My invention relates to game apparatus.

One of the objects of my invention is to provide a game apparatus of the type described which shall contain certain novel and improved constructional features making the game dependent upon the skill of the player or players and thus rendering the game highly interesting and amusing.

Another object of my invention is to provide a novel game apparatus of the class described which shall comprise relatively few and simple parts, which shall be easy to assemble, and yet sturdy in construction, and the operation of which shall be simple and readily understandable.

Other objects of my invention will hereinafter be pointed out or will become apparent as the description proceeds.

In the accompanying drawings,

Fig. 1 is a top plan view of a game apparatus constructed and arranged in accordance with my invention:

Fig. 2 is a cross-sectional view taken substantially along the line 2 — 2 of Fig. 1:

Fig. 3 is an enlarged cross-sectional view taken substantially along the line 3 — 3 of Fig. 1:

Fig. 4 is a cross-sectional view taken substantially along the line 4 — 4 of Fig. 3:

Fig. 5 is a view similar to Fig. 3, but illustrating a phase in the operation thereof:

Fig. 6 is an enlarged cross-sectional view taken substantially along the line 6 — 6 of Fig. 1:

Figs. 7 and 8 are cross-sectional views taken substantially along the lines 7 — 7 and 8 — 8 respectively of Fig. 6:

Fig. 9 is a view similar to Fig. 5, but illustrating a phase in the operation thereof:

Fig. 10 is a cross-sectional view taken substantially along the line 10 — 10 of Fig. 9:

Figs. 11 and 12 are schematic wiring diagrams showing the operation of my invention by electrical means.

Referring now in detail to the drawings and more particularly to Figs. 1 and 2 thereof, it is noted that the game apparatus constructed and arranged in accordance with my invention comprises a turntable 20 of any suitable size and material fixedly attached to a shaft 21 for rotation therewith. A motor M, connected to a suitable source of current supply (not shown) is provided to drive the shaft 21 to rotate the turntable 20. Suitable reduction gearing including the gears 22 and 23 may be provided between the motor shaft and the shaft 21. The construction just described may be of the type generally well known and employed in the phonograph or similar arts.

The above described turntable and driving apparatus may be suitably housed in a cabinet C comprising the bottom wall 24, upon which the motor M is fastened and the surrounding walls upstanding therefrom comprising front and rear walls 26 and 27 respectively and the side walls 25.

Spaced from the bottom wall 24, and parallel thereto and disposed at a predetermined distance above the turntable 20 is an intermediate wall 28, fixed to the walls 25, 26 and 27. The wall 28 is solid except for a through opening 29 of substantially the same diameter as and in register with the turntable 20. Slightly spaced from the rim of the turntable 20 and surrounding the same is a circular, upstanding wall 31 provided with a flange 31a adjacent the top thereof by means of which the said wall 31 is fixedly attached to the wall 28 in a suitable well-known manner.

It is noted that the wall 31 is also provided with a flange 31b, adjacent the bottom thereof which is disposed in a direction so as to freely underlie the bottom surface of said turntable 20.

In accordance with my invention I provide a plurality of balls B which are adapted to rest upon the turntable 20, so that when the turntable is caused to rotate the balls B, due to the action of centrifugal force, will move to the periphery of the turntable 20 and will normally be prevented from falling off therefrom by the surrounding wall 31. A glass window member 32, spaced from the wall 28 provides a protective closure for the cabinet C.

The wall 31, surrounding the turntable 20 is provided with a plurality of circumferentially spaced openings 40 therein (see Fig. 4), so disposed as to normally permit the balls B to freely pass therethrough and to thus leave the said turntable 20. At each opening 40, I provide a pocket member 45 designed to receive and hold a ball B as it passes through the said opening 40.

As noted in Figs. 3 to 5 of the drawings the pocket 45 comprises a box-like member having side walls 46a, a bottom wall 45c, a rear wall 45b and being open at the top and front. The bottom wall 45c is inclined downwardly toward the rear wall 45b so that when the ball B enters the pocket 45 it will normally roll until it strikes the rear wall 45b where it will rest, as shown in dotted lines in Figs. 3 and 4 and in full lines in Fig. 5.

To selectively trap a ball B, while the turntable is rotating, so that it will enter a pocket 45 so provided a catch member in the form of a hood 50, comprising the top wall 50c, and a depending arcurate wall 50b and having an open side 50c facing in a direction opposite to the direction of motion of the turntable 20. The hood 50 is pivotally supported on brackets 51 by means of the pivots 52, the said brackets 51 being fixedly attached to the wall 28 in any suitable well-known manner.

The hood 50 is preferably normally held in ineffective or raised position, as for example, that shown in Fig. 5, by means of a weight 53 fixed to an arm 54 of the said hood 50, extending on the opposite side of the pivot from the hood 50.
The hood 50, when in raised position, as shown in Fig. 5, will permit the balls B, on the turn-
table 20 to freely pass underneath so that they will not be trapped and forced to enter the pocket 45.

