Nov. 2, 1948. H. REITSMA 2,453,036

GRIP MEASURING BALL FOR BOWLERS

Filed March 6, 1947 2 Sheets-Sheet 1

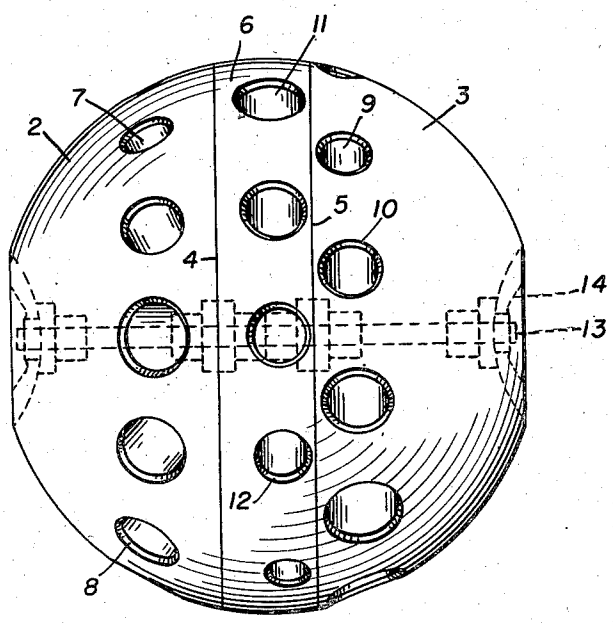


Fig. 1.

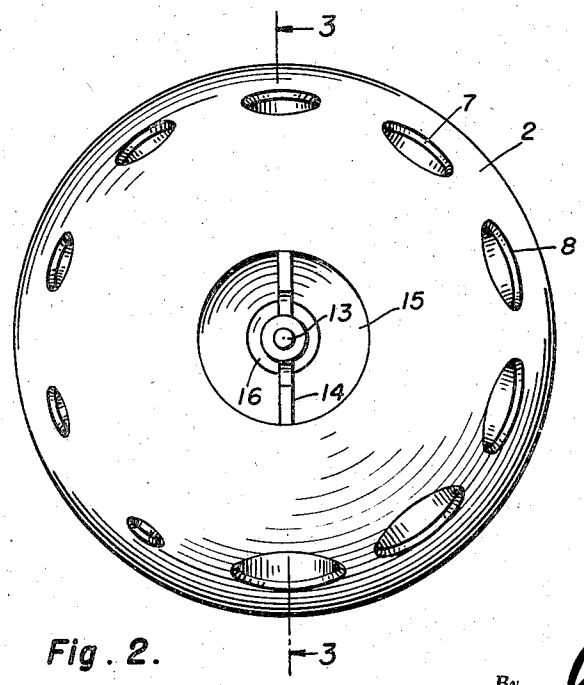


Fig. 2.

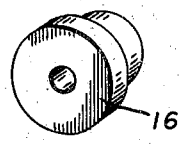


Fig. 5.

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GRIP MEASURING BALL FOR BOWLERS

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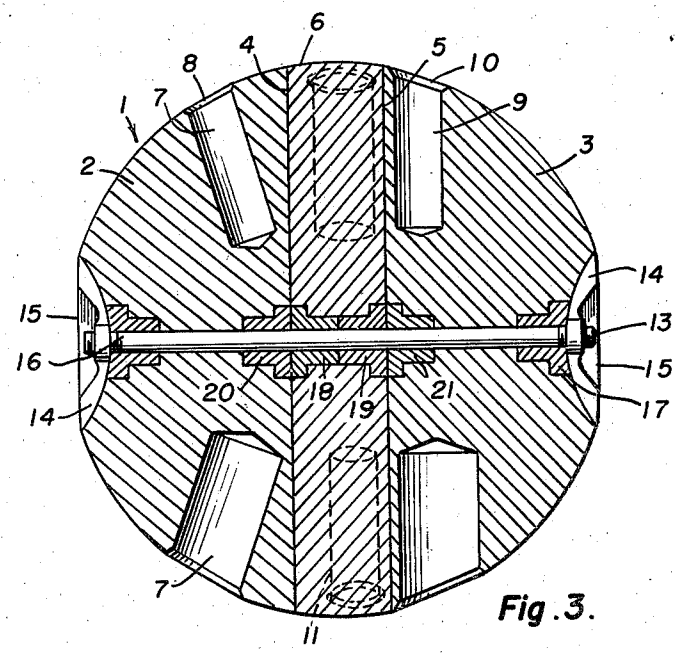


Fig. 3.

