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BOWLING ALLEY AMUSEMENT APPARATUS

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6 Claims. (Cl. 273-44)

My invention relates to games and particularly to portable game apparatus of the type which is usually equipped with coin controlled means for setting the apparatus into playing order.

5 More particularly the invention has for an object to provide a bowling alley game apparatus of the above mentioned type which is of a simple construction, inexpensive to manufacture and will readily and effectively serve its intended purposes.

10 Further, it is an object to provide a game apparatus in which the pins when hit will be dropped down or be pulled down until their heads are flush with the playing floor or play-way to close the holes through which the pins fall and provide an unbroken play-way for the next ball.

15 Further, it is an object to provide a game apparatus of the character stated in which the pins may be reset to playing position by a simple device operable from the front of the table.

20 Again, it is an object to provide a bowling game apparatus in which the balls are impelled by a trigger action and may be directed over the play-way by means under control of the operator.

25 Other objects will in part be obvious and in part generally pointed out hereinafter.

To the attainment of the aforesaid objects and ends, the invention still further resides in those novel details of construction, combination and arrangement of parts, all of which will be first fully described in the following detailed description, then be pointed out in the appended claims, reference being had to the accompanying drawing, in which:

35 Figure 1 is a top plan view of the illustrated embodiment of the invention.

Figure 2 is a central vertical longitudinal section on the line 2-2 of Figure 1.

40 Figure 3 is a cross section on the line 3-3 of Figure 1.

Figure 4 is a detail section on the line 4-4 of Figure 1.

In the drawing, in which like numerals of reference indicate like parts in all of the figures, 45 1 represents the table or box which may be supported on legs 2 and in which is contained the play-way or floor 3. Surrounding the play-way or floor and extending from the front of the box, is a ball projecting lane comprising the first section 4 that extends from the front of the box toward the back, the first reversing bend 5, the return way or second section 6 of the ball projecting lane and the second reversing bend 7, 55 which is provided with a springy section 8 that

may be controlled by the operator to direct the balls as desired.

The controlling may be effected by means of a bell crank direction lever 9 pivotally mounted at 10 and having a heel 11 which is engaged by the control rod 12. The rod 12 may be provided with a back stop 13 and an operator knob 14. The end of the lever 9 engages the spring section 8 of the wall of the ball projecting lane. As the lever is rocked on its pivot the end of the member 8 will be moved in one direction or the other as desired. The lever 9 is provided with a guard 43 to prevent return balls getting past the lever.

Between the ball projecting lane and the play-way 3 is a ditch 15 at the sides and remote or 15 back end of the apparatus. At the front end of the apparatus the ditch is provided with laterals 16 that communicate with a spent ball trap 18. The lateral 16 at the right of the apparatus communicates with the trap 18 through a suitable tunnel 17. The trap 18 is provided with a suitable trap-door 19 that may be released by a coin mechanism (not shown) of any approved construction and suitable means (not shown) may be provided for conveying the released balls to the 25 trigger mechanism into position to be played. As the coin mechanism and the ball placing mechanism are well known and are no part of the present invention, a further description thereof is thought to be unnecessary.

20 20 indicates the trigger device which also may be of any of the usual constructions used in apparatus of this general character, and 21 indicates the coin slide of the coin mechanism.

The play-way or floor 3 at the far or back end 35 of the board is provided with a set of pin holes 22 arranged in the usual bowling pin setting order. Beneath the floor 3 adjacent the holes 22 are suitable supports 23 carrying a pin stop plate 26 having holes 27 through which the guide rods 40 of the pins pass.

A pin resetting plate 28 is operated from the front of the apparatus as, for example, by means of a lever 29 pivoted at 31 to one of the standards 23. The plate 28 has ears 30 carrying a roller-pin 25 that passes through a hole in the lever 29 and forms a pivotal connection between the plate and lever. The plate 28 rests on the lever 29 and on a foot 44 when not in use. The lever 29 may be operated by a pull rod 32 connected to 50 it at 33.

Each pin comprises a pin proper 34 having a head 35 of a diameter to fit the holes 22 with a sliding fit. In addition to the pin proper 34 there is a neck 36 which connects the pin proper 55

with the pin base 33 and which provides a shoulder 37 by means of which the pin is held in its playing position over the edge of the hole 22, as indicated.