To render the game more interesting and more dependent upon the skill of the player or players I provide means whereby the hood under control of the player may be lowered to the effective ball catching position, as shown in Fig. 3, against the normal position of the weight 53.

The following mechanism represents one satisfactory means for selectively raising and lowering of the hood 50.

Mounted on the cabinet C, the wall 26 thereof is a manually manipulated rocking switch 60 shown in detail in Figs. 6 and 7 of the drawings. The said switch 60 comprises a box-like member having a bottom wall 60c, the side walls 60b, a back wall 60e, a front wall 60a, and a top wall or closure 60d. Disposed adjacent the front wall 60a and rear wall 60e are blocks 61 and 62 respectively; said blocks being provided with connecting terminals 65 and 66 adapted to be electrically connected to a suitable source of current supply (not shown). Freely disposed within the switch is a ball 68 of electrically conductive material and of such size as to ride upon and contactively engage both tracks 63 and 64 to complete an electrical circuit between the said tracks 63, 64 and the said source of supply. As noted in Figs. 6 and 7, the tracks 63 and 64 are preferably designed to incline upwardly from the blocks 61 and 62 toward the center, so that the ball will not be permitted to come to rest anywhere except on the insulated areas, comprising the blocks 61 and 62.

One end of the rocking switch 60 is provided with a bracket 69 which is pivotally mounted on a post 70, the said post may be fixed to the wall 26 or to any other desirable portion of the cabinet C. The opposite end of the rocking switch 60 is free and unattached and is adapted to rest upon a cam member 71 which in turn is fixed to a shaft 72 suitably journaled in the wall 26 of the cabinet C. The cam 71 is so designed that by rotating the shaft 72 either in a clockwise or counter-clockwise direction, the free end of the rocking switch 60 may be raised to the tilted position shown in Fig. 9, in which position the ball 68 will roll toward the rear wall 60a to come to rest on the insulated block 62. It is noted that during the time that the ball 68 was rolling on the track portions between the blocks 61 and 62 an electrical circuit was completed. The said completion of said circuit is caused to energize an electro-magnet 75 (see Figs. 3 and 5) forming a part of said circuit. This will in turn cause the armature 76 to move inwardly in the direction of the arrows Y. One end of the armature 76 is pivotally fixed to a rocker arm portion 77 of the hood 50 by the pivot shaft 78.

It is thus seen from the above described construction that when the ball 68 of the rocking switch rests upon the tracks 63 and 64 to complete the circuit, the electro-magnet 75 will cause the armature 76 to pivotally move the hood from its normal ineffective or raised position shown in Fig. 5, to the effective position lowered shown in Fig. 3, in which position a ball B, will be caught and made to enter a pocket 45.

To facilitate the operation of the hood 50, as above described, I provide the hand knob 80 fixed to the cam shaft 72 for rotating therewith. It is noted that the knob 80 is positioned on a portion of the shaft 72 which extends through and beyond the front wall 26 of the cabinet C.

From the above description it is noted that the player may rotate the cam 71 in either direction to raise the switch 60, by manual operation and that the circuit will be closed to raise the hood 50 for only a relatively short time when the ball 68 rolls on the metallic tracks 63 and 64. Therefore, since the hood 50 is maintained only momentarily in lowered position it depends on the skill of the player to effect the lowering of the hood at the proper moment to intercept a desired ball 68 and deflect it into the pocket 45.

As clearly shown in Figs. 6, 8 and 9 of the drawings, I prefer to provide a stop member 81 fixed to the wall 26, projecting inwardly of the cabinet C and disposed in the path of rotation of the cam 71 to limit the rotational movement of the said cam 71 in either direction.

While in Fig. 1 of the drawings I have shown manipulating cams 71 and knobs 60 located in the front wall 26 for use in operating two rocking switches located at spaced points around the turntable 20, it is understood that similar pocket operating mechanisms may be provided for the other two pockets 45 shown, and that any number of additional pockets may be provided for as many players as desired.

If desired a time switch 85 of any suitable well known standard construction may be provided in the circuit operating the turntable 20 so that when the said circuit is closed by any suitable switch device the turntable will continue to rotate for a predetermined period to constitute a game. In Figs. 11 and 11 I have shown a coin slot device 88 which is so constructed and arranged in the well known manner so that when a coin is inserted in the recess 89 and the coin slot pushed inwardly in the direction of the arrow 128, the cammed portion 88a of the coin slot device 88 will move the lever 85a to close the time switch 85. By means of a forked portion 88b of the coin slot device 88 the switch 85b may be closed to energize an electro-magnet 86 (see Figs. 3 to 5) to cause the movement of its armature 87 in the direction of the arrow 88. A rocker arm 89 pivotally mounted on a bracket 100, and pivotally connected to the armature 87 will cause the back end of the pocket 45 to be tilted upwardly from the position shown in Fig. 3 to the dotted line position shown in Fig. 5 to thus cause the ball 68 to roll back to the turntable 20 for the start of the game. In this manner the mere insertion of a coin in the slot device and the pushing of said coin slot device inwardly will place all the balls B back on the turntable 20 and at the same time start the said turntable rotating. The players may then take their positions at the knobs 80 and exercise their skill in attempting to trap certain selected balls B into their own pocket 45. Any suitable system of scoring may be employed.

