No. 853,278. PATENTED MAY 14, 1907.

W. E. VINING.

GAME APPARATUS.

APPLICATION FILED MAY 16, 1906.

4 SHEETS—SHEET 1.

FIG. 1.

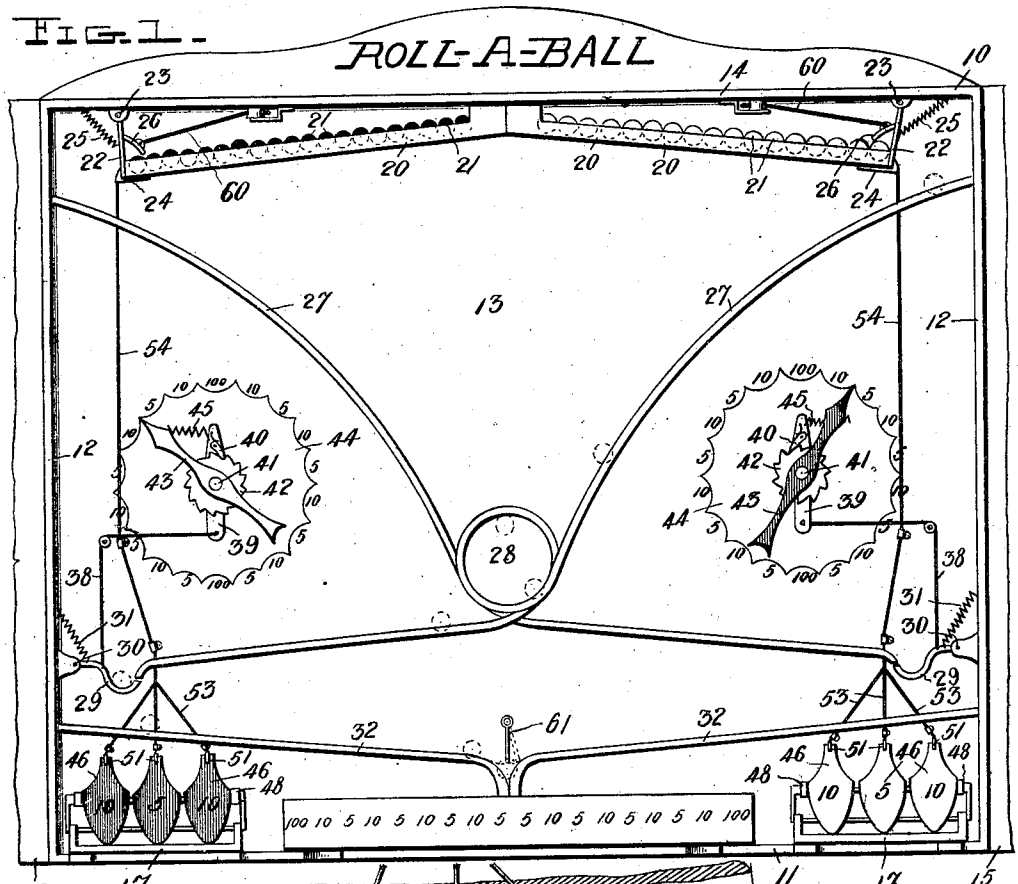
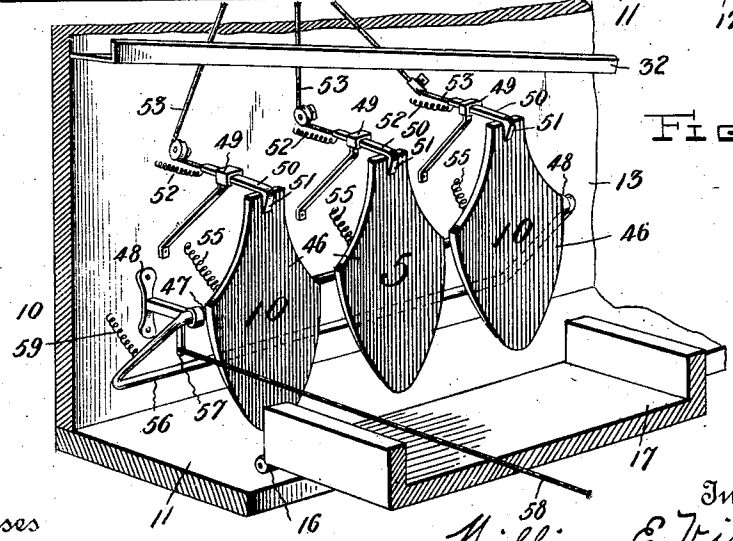


FIG. 5.



