T. W. COOPER.

GAME APPARATUS.

APPLICATION FILED DEC. 19, 1916.

1,248,270. Patented Nov. 27, 1917.

Fig. 1.

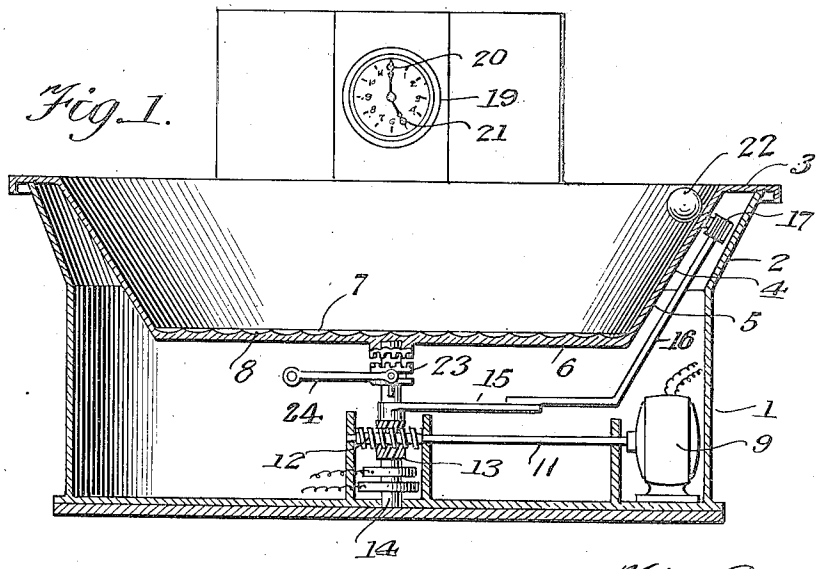


Fig. 2.

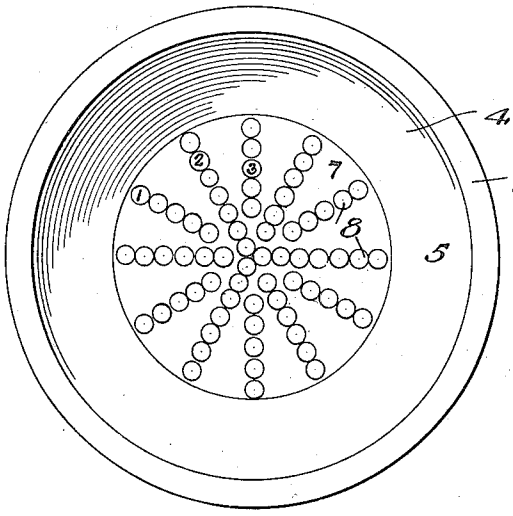
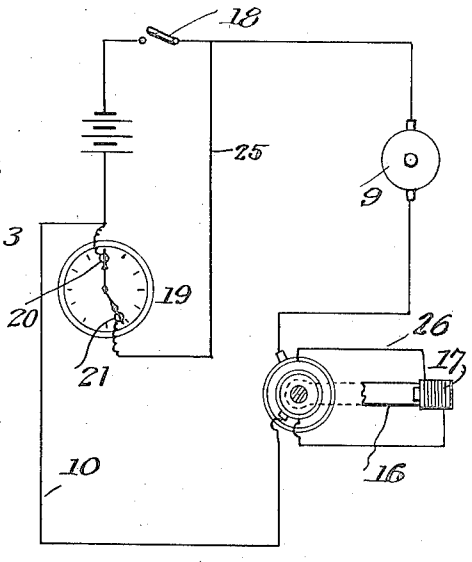


Fig. 3.



INVENTOR

T. W. Cooper

BY Victor J. Evans

ATTORNEY

UNITED STATES PATENT OFFICE.

THOMAS W. COOPER, OF NEW YORK, N. Y.

GAME APPARATUS.

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To all whom it may concern:

Be it known that I, THOMAS W. COOPER, a subject of the King of Great Britain, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Game Apparatus, of which the following is a specification.

This invention relates to game apparatus and has for its principal object the provision of a bowl-like support, having a playing surface provided with portions which are distinguished from each other, a playing piece or object which is movable in the proximity of said distinguished portions of the body, and electrically controlled mechanism for propelling said object and for permitting the same, at a set or predetermined time to be projected onto the playing surface where it will be accommodated in one of the mentioned distinguished portions thereof.

The device may be advantageously used for advertising purposes in store windows, public places and the like and in view thereof, I provide a support which is normally stationary but mounted so that it may be revolved, including in the structure a selective mechanism whereby said support can be rotated or held stationary at the pleasure of the operator, further providing an object which is adapted to be moved over and within the bowl-like support when the latter is held stationary or moved with the support when the latter is revolved, and finally associating an electrically controlled mechanism with said object so as to cause the same to describe certain mysterious movements, as explained below.

