March 3, 1964

J. J. CZAREV

3,123,358

BOWLING BALL POSITION INDICATOR

Filed Oct. 12, 1962

Fig. 1.

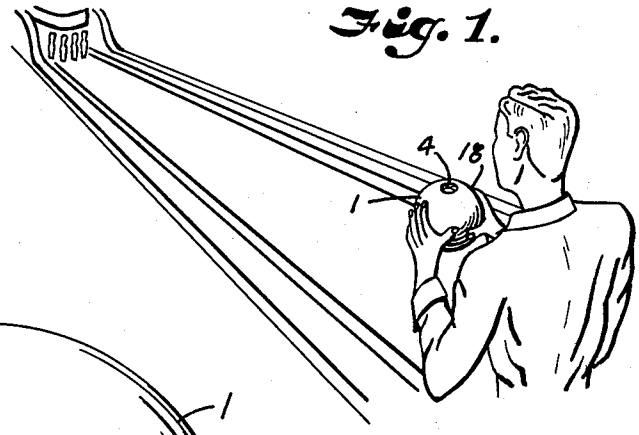


Fig. 2.

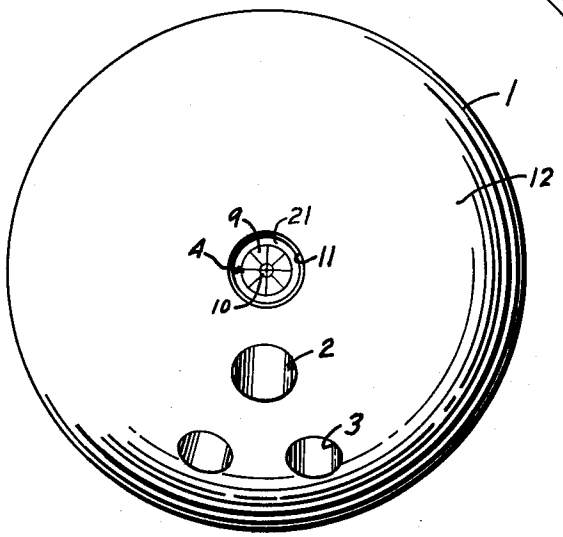


Fig. 3.

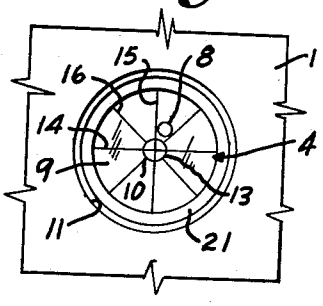
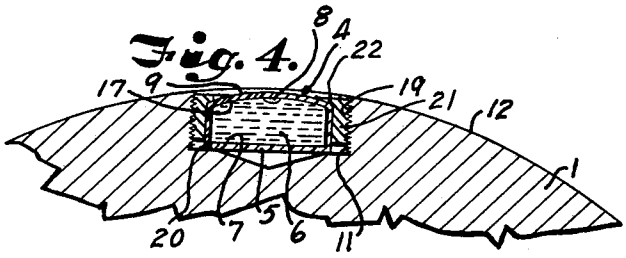


Fig. 4.



INVENTOR.
JOHN J. CZAREV

BY

Fishburn and Gold

ATTORNEYS

United States Patent Office 3,123,358 Patented Mar. 3, 1964

3,123,358

BOWLING BALL POSITION INDICATOR

John J. Czarev, 688 Allen Road, Independence, Mo.

Filed Oct. 12, 1962, Ser. No. 230,075
7 Claims. (Cl. 273—63)

This invention relates to game apparatus, and more particularly to devices such as bowling balls and the like wherein it is desired to start the ball on substantially the same path at each roll thereof and has for its principal object to provide a visible means of indicating a relative position of the ball at the start of the backswing of the user.

In games requiring the rolling of a ball, such as in bowling, the player usually holds the ball in front of him and starts his backswing and his run endeavoring to roll the ball on a desired path. In order to have good control, the ball position and the player's movements should be as nearly the same on each roll as is possible. As the player holds the ball in front of him prior to making a roll, he endeavors to have his hand, fingers and wrist in a desired position, but slight variation can change the relative positions of those elements and result in a variation of the roll at the very start of the backswing which variation will usually continue through the entire roll.

Other objects of the present invention are to provide a small visible indicator in a bowling ball whereby the player can adjust the position of his ball to substantially the same at each roll; to provide such an indicator in a bowling ball wherein a liquid vial has a bubble therein with associated indicia to cooperate in facilitating a player moving his ball whereby the bubble and indicia will indicate the relative position; to provide a ball with a position indicator that is small and light in weight so as not to change the characteristics of the ball but is still economical to manufacture and easily installed relative to finger holes in the ball.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein are set forth by way of illustration and example certain embodiments of this invention.

FIG. 1 is a perspective view of a player holding a bowling ball with a position indicator in readiness to start the next roll down the alley.

FIG. 2 is a plan view of a bowling ball with a position marker thereon.

FIG. 3 is an enlarged top view of the position marker with the bubble off center.

FIG. 4 is an enlarged partial sectional view through a bowling ball and position indicator.

