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Q. HANSLEY

2,372,572

BOWLING ALLEY

Filed May 11, 1944

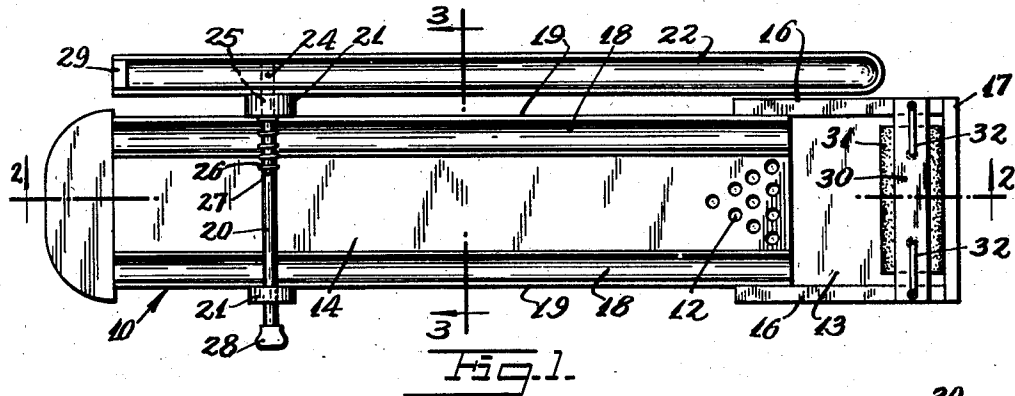


Fig. 1.

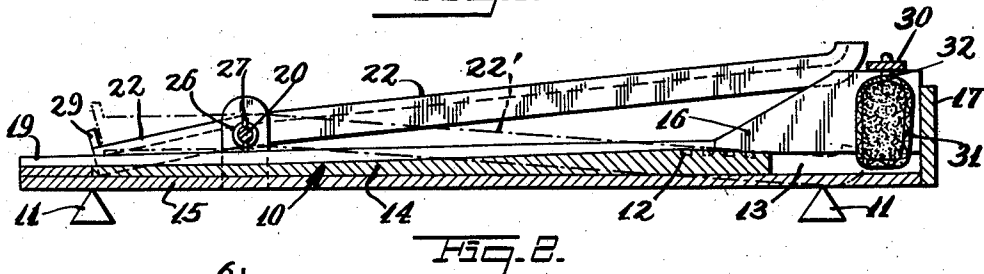


Fig. 2.

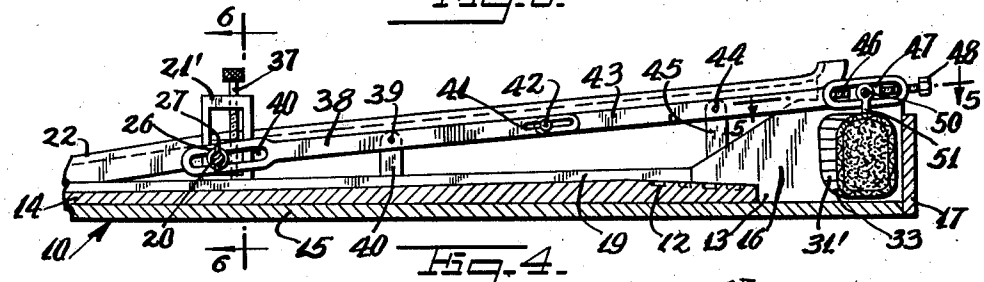


Fig. 3.

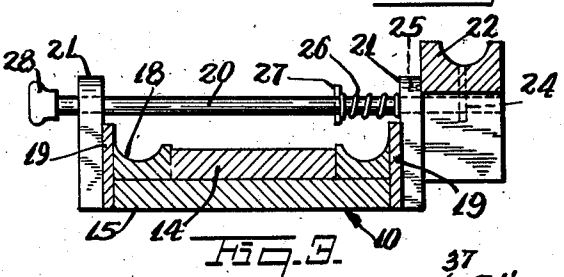


Fig. 4.

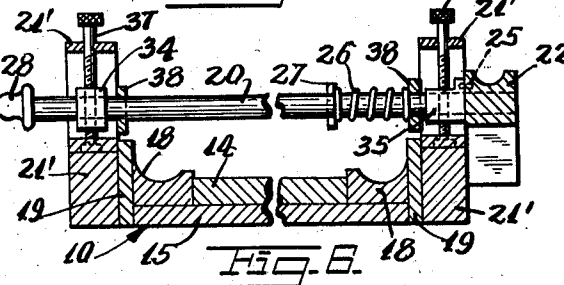


Fig. 5.

