Oct. 2, 1945. J. FOSTOS 2,385,980

AMUSEMENT DEVICE

Filed Feb. 6, 1943

Fig. 1

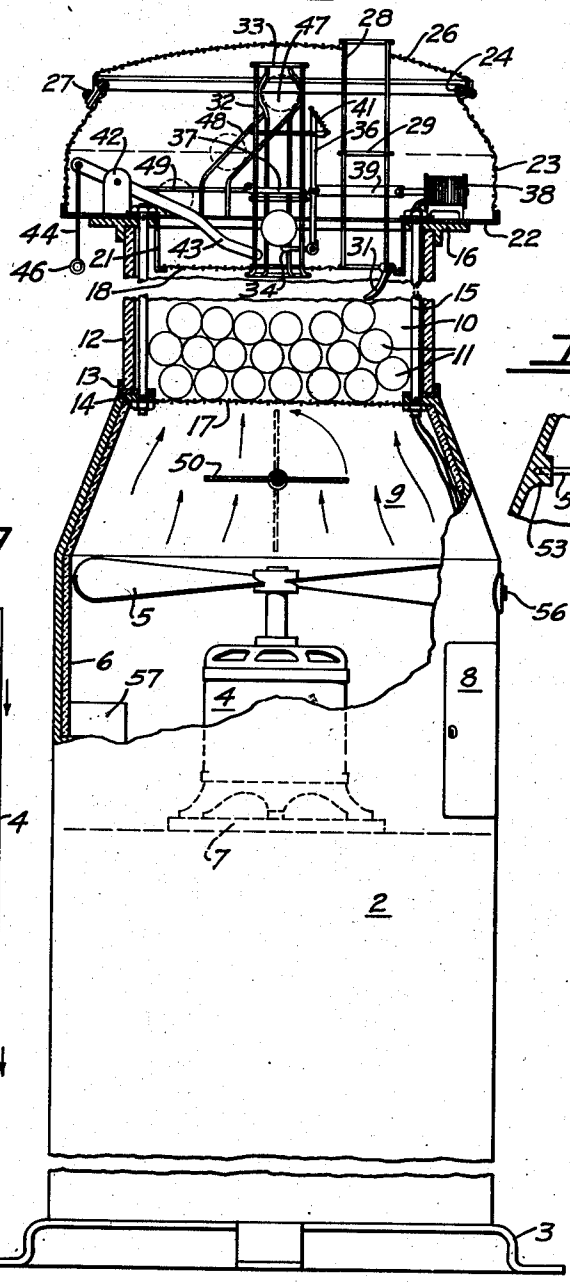


Fig. 2

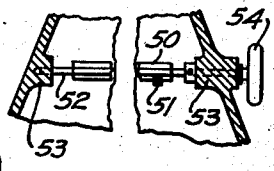
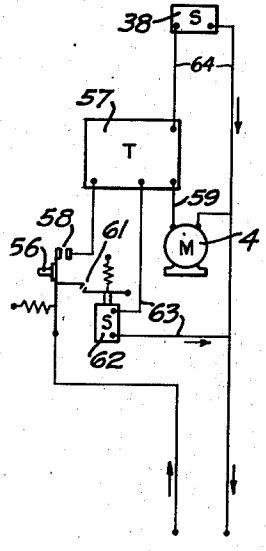


Fig. 3



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AMUSEMENT DEVICE

John Fostos, Burlingame, Calif.

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2 Claims. (Cl. 273—144)

My invention relates to an amusement device or game; and one of the objects of the invention is the provision of an apparatus in which light balls having arbitrarily assigned values may be tossed in a current of air, and perhaps one of them caught in a trap in which it is removed from the swirl of other balls. Time limits are set for the play and effect is given to the values of the trapped balls by means of totals scored by each player, or by prizes assigned to balls of given color, or otherwise to lend zest and interest to the contest which blends skill in handling the air with the laws of chance.