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4 SHEETS—SHEET 2.

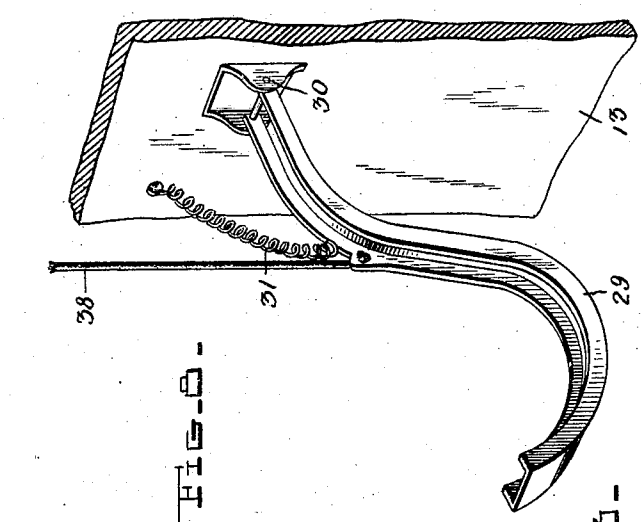


FIG. 3.

FIG. 1.

FIG. 2.

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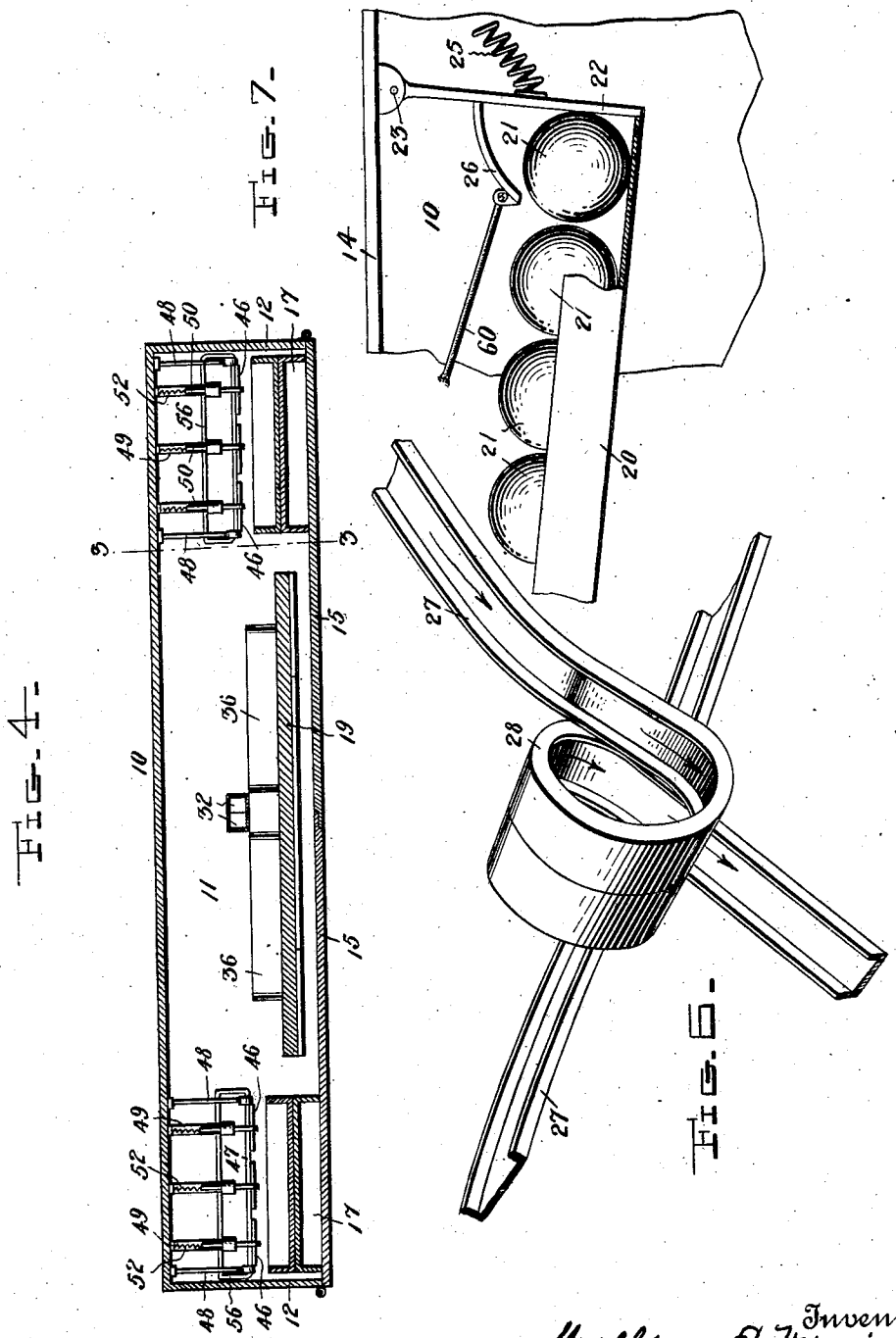
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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