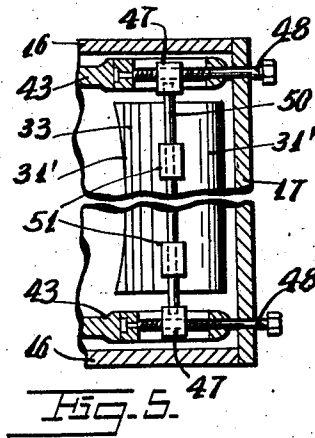


Fig. 6.

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2,372,572

BOWLING ALLEY

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Substituted for abandoned application Serial No. 430,332, February 11, 1942. This application May 11, 1944, Serial No. 535,095

4 Claims. (Cl. 273-49)

This invention relates to new and useful improvements in a bowling alley. The present application is a substitute of my abandoned application filed on February 11, 1942, Serial Number 430,332.

The invention has for an object the construction of a baby grand bowling alley which is characterized by a platform with a pin field at its rear end and a ball collecting field immediately to the rear of the pin field. The bowling alley is also provided with side gutters for catching balls attempting to roll off the platform.

Another object of this invention resides in the provision of a stop pad suspended at the back of the platform of the bowling alley for stopping the balls as they pass the pin field.

The invention also proposes the provision of a transverse guide bar mounted intermediate the platform of the alley for assisting in locating the path through which the balls are to be thrown by the player in order to effectively strike a bowling pin on the pin field.

The invention also contemplates the provision of a ball return guide, and a novel arrangement by which this guide may be placed into and out of use.

The invention also proposes the provision of means for adjusting the guide rod vertically, and furthermore, simultaneously and automatically adjusting the stop pad vertically in specific relation to adjustments of the guide rod.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure—

Fig. 1 is a plan view of a baby grand bowling alley constructed in accordance with this invention.

Fig. 2 is a vertical longitudinal sectional view taken on the line 2-2 of Fig. 1.

Fig. 3 is a transverse vertical sectional view taken on the line 3-3 of Fig. 1.

Fig. 4 is a fragmentary longitudinal sectional view similar to Fig. 2 but illustrating a modified construction.

Fig. 5 is a fragmentary horizontal sectional view taken on the line 5-5 of Fig. 4.

Fig. 6 is a fragmentary vertical sectional view taken on the line 6-6 of Fig. 4.

The baby grand bowling alley, in accordance with this invention, includes a platform 10 which

is illustrated supported upon support blocks 11. This platform 10 is provided with a pin field 12 at its rear end and a ball collecting field 13 immediately to the rear of the pin field. The platform 10 is formed from several layers of material. There is a top layer 14 which terminates at the pin field 12. There is a bottom layer 15 which extends past the pin field 12 and serves to form the ball collecting field 13. The ball collecting field 13 is surrounded by side walls 16 and a back wall 17. Gutters 18 extend along the sides of the platform 10 for catching and holding balls which tend to roll off the platform. These gutters are supplemented with side boards 19 attached upon the sides of the platform 10 and gutters 18.

A guide rod 20 is mounted across a front portion of the platform 10. This guide rod 20 is supported upon standards 21 mounted on the sides of the boards 19. The guide rod 20 is for the purpose of guiding a player in effectively throwing balls to strike the pins which are intended to be rested upon the pin field 12.

A ball return guide 22 is fixedly mounted upon one end of the rod 20 and extends along the side of the platform 10. This ball return 22 is normally directed downwards at an inclination from the rear to the front as illustrated by full lines in Fig. 2. The ball return guide is fixedly connected on the rod 20 by a pin 24. Means is provided for releasably holding the rod 20 from turning. This means includes a key 25 mounted on the side of the ball return guide 22 and engaging a complementary key opening formed in the adjacent standard 21.

A spring 26 is coaxially mounted on the rod 20 and acts between a pin 27 mounted on the rod 20 and one of the standards 21. This spring 26 normally urges the rod 20 in a direction so as to cause the key 25 to engage its complementary key opening.

The rod 20 is provided with a head 28 which may be pressed inwards to compress the spring 26 and to move the key 25 out from the key opening. Then the ball return guide 20 may be pivoted to the position indicated by the dot and dash lines 22' in Fig. 2. In this latter condition the rear portion of the ball return guide may be filled with balls from the ball field 13 and the balls will remain as placed.

The player may return the ball return guide 22 to its raised operative position, as shown by the full lines in Fig. 2, and then the balls will roll to the front end of the ball return guide. A block 29 is mounted in the front end of the guide

22 to stop and hold the balls at this point until they are removed by a player.

A support bar 30 is mounted across the walls 16. A stop pad 31 is supported by several cords 32 attached to the bar 30. Thus the stop pad 31 is suspended to the rear of the ball collecting field 13.

