for releasing the accumulated marbles from said return runway for reception by said marble propelling means.

5. In a marble propelling game, the combination of a scoring disc provided with a central opening greater in diameter than the diameter

of a marble, said scoring disc being depressed toward said central opening, said scoring disc being further provided with a count-scoring recess disposed between said central opening and the periphery of said disc, a delivery chute leading to the circumferential area of the scoring disc, an inclined return runway in communication with said central opening and comprising a lowermost end disposed toward one side of the game, marble propelling means comprising a manually controllable member disposed adjacent said one side of the game, said manually controllable member serving upon depression and release to effect the forceful movement of a marble upwardly from the lowermost end of said runway and through said chute onto the circumferential area of the said scoring disc.

6. In a marble propelling game, the combination of a scoring disc provided with a central opening greater in diameter than the diameter of a marble, said scoring disc being depressed toward said central opening, said scoring disc being further provided with a count-scoring recess disposed between said central opening and the periphery of said disc, a substantially horizontally extending delivery chute leading to the circumferential area of the scoring disc, an inclined return runway in communication with said central opening and comprising a lowermost end disposed toward one side of the game, marble propelling means comprising a manually controllable member disposed adjacent said one side of the game, said manually controllable member serving upon depression and release to effect the forceful movement of a marble upwardly from the lowermost end of said runway and through said chute onto the circumferential area of the said scoring disc.

WILLIAM W. HARRIS.