Means are provided for removing a trapped ball from the trap, and for introducing additional balls to the swirl chamber. Means are also provided for producing an ascending current of air below the balls so as to toss them about; and means accessible to the player are also provided for the control of the air current. Time controlled means initiated by a starting button for the motor-driven fan fixes the period during which a score in one period of play may be made, and conditions the machine for another period or cycle.

My invention has other objects besides those specifically above mentioned, and these will be set forth in the following detailed description of my invention. It is to be understood that I do not limit myself to the showing made by this description and the illustrative drawing, as I may adopt variant forms of my invention within the scope of the appended claims.

In the drawing, Figure 1 is an elevation, partly in vertical axial section, of an apparatus embodying my invention. Portions of the figure are omitted to reduce its length. Figure 2 is a fragmentary view in vertical section through the air control baffle and its control knob. Figure 3 is a diagram of the electrical connections.

The present embodiment of my invention comprises a preferably cylindrical hollow housing or body 2 mounted on a supporting base including legs 3. Mounted in the center of the body is a vertical shaft motor 4 for driving the fan blades 5; and a lining 6 of sound proofing material is preferably secured to the inside of the housing to deaden vibration and lessen noise which the fan and motor might otherwise cause. To absorb vibration the motor is set on a rubber block 7; and a hand hole normally closed by a flush cover plate 8 provides access to the interior of the housing for servicing the motor and operating parts adjacent thereto. The rotating fan supplies the upward current of air which passes through the control chamber 9 formed by the conical extension of the housing 2, and into the swirl chamber 10, in which a quantity of light balls 11 lie.

The swirl chamber is enclosed by a cylindrical wall 12 of glass or transparent plastic which seats on a flanged ring 13 resting on the inwardly extending flanged upper rim 14 of the housing. It is held securely in place by tie rods 15 piercing the two flanges and connecting them to a flanged crown ring 16, disposed on the top of the glass wall. The swirl chamber is provided with a screen floor or bottom wall 17, extending between the flange 14, and held by the nuts on the lower ends of the tie rods. A screen top wall or ceiling 18 extends across the chamber a short distance below the crown ring, and is supported therefrom by brackets 21 conveniently caught under the nuts at the upper ends of the tie rods.

Above the glass wall of the swirl chamber is disposed the collection chamber into which balls are thrown by the air blast. It is preferred to have the balls in this chamber clearly visible and for that reason, the walls are made of screen or transparent plastic or glass. Resting on the crown ring and conveniently secured thereto by the nuts on the top of the tie rods is the annular plate 22 flanged on the periphery for fastening to the screen side wall 23, which terminates at its upper edge in the stiffening ring 24, to which the screen cover 26 is hinged. Preferably a lock hasp 27 is provided for a padlock to prevent unauthorized opening of the collection chamber.

Means are provided for readily introducing balls into the swirl chamber. Fastened in suitably placed apertures in the cover screen 26 and the swirl chamber top wall 18, which is also the bottom wall or floor of the collection chamber, are a plurality of thin rods 28 held by spaced rings 29, and together forming a chute from the outside to the top of the swirl chamber. Loosely pivoted on the bottom ring 29 of the chute is a light, curved finger stop 31. This stop offers no resistance to a ball dropping through the chute, but in the upward blast of air during operation of the machine, the stop swings over against the bottom ring to block upward entry into the lower end of the chute.

Trap means are also provided for catching and holding a single ball at a time, and for removing the ball from the trap to a storage space at the volition of the player, and also for dropping the ball back into the swirl chamber. Centrally arranged in the collection chamber, and in an aperture in the screen floor thereof, is a trap formed of thin rods 32, secured by spaced rings 33. The

open bottom of the trap permits a blast-borne ball to enter, pushing past the latch 34 pivotally mounted on the pivoted lever 36, which normally lies in such position as to hold the latch across the opening into the trap. A stop lever 37 loosely pivoted to the side of the trap a short distance above the latch and normally resting on one of the rings 33, limits the height to which the ball may be blown when it enters the trap. A ball caught in the trap between the latch and stop lever remains there until the player removes it, if it has value and will count toward a score or prize; or if it is without value, it is automatically released at the end of the cycle of play by withdrawal of the retaining latch. This is accomplished by a solenoid 38, the core of which is connected by link 39 with the lever 36. At the close of the play period, means operated by the timing mechanism momentarily closes the solenoid circuit to retract the latch and release any ball in the trap. A spring 41 then effects the recovery movement of the parts. It will be convenient to make the tie rods 15 of pipe, and run the wires to the solenoid through one of them as shown in the drawing.

