

May 3, 1949.

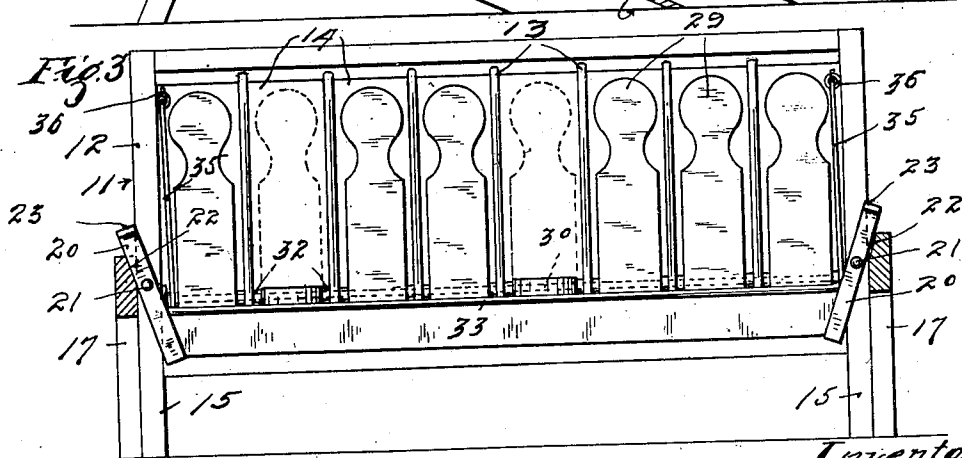
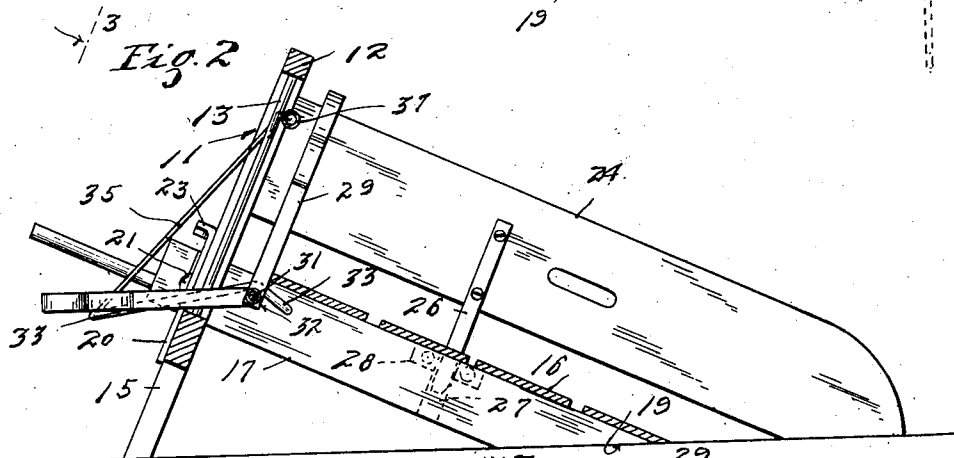
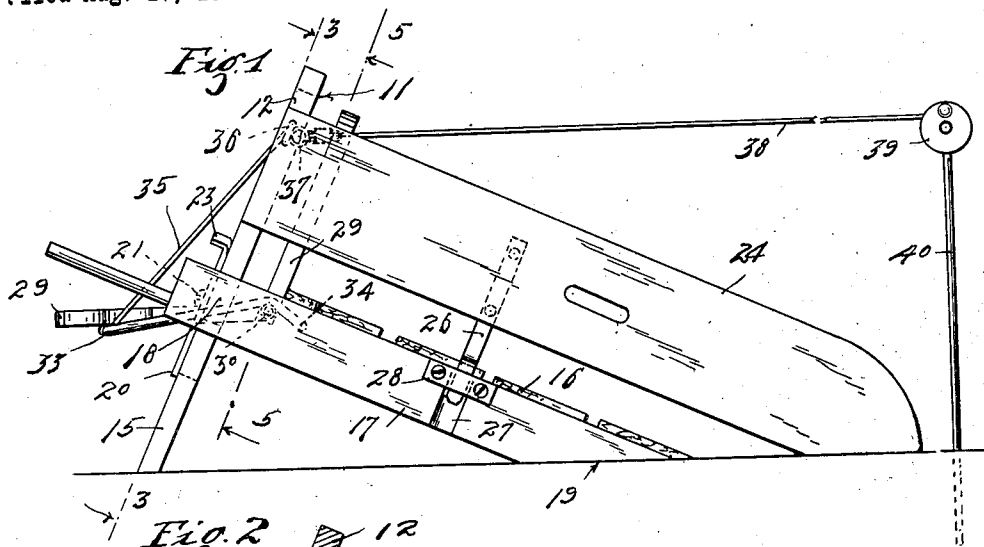
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2,469,236