Referring more in detail to the drawings:

1 generally designates a bowling ball having a thumb hole 2 and finger holes 3, it being understood that such holes may be arranged as desired and may be of different numbers as in conventional practice. A position indicator 4 is arranged in the ball 1 and adapted to be used by a player to ascertain by relative indicia when the ball is held in the same orientation. In the structure illustrated, a vial 5 having liquid 6 arranged in a closed compartment 7 provides a bubble 8 visible through a transparent window 9. Arranged on the window or relative thereto are a plurality of indicia lines 10 which aid in indicating the relative position of the bubble 8. In the structure illustrated, the vial 5 is secured in a recess 11 in the ball whereby it and the window 9 thereof are below the surface 12 of the ball.

The indicia lines 10 preferably are arranged as illustrated in FIG. 3 wherein there is a line 13 forming a small circle, lines 14 and 15 extending across the window at right angular relation, and lines 16 extending radially outwardly from the circle 13 in intermediate or equal angular relation from the lines 14 and 15. It is preferred that the window 9 be spherical or the inner surface 17 concave outwardly with the radius thereof such that the level vial structure 5 may be tilted in various degrees to move the bubble toward the outer periphery of the vial whereby the player can arrange the ball in front of him as at 18 immediately prior to starting his backswing and note the position of the bubble 8 relative to the indicia lines and then, on rolling his ball, if it has the path desired, on the next roll he will bring the ball to the position wherein the bubble and the indicia lines will be in the same relative position for the same ball orientation as on the previous roll.

The vial 5 may be secured in the recess 11 in the ball in any suitable manner. In the structure illustrated, a socket or recess 11 is drilled radially inwardly into the ball and provided with screw threads 19. The lower portion of the vial is inserted into the recess with the bottom engaging a bottom portion 20 of the recess. A threaded bushing 21 is screwed into the recess, said bushing having an inwardly extending flange 22 at its outer end that engages the vial at the outer margins of the window to clamp the vial between the flange 22 and the bottom portion 20 of the recess 11, the vial and bushing both being below the surface 12 of the ball.

The vial is positioned in the ball relative to the thumb and finger holes whereby when the ball is held by a player prior to making a roll with the ball, said vial will be generally on the topmost part of the ball and the bubble 8 will be visible within the periphery of the window 9 at any position in which the player would normally hold his ball. The player by noting the relative position of the bubble and the indicia lines can on any subsequent roll bring his ball back to substantially the same relative position by holding the ball so the bubble and indicia lines will have the same relative position as on the previous roll.

It is to be understood that while I have illustrated and described one form of my invention, it is not to be limited to the specific form or arrangement of parts herein described and shown except insofar as such limitations are included in the claims.

What I claim and desire to secure by Letters Patent is:

1. In a bowling ball having finger holes and a recess extending radially into the ball in spaced relation to the finger holes whereby the recess is upwardly when the ball is held in starting position for bowling,

(*a*) a liquid-containing vial secured in said recess and having a bubble therein and a window through which said bubble is visible with said window outwardly exposed and below the ball surface,

(*b*) and indicia lines associated with said vial window and forming divisions of area facilitating orientation of the bubble relative thereto.

2. In a bowling ball having finger holes and a recess extending radially into the ball in spaced relation to the finger openings whereby the recess is upwardly when the ball is held in starting position for bowling,

(*a*) a liquid-containing vial with a bubble therein and having a window through which said bubble is visible,

(*b*) means securing the vial in the recess in the ball with said window outwardly exposed and below the ball surface,

(*c*) and indicia lines associated with said vial window and forming divisions of area facilitating return of the bubble to the same position before each roll of the ball.

3. A bowling ball as set forth in claim 2 wherein the liquid vial is positioned in the recess in the ball and the vial securing means is a bushing fixed in said recess in surrounding relation to the periphery of the vial with a

flange on said bushing engaging the vial to retain same in the recess.

4. In a bowling ball as set forth in claim 2 wherein the indicia lines are on the vial window and include a circle adjacent the center and radial lines extending outwardly therefrom.

5. In a bowling ball having finger holes and a cylindrical recess extending radially into the ball in spaced relation to the finger openings whereby the recess is upwardly when the ball is held in starting position for bowling, said recess having a bottom portion spaced inwardly from the ball surface,

(*a*) a cylindrical liquid-containing vial with a bubble therein and having a window through which said bubble is visible, said vial being of lesser thickness than the depth of the recess,

(*b*) said vial being positioned in the recess in the ball in engagement with said bottom portion of said recess and with said window outwardly exposed and below the ball surface,

(*c*) bushing means surrounding said vial and having

flange portions engaging marginal portions of said window, said bushing being fixed in the recess to hold the vial between said bushing flange portions and the bottom portion of the recess,

(*d*) and indicia lines associated with said vial window and forming divisions of area facilitating orientation of the bubble to the same position before each roll of the ball.

6. In a bowling ball as set forth in claim 5 wherein the indicia lines are on the vial window and include a circle adjacent the center and radial lines extending outwardly therefrom.

7. In a bowling ball as set forth in claim 5 wherein said recess has internal screw threads and the bushing is screwed therein to clamp the vial between the bushing flange portions and the bottom portion of the recess.

References Cited in the file of this patent

UNITED STATES PATENTS

3,087,727 Watterlohn ---------- Apr. 30, 1963