A spring 39 connects the base 38 with the plate 26 so that when the pin is struck by a ball and is disengaged from the edge of the plate it will drop or be pulled down through the hole 22 until its head 35 rests with its upper surface flush with the play-way or floor 3. In order to reset the pins it is only necessary to pull the rod 32 when the lifter 28 will move the pins upwardly again, the springs 39 serving to ensure that the pins will again hook over the edges of the floor at the holes 22.

In order to play the game the pins are set into playing position and a ball 41 is brought into register with the trigger mechanism 20. The trigger mechanism is then operated to propel the ball along the ball projecting lane 4-5-6-7-8.

The operator manipulates the knob 14 so as to direct the ball when it leaves the member 8 over the play-way toward the desired pin or pins. As the pins are struck they will drop down as above described.

The machine may be left as an open game or if desired it may be provided with a transparent top 42.

From the foregoing description taken in connection with the accompanying drawing, it is thought the construction, operation and advantages of the invention will be clear to those skilled in the art, and I wish it understood that slight changes in the details of construction, combination and arrangement of parts may be made without departing from the spirit of the invention or the scope of the appended claims.

What I claim is:

1. In a bowling game, a game apparatus having a floor with a play-way that is provided with a set of pin holes, a set of pins having heads to fill said holes and lie with their tops flush with the play-way when the pins are dropped into the holes, means mounted below the pins to limit the drop of the pins to a position where their tops will lie flush with the play-way, said pins including a pin proper, a base and a neck connecting the base with the pin proper to provide a shoulder by which the pin may rest on the play-floor to hold the pin in playing position, each pin including means cooperating with the drop limiting means to guide the pins in dropping, and means cooperative with the pins for lifting the dropped pins for resetting said pins.

2. A bowling game apparatus comprising in combination a floor with a play-way and a set of pin holes, a set of pins projectible through said pin holes, said pins being designed to drop through said pin holes when struck by a projectile, means to limit the drop of the pins to a position whereby they will act as closures for the pin holes, said pins each including a pin proper, a base and a neck connecting the base and pin proper to provide a shoulder for the purposes described, and means to guide the pins in dropping.

3. A bowling game apparatus comprising in combination a floor with a play-way and a set of pin holes, a set of pins projectible through said pin holes, said pins being designed to drop through said pin holes when struck by a pro-

jectile, means to limit the drop of the pins to a position whereby they will act as closures for the pin holes, said pins each including a pin proper, a base and a neck connecting the base and pin proper to provide a shoulder for the purposes described, means to guide the pins in dropping, and means for resetting said pins.

4. A bowling game apparatus comprising in combination a floor having a playing end and including a play-way surrounded by a ditch for receiving and returning spent balls to the playing end of the apparatus, said apparatus including a ball projecting lane surrounding said ditch, means to project a ball along said lane, said lane having an exit end, operator controlled means for directing the playing ball over the play-way, said play-way being provided with a set of pin holes, pins held in said holes in playing position and means to effect a drop of said pins into said holes when the pins are struck, means to arrest the dropping of the pins to a position where their tops will lie flush with the play-way and close said holes and means to reset said pins.

5. A bowling game apparatus comprising in combination a floor having a playing end and including a play-way surrounded by a ditch for receiving and returning spent balls to the playing end of the apparatus, said apparatus including a ball projecting lane surrounding said ditch, means to project a ball along said lane, said lane having an exit end, operator controlled means for directing the playing ball over the play-way, said play-way being provided with a set of pin holes, pins held in said holes in playing position and means to effect a drop of said pins into said holes when the pins are struck, means to arrest the dropping of the pins to a position where their tops will lie flush with the play-way and close said holes, means to reset said pins, said pins including shoulders to hook over the edge of the board at the pin holes, and said pin dropping means including springs which serve also to assist in holding the pins in the playing position until they are struck.

6. A bowling game apparatus comprising in combination a floor having a playing end and including a play-way surrounded by a ditch for receiving and returning spent balls to the playing end of the apparatus, said apparatus including a ball projecting lane surrounding said ditch, means to project a ball along said lane, said lane having an exit end, operator controlled means for directing the playing ball over the play-way, said play-way being provided with a set of pin holes, pins held in said holes in playing position and means to effect a drop of said pins into said holes when the pins are struck, means to arrest the dropping of the pins to a position where their tops will lie flush with the play-way and close said holes, means to reset said pins, said pins including shoulders to hook over the edge of the board at the pin holes, said pin dropping means including springs which serve also to assist in holding the pins in the playing position until they are struck, said pins having guide rods and said resetting means including a lift device for engaging said rods for the purposes described.

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