In Figs. 4-6 inclusive a modified form of the invention has been disclosed which distinguishes from the prior form in an arrangement for automatically changing the position of the pad 31' when the position of the guide rod 20 is changed. The pad 31' is provided with a plurality of horizontal guide lines 33 inscribed across its front face. These guide lines 33 are for the purpose of assisting a player in aiming his balls at the pins.

The rod is mounted through sockets 34 and 35 which are vertically adjustably mounted in standards 21'. These standards 21' have vertical slots 36. Vertical screws 37 are rotatively mounted through the standards 21' and threadedly engage the sockets 34 and 35. The arrangement is such that the screws 37 may be turned in one direction or another to adjust the sockets 34 and 35 upwards or downwards. This changes the vertical position of the guide rod 20.

Lever 38 are pivotally mounted intermediate of their ends by pintles 39 upon standards 40 mounted on the boards 19. The front ends of the levers 38 are pivoted with slots 40 through which the bar 20 passes. The rear ends of the levers 38 are formed with slots 41 engaged by pins 42 mounted on levers 43. These levers 43 are pivotally mounted intermediate of their ends by pintles 44 on standards 45 mounted on side walls 16. The rear ends of the levers 43 are provided with horizontal slots 46.

Sockets 47 are slidably mounted in the slots 46. These sockets 47 are threadedly engaged by screws 48 which are rotatively mounted on the levers 43. The arrangement is such that the screws 48 may be turned to move the sockets forwards or rearwards. A bar 50 is mounted across the sockets 47. The stop pad 31' is provided with strips 51 mounted on the rod 50 by which the stop pad 31' depends.

The ball return 22 is provided with a key 25 which engages a key opening in the side of the socket 35. The spring 26 acts between the pin 27 and side of one of the levers 38. The arrangement is such that the spring 26 normally holds the key 25 engaging its complementary key opening. The head 28 of the rod 20 may be pressed inwards to disengage the key 25 from its key opening and then the ball return guide 22 may be pivoted to its inoperative position.

The screws 37 may be turned to raise or lower the sockets 34 and 35 which indirectly raises or lowers the guide rod 20. Simultaneously, the levers 38 will be pivoted, which in turn will pivot the levers 43 which will indirectly act to correspondingly raise or lower the stop pad 33.

The player aims by aligning the rod 20 with one of the lines 33 on the stop pad 31' and then throws the ball and attempts to hit the pins (not shown on the drawing) which are mounted on the pin field 12. To test the condition of the player's form the vertical position of the rod 20 may be adjusted. This also automatically changes the vertical position of the stop pad 31'.

The game is played in the conventional man-

ner with the player standing at the front of the platform and attempting to throw down the pins placed upon the pin field 12 of the platform. Small wooden balls are used for this purpose. The balls are stopped by the stop pads 31 and 31'.

While I have illustrated and described the preferred embodiments of my invention it is to be understood that I do not limit myself to the precise constructions herein disclosed. And the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. In a bowling alley having a platform with a pin field at its rear end and a ball collecting field immediately to the rear of the pin field, a transverse rod turnably mounted on said platform, a ball return guide fixedly mounted on said rod and extending along the side of said platform and normally being directed at a downward inclination from its rear to its front end, and means for releasably holding said rod from turning, comprising a key mounted on the side of the ball return guide and engaging a key opening in a stationary part.

2. In a bowling alley having a platform with a pin field at its rear end and a ball collecting field immediately to the rear of the pin field, a transverse rod turnably mounted on said platform, a ball return guide fixedly mounted on said rod and extending along the side of said platform and normally being directed at a downward inclination from its rear to its front end, and means for releasably holding said rod from turning, comprising a key mounted on the side of the ball return guide and engaging a key opening in a stationary part, said rod being movable to move the ball return guide to disengage said key.

3. In a bowling alley having a platform with a pin field at its rear end and a ball collecting field immediately to the rear of the pin field, a transverse rod turnably mounted at the front of said platform, a ball return guide fixedly mounted on said rod and extending along the side of said platform and normally being directed at a downward inclination from its rear to its front end, and means for releasably holding said rod from turning, comprising a key mounted to the side of the ball return guide and engaging a key opening in a stationary part, said rod being movable to move the ball return guide to disengage the said key, resilient means urging the rod in one direction to engage said key and key opening.

4. In a bowling alley having a platform with a pin field at its rear end and a ball collecting field immediately to the rear of the pin field, a transverse rod turnably mounted at the front of said platform, a ball return guide fixedly mounted on said rod and extending along the side of said platform and normally being directed at a downward inclination from its rear to its front end, and means for releasably holding said rod from turning, comprising resilient means urging said rod in one direction and a key mounted on said ball guide and engaging a complementary key opening in a stationary part.

QUINCEY HANSLEY.