Means are also provided to be operated by the player for lifting the ball in the trap out of it and into a storage space adjacent the wall of the collection chamber, from which it may be reached through the top when the cover is raised. Pivoted to lugs 42, fixed on the annular plate 22, is a lever 43, extending downwardly at an angle into the bottom portion of the trap. The opposite end is provided with a chain or link 44 hanging down through the overhanging rim of the plate and terminating in a pull ring 46, by which the player may work the lever. The positions and proportions of the several parts are such that when the lever is down in its normal position, the opening into the trap is unobstructed but when the pull ring 46 is pulled down, the inner end of the lever catches under the ball in the trap and raises it to the opening 47 into the sloping runway formed by the rods 48. Entering the runway, the ball rolls down into a storage space formed between the outer wall and a low fence 49, and extending for a short distance around the rim of the collection chamber.

The game is played with a quantity of balls being tossed about in a blast of air passing up through the control, swirl and collection chambers and out through the screen cover. Means are arranged in the control chamber by which the player may exercise some degree of control over the character and direction of the air currents, so that practised handling may contribute the element of skill to the trapping of balls of desired values. A baffle plate 50 is fixed by a set screw 51 on a shaft 52, which is journaled horizontally in bearings 53 set in the wall of the control chamber just above the fan blades. Preferably the baffle plate is elliptical in shape, being somewhat longer along the line of its pivoted shaft than it is wide, but it may be circular. It should be evenly balanced and the shaft tight enough in the bearings to retain whatever position it is turned to, while at the same time being easily turned by a control knob 54 on the outside of the housing. By turning the knob 54, the plate is tipped to spill the air to one side or the other in varying degree, so that currents of different directions and velocities enter the swirl chamber, and the flow of the balls toward and around the trap opening may be influenced to the end that the chance of trapping a desired ball is measurably enhanced.

Each period of play begins when the electric motor is started by pushing in the button 56; and continues for a predetermined period until the current to the motor is interrupted by the operation of a time controlled mechanism 57, the details of which need not be described since various structures of this character are well known and form no part of my present invention. Referring to Figure 3, it is sufficient to say that the pressing of the button 56 closes a switch 58 in the circuit to and starts the operation of the timing mechanism 57 which thereupon closes the circuit 59 to the motor for a predetermined interval and then opens it. The switch 58 is held closed by a spring latch 61 connected to be released by a solenoid 62, controlled by circuit 63. After the speed of the fan has died down so that the balls in the swirl chamber are at rest, the circuit 64 to the solenoid 38 is closed and immediately opened to release any ball remaining in the trap. Finally, the timing mechanism circuit is again conditioned for operation by energizing the circuit 63 controlling the latch 61 to open the main switch 58 and release the starting button, so that when the button is again pressed in, a new cycle of operations will begin.

I claim:

1. An amusement device comprising a swirl chamber adapted to hold a quantity of balls, means for causing a blast of air through the chamber to toss the balls about, and a pivotally mounted baffle plate for modifying the air currents entering the swirl chamber.

2. An amusement device comprising a swirl chamber adapted to hold a quantity of balls, means for causing a blast of air through the chamber to toss the balls about, a pivotally mounted baffle plate for modifying the air currents entering the swirl chamber, a trap into which one of the air-borne balls may be directed, and manually operated means for moving the baffle plate to influence the movement of the balls.

JOHN FOSTOS.