If desired further competition may be introduced into the game by providing means whereby one or more pocket hoods may be operated so as to be automatically momentarily lowered by means of and during the rotation of the turntable 20. In Figs. 1 and 2 I have shown one way in which this can be accomplished. Attached to
the underside of the turntable 20 is a cammed lug 99. Suitably supported in the cabinet C is a switch mechanism 91 comprising a pair of contacts 92 and 93, normally open, and having lead wires 94 and 95 leading to a source of current supply (not shown). The contact 93 may have attached thereto as shown a spring member 121 normally disposed in the path of the lug 99.

It is thus noted that when the turntable rotates the lug 99 will depress the spring 121 to close the contacts 92 and 93 at each revolution which will complete a circuit through the electromagnet 15 to momentarily lower the hood 50 in the same manner as described in connection with the manually manipulated rocking switches.

In Fig. 11 I have illustrated the electrical circuit for controlling the operation of the motor and hood 50. These circuits are controlled by the time switch 86 which may be set to run for a desired period of time during which the player may play the game, and which may be activated by a suitable coin slot or other device. Current is supplied from a source (not shown) through the transformer T and thence through the time switch 86, to operate the devices as follows:

The motor M which operates the turntable 20 is energized by the circuit comprising the lead lines 121 and 122, from the transformer T to the motor, thence out from the motor by the lead lines 123, 124, 125 and 126 to the time switch 86, and back to the transformer by the lead line 128.

The electromagnets 15 which operate the hood 50 are energized by the momentary contact made by the movement of the balls 68 of the rocker switches 66, by completing circuits through the transformer T. The two switches 81, as previously described, are operated mechanically by the rotation of the turntable 20, to energize two corresponding electromagnets 15 irrespective of the operation of the rocker switches.

In Fig. 12 I have shown the circuits for energizing the electromagnets 66 which tilt the pockets 45 upwardly from said back end thereof to return the balls B to the turntable, for the next game. In this circuit the time switch 86, as previously described, is arranged so that upon actuation it will temporarily actuate the switch 86a to complete the circuits from the transformer T, through the switch 86a and through all the magnets 83 at the same time.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim and desire to secure by Letters Patent:

1. In a game apparatus of the class described, a turntable adapted to have a ball freely resting thereon, means for rotating said turntable, a wall surrounding said turntable to normally prevent said ball from leaving said turntable upon rotation thereof due to centrifugal force, an opening in said surrounding wall, a ball receiving pocket disposed of said surrounding wall and communicating with said opening, means normally ineffective for guiding said ball through said opening and into said pocket, and means for rendering said last named guiding means effective.

2. In a game apparatus of the class described, a turntable adapted to have a ball freely resting thereon, means for rotating said turntable, a wall surrounding said turntable to normally prevent said ball from leaving said turntable upon rotation thereof due to centrifugal force, an opening in said surrounding wall, a ball receiving pocket communicating with said opening means, normally ineffective for guiding said ball through said opening and into said pocket, and means for rendering said last named guiding means effective for only a predetermined period of time.

3. In a game apparatus of the class described, a turntable adapted to have a ball freely resting thereon, means for rotating said turntable, a wall surrounding said turntable to normally prevent said ball from leaving said turntable upon rotation thereof due to centrifugal force, an opening in said surrounding wall, a ball receiving pocket communicating with said opening means, normally ineffective for guiding said ball through said opening and into said pocket, and means for automatically rendering said last named guiding means effective.

4. In a game apparatus of the class described, a turntable adapted to have a plurality of balls freely resting thereon, means for rotating said turntable, a wall surrounding said turntable to normally prevent said balls from leaving said turntable due to centrifugal force upon rotation thereof, openings in said surrounding wall, ball receiving pockets communicating with said openings, means for trapping said balls so that they will be guided through said openings and into said pockets, said last named trapping means being normally ineffective position and means for causing said trapping means to move to effective position.

5. In a game apparatus of the class described, a turntable adapted to have a plurality of balls freely resting thereon, means for rotating said turntable, a wall surrounding said turntable to normally prevent said balls from leaving said turntable due to centrifugal force upon rotation thereof, openings in said surrounding wall, ball receiving pockets disposed outside of said surrounding wall and communicating with said openings, means for trapping said balls so that they will be guided through said openings and into said pockets, said last named trapping means being normally ineffective position and means for causing said trapping means to move to effective position and to remain in such position for only a predetermined period of time.

6. A game apparatus according to claim 4 in which means are provided for returning the balls from said pockets to said turntable.

CHARLES E. ANDERSON.

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

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