With the above and other objects in view which will appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement of parts which will hereinafter be fully described and particularly pointed out in the claims.

In the accompanying drawings, has been illustrated, a single and preferred form of the invention, it being, however, understood that no limitations are necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings:—

Figure 1 is a vertical section through the device.

Fig. 2 is a plan view thereof.

Fig. 3 is a diagrammatic illustration showing the electric circuits.

The structure includes a base having a cylindrical inclosure 1, which is provided with a flaring wall 2, on which the flange 3, of a cupped support or bowl 4, normally rests. This bowl is also provided with a relatively deep flaring rim or wall 5, which is joined at its base with a horizontal wall or bottom 6, provided with a playing surface 7, having pockets or depressions 8, therein. These pockets can be distinguished from each other in any suitable well known manner, such as by coloring the same differently or marking the same alphabetically or numerically. Certain pockets are numbered in Fig. 2 to illustrate the idea.

Located in the base 1, is a motor 9, which is arranged in a suitable electric circuit 10, the shaft 11, of said motor having a worm portion 12, which meshes with a driven worm-gear 13, on a vertical shaft 14, the latter having a crank arm 15, which carries an oblique branch 16, upon which a magnet 17, is mounted. This magnet is included in a circuit 26 connected with the motor circuit 10 as shown diagrammatically in Fig. 3 and is adapted to be energized simultaneously with an operation of the motor to revolve said shaft 14, for a purpose to be hereinafter explained.

Said main or motor circuit 10 also includes a suitable switch 18. The numeral 19 designates a circuit closer, preferably in the form of a time piece in which the dial is provided with insulated contacts 20 and 21, which are respectively adapted to make connection with the minute and hour hands of said time piece. These contacts 20 and 21, are arranged in a shunt circuit 25 bridged across the main circuit 10 as shown, and incident thereto it follows that when said hour and minute hands come into engagement with said contacts, the motor circuit is bridged and the motor automatically thrown out of operation and the magnet de-energized. Normally, the switch 18, is closed so that the circuit is complete through the motor 9, and said magnet 17. The provision of a secondary or shunt circuit in which the contacts 20 and 21, are arranged is merely one mechanical illustration of a suitable mechanism for automatically stopping the motor and deënergizing the magnet as will be understood.

Arranged to travel around with or within the bowl is a spherical body or ball 22, which is adapted to be attracted by said magnet 17, whereby as long as the driven shaft 14, is in operation, the said ball will be compelled to describe circulatory movements or courses about said rim, and will be sustained above the actual playing surface 7. Under the provision of the mentioned time controlled mechanism the circuit will be automatically interrupted or broken at a predetermined time so as to deënergize the magnet 17, to destroy its magnetic attraction for the ball, and permit the same to gravitate onto the horizontal playing surface 7, at which time it will accommodate itself in one of the many depressions or pockets 8.

The apparatus is adapted for use in store windows, public places or the like and may be used to an advantage for the purpose of attracting customers and inviting their attention to certain special sales of merchandise. For instance, the depressions 8, may be numbered to represent certain sub-divisions or departments of a department store, so that when the ball comes to rest in one of said depressions it will indicate that a special sale of merchandise is to be conducted in the department of that number, beginning at the time designated by the time piece when the circuit is bridged. This is only an illustration of one of many ways in which the device can be placed in practical effect for the purpose of attracting crowds and customers and for temporarily furnishing amusement through the mysterious propulsion of said object 22.

A suitable clutch mechanism 23, is employed for connecting the bowl with the power shaft 14 when desired, and this mechanism may be operated by means of a lever 24 actuated by hand or otherwise. It is obvious that when the bowl is so connected with the shaft it rotates in unison therewith, but its rotation may be checked at any time by manipulating the lever 24, or when the circuit is bridged or when the switch 18 is opened and the power therefor cut off, the bowl will rotate by momentum only, and soon come to rest. The release of the ball permits it to roll onto the bottom of the bowl, and with the latter rotating, the ball will dance over the pockets in its bottom and create considerable excitement in the spectators until it comes to rest in one of the pockets as suggested above. When the bowl is not rotating, the ball has the appearance of traveling around its rim without any impelling means, because of course the magnet is not visible. When the bowl is rotating, the ball is yet carried by the magnet but it has the appearance of traveling with the rim because of its centrifugal force.

What is claimed as new is:—

1. In a game apparatus, the combination with a body comprising a substantially flat bottom cupped on its upper face and a flaring rim, of a ball within said body, an electromagnet outside the rim, means for rotating it around said rim, a circuit in which the magnet is included, and means for breaking such circuit.