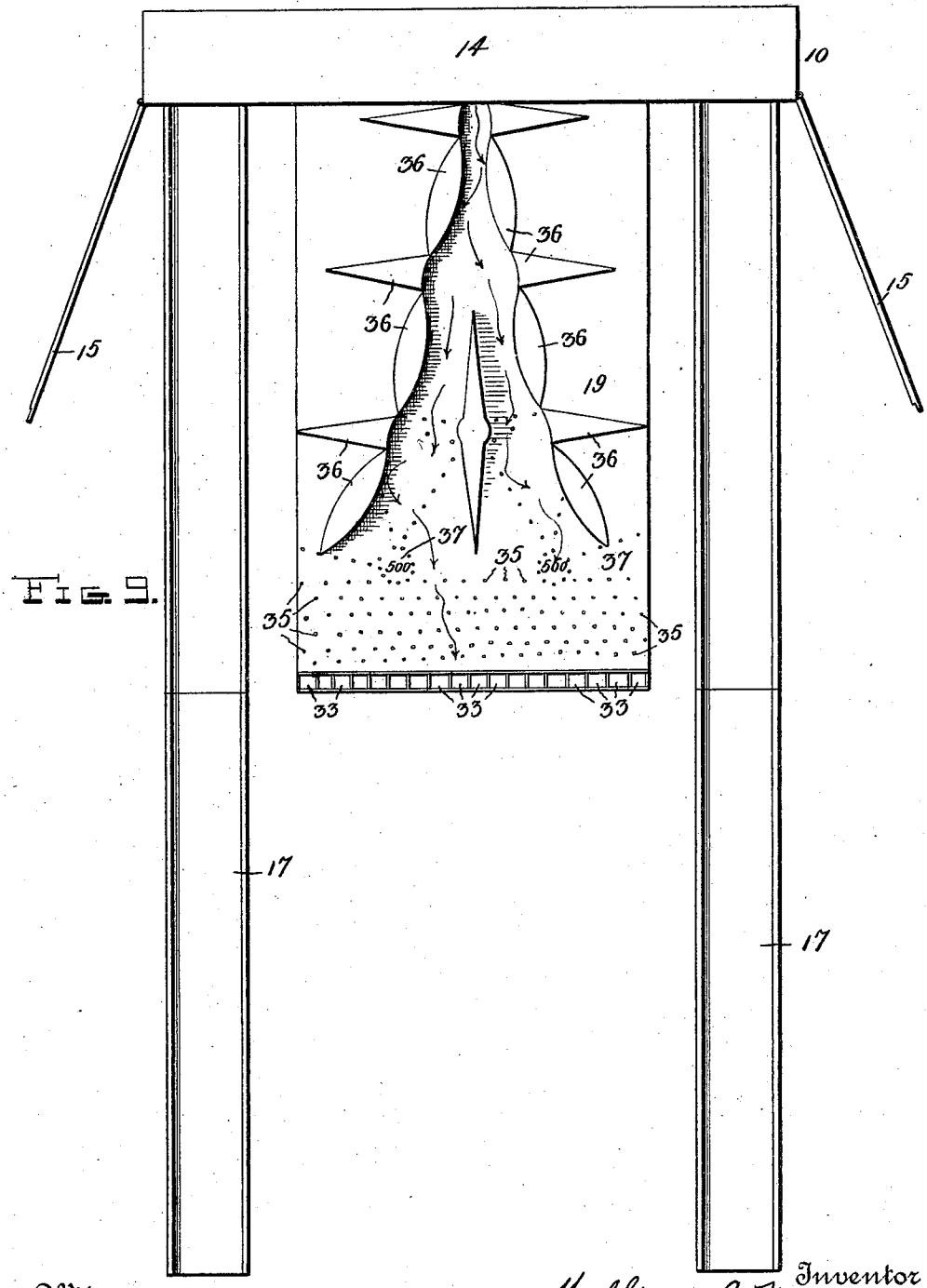


Fig. 9.

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GAME APPARATUS.

No. 853,278. Specification of Letters Patent. Patented May 14, 1907.

Application filed May 16, 1906. Serial No. 317,128.

To all whom it may concern:

Be it known that I, WILLIAM E. VINING, a citizen of the United States, residing at West Haven, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Game Apparatus, of which the following is a specification.

This invention is a game, and has for its object to provide an apparatus embodying certain novel features of construction to be hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a front elevation of the apparatus; Fig. 2 is a central vertical section; Fig. 3 is a vertical section on the line 3—3 of Fig. 4 showing the apparatus folded; Fig. 4 is a horizontal section on the line 4—4 of Fig. 3; Figs. 5, 6, 7 and 8 are details; Fig. 9 is a plan view of the apparatus drawn to a reduced scale.

Referring specifically to the drawings, 10 denotes a housing comprising a floor 11, end-walls 12, a back 13, and a top 14. The front of the housing is open and has a pair of doors 15.

To the floor 11 is hinged as at 16 a pair of alleys 17, which extend outwardly in front of the housing. The alleys are made in two sections, which are hinged together as at 18 so that they can be folded and placed within the housing. Hinged to the floor 11, between the alleys, and extending in front of the housing, is a board 19 which can also be folded over into the housing. This board contains certain devices which will be hereinafter described.

Secured to the back-wall 13 of the housing, at the top thereof, are inclined trays 20, which contain a number of balls 21. The latter are held on the trays by swinging gates 22 extending against the ends of the trays. The gates are hinged at 23 to the top of the housing, and are held closed by spring catches 24 engaging the lower edges of the gates. When the catches are released, the gates are swung open by springs 25 secured to the back