

Feb. 24, 1942.

J. BOMZE

2,274,522

BOWLING BALL

Filed May 19, 1941

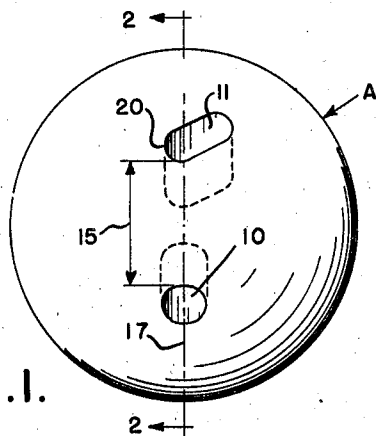


FIG. 1.

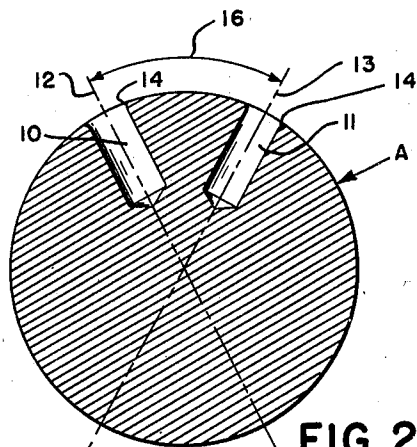


FIG. 2.

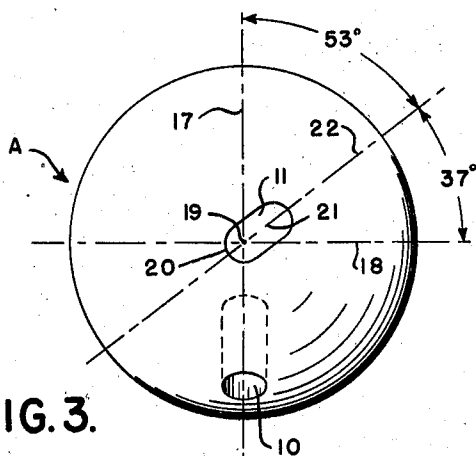


FIG. 3.

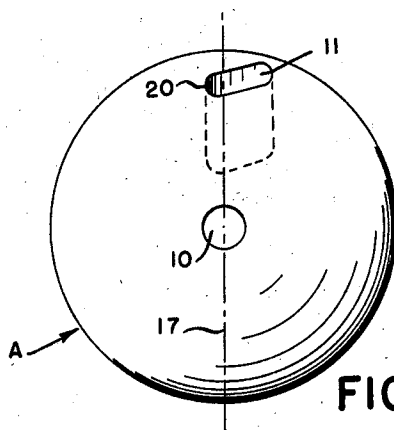


FIG. 4.

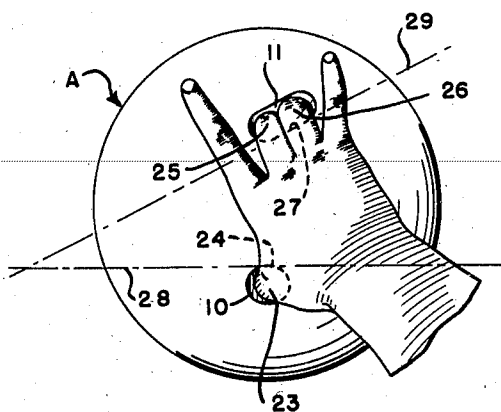


FIG. 5.

INVENTOR.

JACOB BOMZE

BY *W. H. H. Hulbert & Belknap*
ATTORNEYS

UNITED STATES PATENT OFFICE

2,274,522

BOWLING BALL

Jacob Bomze, Detroit, Mich.

Application May 19, 1941, Serial No. 394,213

4 Claims. (Cl. 273—63)

This invention relates generally to bowling balls and refers more particularly to an improved grip therefor.

Heretofore bowling balls have had two holes therein for receiving respectively the thumb and second finger of a bowler's hand, but this arrangement of holes is objectionable because the two fingers only grip the ball and are not always strong enough to hold the same. Moreover, the two fingers do not always provide an accurate delivery of the ball. Other balls have had three holes therein to permit the second and third fingers as well as the thumb to engage separate holes in the ball to hold the same, but this arrangement causes the second and third fingers to assume unnatural positions and sometimes the withdrawal of such fingers from the separate holes therefor has been difficult and has caused a drag that resulted in inaccurate delivery of the ball. Hence, this arrangement too is objectionable.

In the present instance, I have overcome the difficulties heretofore experienced by providing a grip or arrangement of finger-receiving holes that will enable the bowler to hold the ball better and more comfortably with a natural relaxed position of his hand, to withdraw the fingers more readily and naturally from the holes provided therefor in the ball, and to deliver the ball more accurately. Preferably I have accomplished this by providing the ball with two holes, one being cylindrical for the thumb and the other being oblong and obliquely arranged with respect to the cylindrical hole for receiving two or more fingers side by side. Such holes are constructed and arranged in such a way that the fingers engage the ball naturally and are released naturally therefrom without strain, drag or other objectionable factors that heretofore were experienced with other forms of grips.

In the accompanying drawing:

Figure 1 is a plan view of a bowling ball embodying my invention;

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1;

Figure 3 is a plan view substantially at right angles to the axis of the finger hole of the bowling ball;

Figure 4 is a plan view substantially at right angles to the axis of the thumb hole of the bowling ball;

Figure 5 is a diagrammatic view of the ball and a bowler's hand, and showing the thumb and second and third fingers in engagement with the finger holes in the ball.