2. In a game apparatus, the combination with a base including a cylindrical inclosure flared at it upper edge, a bowl having a flaring rim spaced from said flaring edge and an outstanding flange overlying such edge, the bottom of the bowl being cupped, and a ball within the bowl; of a magnet disposed within the space between the flaring edge of the inclosure and the rim, means for energizing the magnet to attract said ball, an arm supporting the magnet from a point beneath the center of the bowl, and means for swinging the arm to cause the magnet to travel around the rim.

3. In a game apparatus, the combination with a base including a cylindrical inclosure flared at its upper edge, a bowl having a flaring rim spaced from said flaring edge and an outstanding flange overlying such edge, the bottom of the bowl being cupped, and a ball within the bowl; of an upright shaft within the inclosure beneath the center of the bowl, an arm projecting therefrom and having a branch rising outside said rim, an electromagnet carried by said branch and adapted to attract the ball, a circuit for energizing said magnet, means for breaking said circuit at a predetermined time, and means for rotating said shaft.

4. In a game apparatus, the combination with a base including a cylindrical inclosure flared at its upper edge, a bowl having a flaring rim spaced from said flaring edge and an outstanding flange overlying such edge, the bottom of the bowl being cupped, and a ball within the bowl; of an upright shaft within the inclosure beneath the center of the bowl, an arm projecting therefrom and having a branch rising outside said rim, an electromagnet carried by said branch and adapted to attract the ball, an electric motor whose shaft is connected with said upright shaft for driving the latter, a motor circuit including a source of energy, means for breaking this circuit at a predetermined time, and a magnet circuit connected with the motor circuit and broken when it is broken, for the purpose set forth.

5. In a game apparatus, the combination with a bowl-like support having its bottom cupped and its rim flaring, and a ball within said support; of an upright shaft beneath the center of said support, an electromagnet outside said rim, an arm from the shaft to the magnet for supporting the latter, a circuit through the magnet, means for break-

ing said circuit at a predetermined time, and means for rotating said shaft.

6. In a game apparatus, the combination with a bowl-like support having its bottom cupped and its rim flaring, and a ball within said support; of an upright shaft beneath the center of said support, an electromagnet outside the rim, an arm from the shaft to the magnet for supporting the latter, a circuit through the magnet, a bridge within said circuit around its source of energy, a time controlled circuit-closer within said bridge, and means for rotating said shaft.

7. In a game apparatus, the combination with a bowl having cups in its bottom and a flaring rim, a ball loose within said bowl, an upright shaft beneath the center of the bowl, an arm projecting therefrom and rising alongside said rim, and an electro-magnet carried by the arm and adapted to attract the ball; of an electric motor whose power shaft is connected with said upright shaft for rotating the latter, a motor circuit including a source of energy and a switch, a magnet circuit connected with and energized by the motor circuit when the latter is energized, a bridge circuit across the motor circuit and a time-controlled circuit closer within said bridge circuit, for the purpose set forth.

8. In a game apparatus, the combination with a bowl-like support having a flaring rim, a ball loose within said support, an upright shaft beneath the center of the support, and manually operable clutch elements on the shaft and support; of an arm projecting from said shaft and having a branch extending outside its rim, an electromagnet carried by said branch and adapted to attract the ball when the magnet is energized, a circuit including said magnet, means for breaking said circuit at a predetermined time, and means for rotating said shaft.

9. In a game apparatus, the combination with a bowl-like support having a flaring rim, a ball loose within said support, and manually operable clutch elements on the shaft and support; of an arm projecting from said shaft and having a branch extending outside the rim, an electro magnet carried by said branch and adapted to attract the ball when the magnet is energized, an electric motor whose power shaft is connected with said upright shaft, a motor circuit including a source of energy, a magnet circuit controlled by said motor-circuit, and means for breaking the motor circuit at a predetermined time.

10. An electric circuit, a member having a bottom and an oblique wall, an object movable thereover, a motor in the circuit, a magnet arranged in the circuit, means for moving said magnet relatively to the wall whereby to attract said object and cause the same to move over said wall during movements of the magnet, and means for de-energizing said magnet so as to release its magnetic attraction for said object and permit the latter to gravitate onto the bottom of said body.

11. An electric circuit, a member having a bottom and an oblique wall, an object movable over the wall, a motor in the circuit, a magnet arranged in the circuit, means for moving said magnet relatively to the wall whereby to attract said object and cause the same to move over said wall during movements of the magnet, and means for de-energizing said magnet so as to release its magnetic attraction for said object and permit the latter to gravitate onto the bottom of said body, the bottom having portions distinguished from each other and adapted to singly accommodate said object.

In testimony whereof I, affix my signature.

THOMAS W. COOPER.