of the gates and to the housing. At the front of the gates are downwardly projecting fingers 26 so arranged as to extend behind the ball which is released when the gates are swung open, and in front of the next ball to hold it and prevent it from rolling off the tray, the object being to release only one ball at a time.

Under the end of each tray 20 is an inclined track or runway 27 having near its lower end a loop 28. From the latter the track extends to a tilting cup 29 pivoted at 30 to the end-wall of the housing. A spring 31 returns the cup to its normal position after it is tilted. The tracks 27 extend in opposite directions from one side of the housing to the other. Under the cups 29 are inclined tracks or runways 32 onto which the balls drop from the cups when they tilt. These tracks extend over and carry the balls to the board 19.

The end of the board 19 is provided with a series of pockets 33 having openings 34 to admit the balls. Each pocket is numbered on the outside to denote its value. On the board 19, in front of the pockets, are a series of irregularly arranged deflecting pins 35 and projections 36, which serve to deflect the balls and divert them into irregular and indeterminable courses. The board also has two pockets 37 formed by a series of pins arranged in circles with an opening thereto. These pockets are also numbered to denote their value.

Each of the tilting cups 29 is connected by a line 38 to a lever 39, which carries a pawl 40, said lever being loosely mounted on the pin 41 extending from the back-wall 13 of the housing. The pawl engages a ratchet-wheel 42 loosely mounted on the pin 41, and the ratchet-wheel carries a pointer 43, which indicates on a numbered dial 44. When the cup 29 is tilted, the lever 39 swings, and through the pawl 40 causes the pointer 43 to spin around and indicate on one of the numbers on the dial when it comes to a stop. A spring 45 secured to the lever returns it to its normal position when the ball drops out of the cup and the latter is pulled up by its spring 31.