MINIATURE BOWLING APPARATUS

Filed Aug. 17, 1945

3 Sheets-Sheet 1



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May 3, 1949.

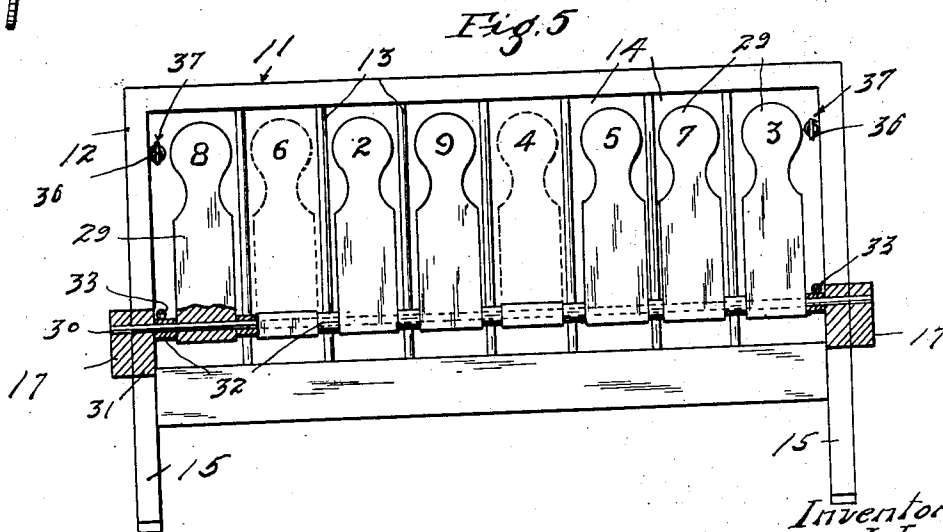
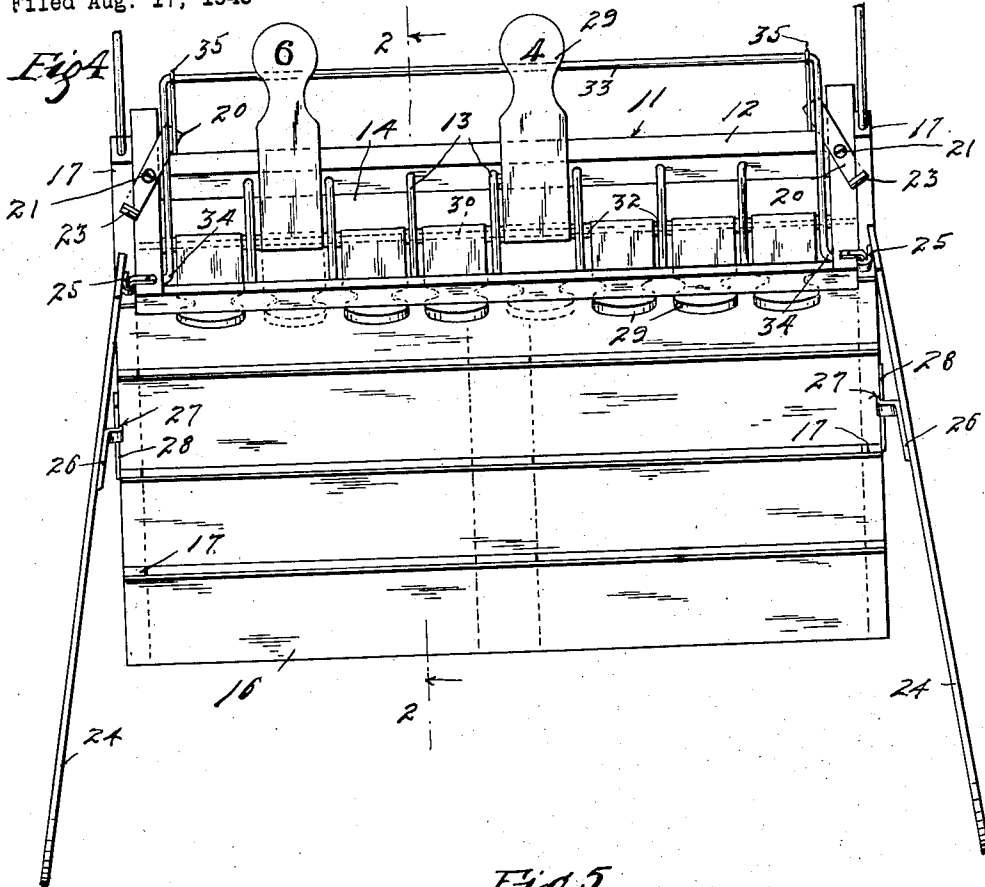
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MINIATURE BOWLING APPARATUS