Referring now to the drawing, A is a solid bowling ball of ebonite or similar material having two spaced holes 10 and 11, respectively, therein for the fingers of a bowler's hand and providing the grip embodying my invention.

As shown, the hole 10 is a substantially straight cylindrical hole extending inwardly from the exterior surface of the ball along approximately a radial line 12 for a predetermined distance of depth and adapted to receive the thumb of a bowler's hand, while the hole 11 is a substantially straight oblong hole extending inwardly from the exterior surface of the ball along approximately a radial line 13 for a predetermined distance or depth and adapted to receive side by side two or more fingers such, for example, as the second and third fingers of the bowler's hand. Preferably the oblong hole 11 is obliquely arranged relative to the cylindrical hole 10 so that the fingers may grip and release the ball naturally. Either or both holes 10 and 11 may have flared outer edges such as 14. As usual, the diameter and depth of the cylindrical hole 10 and the depth, length and width of the oblong hole 11 are dependent upon the size of thumb and of the fingers to be inserted in said holes, and ordinarily are formed in the ball after suitable measurements of the bowler's hand have been obtained. Likewise, the span 15 between the holes 10 and 11 is determined by such measurements. However, regardless of any variation in the span and consequently the angle 16 between the radial lines 12 and 13, the oblong hole 11 always inclines laterally away from the cylindrical hole 10.

Before forming the holes 10 and 11 therein, the ball may be considered as divided by relatively perpendicular primary and secondary diametral planes 17 and 18, respectively, defining by their intersection a pole 19 on the surface thereof. The oblong hole 11 is formed in the ball so that the curved end 20 thereof is to the left of the primary plane 17 and substantially concentric with the pole 19, and the longitudinal median line 21 of the oblong hole 11 is coincident with an oblique diametral plane 22 disposed approximately at a 53° angle to the primary diametral plane 17 and approximately at a 37° angle to the secondary diametral plane 18. The axis of the cylindrical hole 10 is coincident with the primary diametral plane 17.

The ball may be gripped as illustrated in Figure 5 so that the palmar surface of the thumb 23 will engage the curved wall 24 of the cylindrical hole 10, and the palmar surfaces of the

second and third fingers 25 and 26, respectively, will engage the elongated side wall 27 of the oblong hole 11. When the ball is released, the thumb 23 leaves the cylindrical hole 10 substantially in a plane 28 tangent to the cylindrical hole, and the fingers 25 and 26 leave the oblong hole 11 in a plane 29 coincident with the side wall 27 of said oblong hole.

Thus, with my construction and arrangement of finger-receiving holes, it is possible to hold the ball with three fingers in only two holes without unnatural flexure of muscles and to release or deliver the ball easily, smoothly and accurately without abrasion of the fingers or drag on the ball in any way.

What I claim as my invention is:

1. A bowling ball which for purposes of definition is considered as divided by relatively perpendicular primary and secondary diametral planes, the ball having a cylindrical hole for receiving a thumb and having a hole oblong in cross section for receiving two or more fingers side by side, the axis of the cylindrical hole being coincident with the primary diametral plane, the oblong hole being spaced from and the major axis of the surface opening thereof inclining laterally away from the cylindrical hole, the major portion of the surface opening of the oblong hole extending to one side of the primary diametral plane and away from the cylindrical hole.

2. A bowling ball which for purposes of definition is considered as divided by relatively perpendicular primary and secondary diametral planes, the ball having a cylindrical hole for receiving a thumb and having a hole oblong in cross section for receiving two or more fingers side by side, the axis of the cylindrical hole being coincident with the primary diametral plane, the oblong hole being spaced from and the major axis of the surface opening thereof inclining laterally away from the cylindrical hole, the major portion of the surface opening of the oblong hole extending to one side of the primary diametral

plane and away from the cylindrical hole and disposed above and at substantially a thirty-seven degree angle to the secondary diametral plane.

3. A bowling ball which for purposes of definition is considered as divided by relatively perpendicular primary and secondary diametral planes, the ball having a cylindrical hole for receiving a thumb and having a hole oblong in cross section for receiving two or more fingers side by side, the axis of the cylindrical hole being coincident with the primary diametral plane, the oblong hole being spaced from and the major axis of the surface opening thereof inclining laterally away from the cylindrical hole, the major portion of the surface opening of the oblong hole extending to one side of the primary diametral plane and away from the cylindrical hole, one side of the cylindrical hole being coincident with a plane disposed parallel to the primary diametral plane and substantially tangent to a part of the adjacent end of the oblong hole.

4. A bowling ball which for purposes of definition is considered as divided by relatively perpendicular primary and secondary diametral planes, the ball having a cylindrical hole for receiving a thumb and having a hole oblong in cross section for receiving two or more fingers side by side, the axis of the cylindrical hole being coincident with the primary diametral plane, the oblong hole being spaced from and the major axis of the surface opening thereof inclining laterally away from the cylindrical hole, the major portion of the surface opening of the oblong hole extending to one side of the primary diametral plane and away from the cylindrical hole and disposed above and at substantially a thirty-seven degree angle to the secondary diametral plane, one side of the cylindrical hole being coincident with a plane disposed parallel to the primary diametral plane and substantially tangent to a part of the adjacent end of the oblong hole.

JACOB BOMZE.