At the end of each alley are a set of paddles 46 which are hinged to a rod 47 carried by brackets 48 extending from the back-wall 13 of the housing. Behind each paddle a bracket 49 extends from the back-wall, which bracket has an opening forming a bearing or support for a slide 50 having at its front end a hook 51 engaging over the top edge of the paddle. The rear end of the slide is connected to a spring 52, fastened to the back-wall, said spring serving to hold the slide retracted. The rear end of each slide is also connected by a line 53 to a main line 54, which is made fast to the catch 24. These lines extend over suitable guide-pulleys as shown.

The lower ends of the paddles are intended to be struck by a ball rolling down the alley,

and when so struck they are tilted, which causes the slide to be pulled forwardly to actuate the line 54 and release the catch 24. A spring 55 secured to the lower end of each paddle and fastened to the back-wall 13 holds the paddle down when tilted. To reset the paddles I employ a bail 56 which extends behind the paddles, being mounted in the brackets 48. One end of the bail has an angular extension 57 to which is fastened a line 58. The bail is normally held in elevated position by a spring 59 so as not to interfere with the tilting of the paddles. To reset the paddles, the line 58 is pulled which swings the bail downwardly and replaces the paddle in an upright position. When the line is released the spring 59 swings the bail rearwardly out of the way of the paddles. The slides 50 are made of flexible metal, so that when the paddles are reset their top edges will snap under the hooks 51. The paddles are numbered to denote their value.

In the operation of the apparatus, a ball is rolled down one of the alleys, and upon striking one of the paddles it tilts the same and actuates the slide 50 which releases the catch 24 as already described. The gate 22 then swings open and a ball drops down on the track 27, loops the loop 28, and drops into the cup 29. The latter then tilts and actuates the pointer 43 as already described, and deposits the ball on the track 32. The ball then rolls down to the board 19 and over the same, and finally into one of the pockets thereon, its path over the board being irregular by reason of the deflecting pins 35 and projections 36 already described. Both alleys can be played at the same time as the parts herein described are in duplicate, and differently colored. A line 60 is attached to the finger 26, whereby the gate is closed after a ball has left the tray 20. At the junction of the tracks 32 is a swinging gate 61 to prevent two balls from coming together. When a ball strikes the gate on one side, it is thrown over against the track on the other side, so that but one ball can pass at one time.

When the apparatus is not in use, the alleys 17 and the board 19 will be folded over into the housing, and the doors 15 are closed and secured by a suitable locking-device. When folded in this manner the apparatus takes up little space and, therefore, can be conveniently shipped or stored.

I claim:—

1. A game apparatus comprising a tray containing a series of balls, means for successively discharging said balls from the tray, an inclined track to receive the balls, a dial and an indicator therefor, and means actuated by the balls for operating the indicator.

2. A game apparatus comprising a tray containing a series of balls, an inclined track, means for successively discharging said balls from the tray onto the track, an indicator and a dial therefor, and a tilting cup at the end of the track to receive the balls, and operatively connected to the indicator to actuate the same.

3. A game apparatus comprising an alley, a tray containing a series of balls and having a gate, means actuated by a ball on the alley for opening the gate to successively release the balls in the tray, an inclined track on which said balls roll when they leave the tray, a series of pockets beyond the end of the track to receive the ball and deflectors in front of the pockets.

4. A game apparatus comprising a tray containing a series of balls, a gate for said tray, a catch for holding the gate closed, an alley, a series of tilting paddles at the end of the alley and operatively connected to the catch for releasing the same, a track to receive the balls when they are discharged from the tray, a series of pockets beyond the end of the track, and deflectors in front of the pockets.

5. A game apparatus comprising a tray containing a series of balls, an inclined track, means for successively discharging the balls from the tray onto the track, an indicator and a dial therefor, a tilting cup at the end of the track to receive the balls and operatively connected to the indicator to actuate the same, a second track to receive the balls from the cup, a series of pockets beyond the end of said track, and deflectors in front of the pockets.

6. A game apparatus comprising a tray containing a series of balls, an inclined track having a loop, means for successively discharging said balls from the tray onto the track, a series of pockets beyond the end of the track, and deflectors in front of said pockets.

7. In a game apparatus, a casing, and a folding alley hinged to said casing and extensible thereinto.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM E. VINING.

Witnesses:

SAML. LLOYD,

E. P. THOMPSON.