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3 Sheets-Sheet 2



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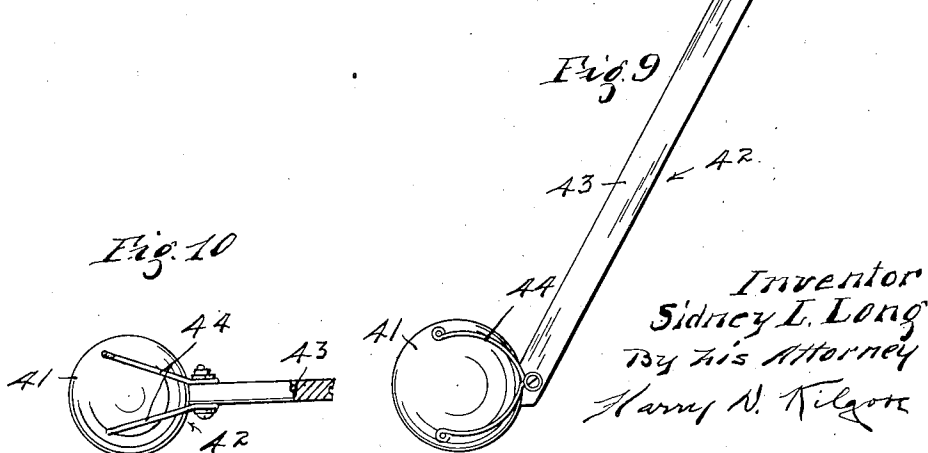
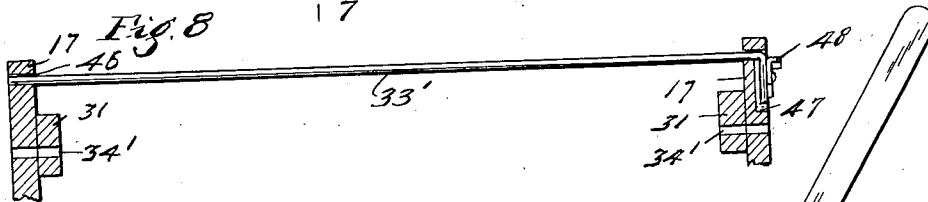
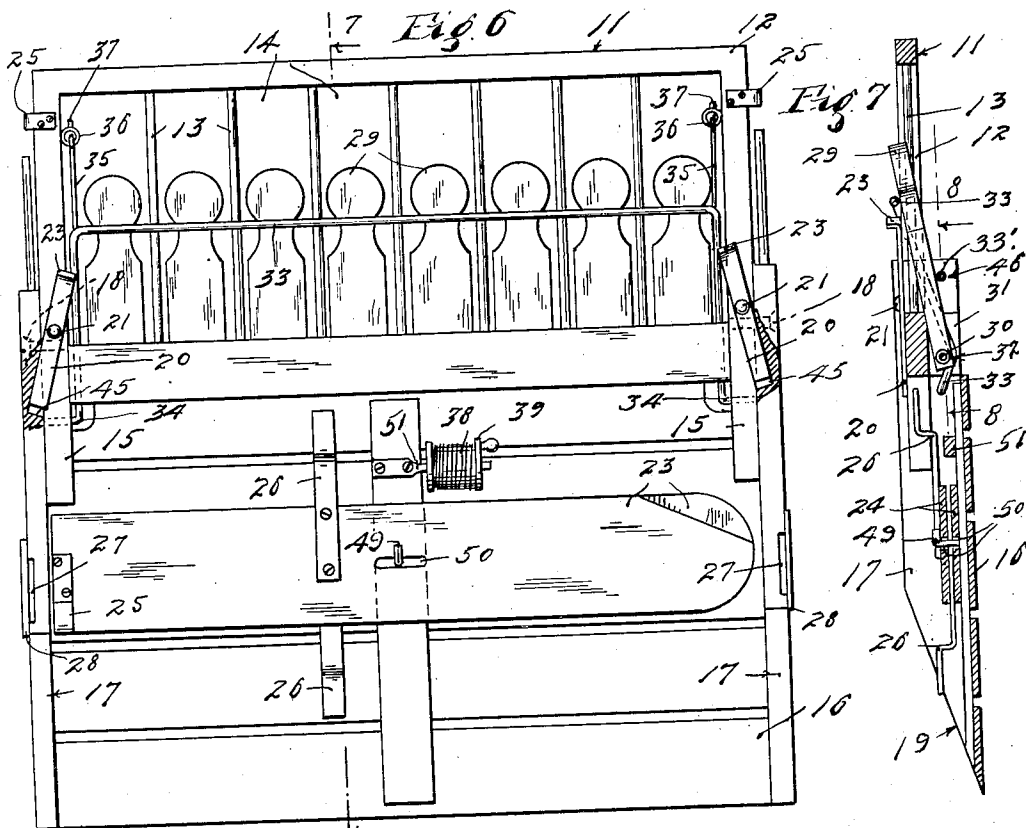
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MINIATURE BOWLING APPARATUS

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3 Sheets-Sheet 3.



UNITED STATES PATENT OFFICE

2,469,236

MINIATURE BOWLING APPARATUS

Sidney L. Long, Minneapolis, Minn.

Application August 17, 1945; Serial No. 611,192

7 Claims. (Cl. 273-127)

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My present invention relates to improvements in miniature bowling apparatus and, more particularly, to a foldable miniature bowling apparatus that can be set up and a game played in a room or out of doors.

This bowling apparatus includes pivoted pins that are upset by throwing or rolling a ball.

The objects of this invention are: first to provide means for stopping the ball after it strikes one or more of the pins, and in returning the ball to the thrower; second, in providing a novel means for returning the pins to upright positions; and third, in providing common means for locking the bowling apparatus in either its set up or folded positions.

These and other objects of the invention will be apparent from the following description, reference being had to the drawings.

To the above end, generally stated, the invention consists of the novel devices and combination of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a side elevation of the bowling apparatus;

Fig. 2 is a view in section taken on the line 2-2 of Fig. 4;

Fig. 3 is a view partly in rear elevation and partly in section taken on the line 3-3 of Fig. 1;

Fig. 4 is a plan view of the bowling apparatus;

Fig. 5 is a view partly in front elevation and partly in section taken on the line 5-5 of Fig. 1;

Fig. 6 is a rear elevation of the bowling apparatus folded;

Fig. 7 is a view in section taken on the line 7-7 of Fig. 6;

Fig. 8 is a detail view with some parts sectioned on the line 8-8 of Fig. 7;

Fig. 9 is an elevation of a ball and a device for throwing the same; and

Fig. 10 is a plan view of the parts shown in Fig. 9 with a portion of the handle broken away and sectioned.

The numeral 11 indicates a grid comprising a rectangular frame 12 and a plurality of upright spindles 13. The spindles 13 are laterally spaced apart to leave pin passageways 14 therebetween. The side members of the frame 12 are extended below said frame to afford a pair of legs 15.

A platform 16 is supported on side members 17 between which the grid 11 extends. These side members 17 are pivoted at 18 to the side

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members of the frame 12. The platform 16 is upwardly inclined and the lower or outer ends of the side members 17 are beveled at 19 to bring the front edge of said platform close to the floor or ground. The grid 11 lies in a plane perpendicular to the platform 16 and therefore is in a forwardly inclined position.

The grid 11 and the platform 16 are releasably held against relative pivotal movement by latch bars 20. These latch bars 20 are intermediately pivoted at 21 to the side members of the frame 12 and extend into transverse notches 22 in the platform side members 17. The upper end portions of the latch bars 20 are turned outwardly to afford finger-pieces 23.

The platform 16 is provided with a pair of outwardly diverging side boards 24. The side boards 24 are detachably secured to the frame 12 by separable fasteners 25. These side boards 24 are also detachably secured to the platform side members 17 by legs 26 on said side boards. These legs 26 extend into grooves 27 in the side member 17 and are held therein by keeper plates 28.

A plurality of bowling pins 29 are pivotally mounted on a horizontal rod 30 that extends parallel to the grid 11. The end portions of the rod 30 are secured in aligned holes in the platform side members 17 and blocks 31 on the inner faces of said members. Sleeves 32 on the rod 30 hold the pins 29 spaced from the frame 12 and from each other. There is a passageway 14 for each pin 29 and the pins 29 are free to swing through the passageways 14. Normally, the pins 29 engage the upper edge of the platform 16 as a stop, and are held thereby in forwardly inclined positions that are parallel to the plane of the grid 11. When the pins 29 are in upright positions, they extend obliquely through the passageways 14 and their upper portions are back of the grid 11.

When the pins 29 are struck by a ball, as will presently appear, they swing rearward on the rod 30 through the passageway 14 and into horizontal positions in which they rest on the transverse member of a ball-like rod 33. The arms of the rod 33 lie close to the inner faces of the side members of the frame 12 and their free end portions are turned outwardly to afford pivots 34 that extend into aligned holes 34' in the platform side members 17. The arms of the rod 33 extend over the two outermost spacing sleeves 32.

The rod 33 is held in substantially a horizontal position by a pair of cables 35 that extend through

eyes 36 on the upper end portions of the side members of the frame 12. Rings 37 attached to the upper end portions of the cable 35 engage the eyes 36 as stops.

By pulling on one of the rings 37, the rod 33 may be lifted and carries the pins 29 resting thereon into upright positions beyond dead center, and from these positions they will swing forwardly by the force of gravity and be positioned against the upper edge portion of the platform 16.

When the ring 37, by which the rod 33 has been lifted, is released, said rod will drop by the action of gravity and be stopped by the cables 35 in its horizontal position.

For the sake of convenience, the rod 33 may be lifted to reset the pins by a long cable 38 attached at one of its ends to one of the rings 37. The action end of the cable 38 is attached to a spool 39 on which it may be wound when not in use. This remote control of the rod 33 in resetting the pins 29 makes it unnecessary for the players to walk to the apparatus to reset the pins 29. The spool 39 is removably held on the bent upper end portion of the rod 40 stuck in the ground close to the player.

The bowling apparatus also includes a relatively large hollow rubber ball 41 and a novel device 42 for throwing the ball. This device 42 includes a handle 43 having attached thereto four light spring fingers 44 by which the ball 41 is releasably held. In throwing the ball 41, the device 42 is held as positioned in Fig. 9 and when swung forwardly, gives said ball sufficient momentum to release itself from the spring fingers 44.

The use of the throwing device 42 in connection with the bowling apparatus, is highly important for the reason that the ball 41 is thrown close to the ground and either strikes the pins 29 directly or strikes the floor or ground, rolls up the platform 16 and strikes said pins. The ball 41 is of such size that it will not pass through one of the pin passageways 14 and, when thrown or rolled, will strike the grid 11, roll down the platform 16 and be returned to the thrower. The side boards 24 prevent the ball 41, after striking the grid 11, from being deflected laterally from the platform 16.

The bowling apparatus may be folded by turning the latch bars 20 into inoperative position and in moving the grid 11 and platform 16 pivotally into a common plane. The grid 11 and platform 16 are held in folded relation by turning the latch bars 20 into grooves 45 in the inner faces of the platform side member 17. It will thus be seen that the latch bars 20 serve a double purpose, to wit: they lock the grid 11 and platform 16 in both operative and inoperative positions. To complete the folding of the apparatus, the pins 29 are placed against the rod 33 and held there by the rod 40. One end of the rod 40 is inserted, at its straight end, into a hole 46 in one of the platform side members 17 and its head or bent end is placed in a recess 47 in the other of said side members and held there by a turn-button 48. Before the grid 11 and the platform 16 are folded, the side boards 24 are removed therefrom, placed the one upon the other on the under side of said platform and secured thereto by an L-screw 49. This screw 49 has threaded engagement with the platform 16, extends through aligned slots 50 in the side boards 24 and its head is turned into overlapping engagement with the uppermost side board 24. The remote control cable 38 is wound on the spool 39 and said spool placed on a spindle 51 secured

to the platform 16 on its under side and frictionally held.

The bowling apparatus, when folded, is very compact and can be easily carried or stored in a comparatively small space.

From what has been said, it will be understood that the apparatus described is capable of modifications as to details of construction and arrangement within the scope of the invention herein disclosed and claimed.

What I claim is:

1. In an apparatus of the class described, a plurality of upright pins pivotally mounted to be upset rearwardly when struck by a ball, and a ball-stopping grid back of the upright pins and through which grid the pins extend when upset.

2. In an apparatus of the class described, a plurality of upright pins pivotally mounted to be upset rearwardly when struck by a ball, a ball-stopping grid back of the upright pins and through which grid the pins extend when upset, and means for returning the upset pins through the grid to normal positions.

3. In an apparatus of the class described, a plurality of forwardly inclined upright pins pivotally mounted to be upset rearwardly when struck by a ball, a forwardly inclined ball-stopping grid back of the upright pins and through which grid, a pivoted bail-like member on the transverse portion of which the pins rest when upset, and means for swinging said member to lift the pins beyond dead centers, whereby the force of gravity will return the pins through the grid to their forwardly inclined positions.

4. In an apparatus of the class described, a plurality of upright pins pivotally mounted to be upset rearwardly when struck by a ball, a ball-stopping grid back of the upright pins and through which grid the pins extend when upset, and an inclined platform leading to the pins.

5. In an apparatus of the class described, a plurality of upright pins pivotally mounted to be upset rearwardly when struck by a ball, a ball-stopping grid back of the upright pins and through which grid the pins extend when upset, an inclined platform leading to the pins, and having ball-intercepting side members.

6. In an apparatus of the class described, a ball-stopping grid, an inclined platform pivotally attached to said grid, a plurality of upright pins pivotally mounted on the platform forwardly of the grid to be upset rearwardly through the grid when struck by a ball, means for returning the upset pins through the grid to normal positions, and a latch for holding the grid and the platform substantially perpendicular to each other or folded into substantially the same plane.

7. In an apparatus of the class described, a platform having side members, a ball-stopping grid having supporting legs and extending transversely between said members, said platform and grid being pivotally connected, a plurality of pins pivotally mounted on the platform to be upset rearwardly through the grid when struck by a ball, means for returning the upset pins through the grid to normal positions, and a pair of latches on the grid for interlocking engagement with the side members of the platform at different points to hold the platform and the grid either substantially perpendicular, the one to the other, or substantially in the same plane.

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