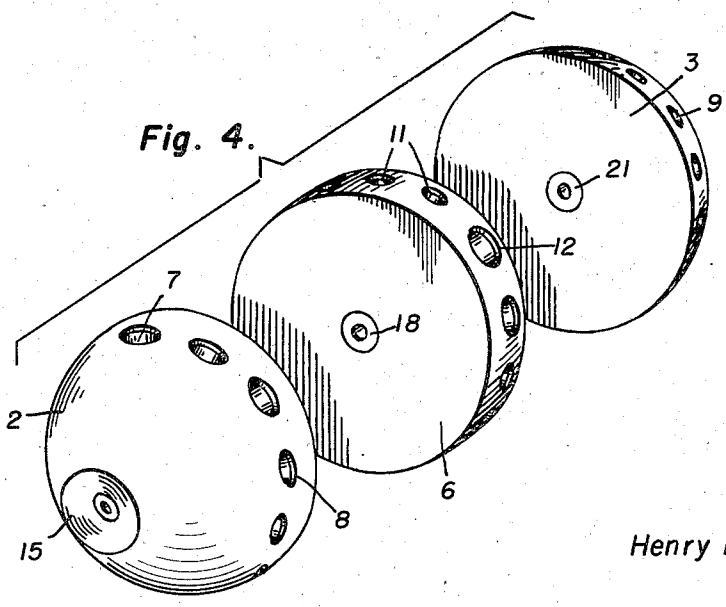


Fig. 4.

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UNITED STATES PATENT OFFICE

2,453,036

GRIP MEASURING BALL FOR BOWLERS

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Application March 6, 1947, Serial No. 732,839

2 Claims. (Cl. 33—174)

1

My invention relates to improvements in grip measuring balls for bowlers, the primary object in view being to provide a ball of the class indicated with thumb and finger grip sections relatively adjustable to provide for obtaining a greater number of different grip combinations of thumb and finger spacings than can be attained with present day devices designed for a similar purpose.

Another object is to provide a device of the character and for the purpose above set forth which is accurate, easy to adjust, will not get out of order from prolonged use, and is comparatively inexpensive to manufacture.

To the accomplishment of the above, and subordinate objects presently appearing, a preferred embodiment of my invention has been illustrated in the accompanying drawings, set forth in detail in the succeeding description, and defined in the claims appended hereto.

In said drawings:

Figure 1 is a view in elevation of my improved grip measuring ball in a preferred embodiment thereof;

Figure 2 is a similar view with the ball turned through an angle of 90 degrees;

Figure 3 is a view in section taken on the line 3—3 of Figure 2;

Figure 4 is a view in perspective of the sections of the ball disassembled; and

Figure 5 is a view in perspective of one of the bushings.

Reference being had to the drawings by numerals, according to my invention, a bowler's measuring ball 1 is provided, of the same size as those commonly used in bowling tenpins, and which comprises a pair of opposite thumb and finger grip sections 2, 3 segmental in cross section with flat sides 4, 5 facing, and an intermediate, diametrical, flat sided finger grip section 6 fitting sidewise between and against the flat sides 4, 5 of said sections 2, 3 to complete the ball 1. Preferably, the said sections 2, 3 and 6 are formed of hard rubber.

The thumb grip section 2 is provided with a circular series of cylindrical thumb grip holes 7 therein spaced apart equi-distantly around the same but adjacent to the flat side 4 of said section, and which incline toward said flat side tangentially in correspondence with the inclination of the usual thumb grip holes in the usual bowling ball. The thumb grip holes 7 are of different diameters, relatively, with outer beveled ends 8 facilitating entering the thumb into the same and are spaced different distances from the

2

side 4 of said section 2 for a purpose presently seen.

The finger grip section 3 is provided with a circular series of cylindrical finger grip holes 9 therein, with beveled outer ends 10 facilitating entering the fingers therein, and which are spaced apart equi-distantly around the section 3 adjacent to the side 5 of said section and with axes parallel to said side 5, said openings 9 being also of different diameters relatively.

The intermediate finger grip section 6 is formed with a circular series of finger grip holes 11 therein, also cylindrical, with beveled outer ends 12, for a purpose which will now be clear, and said holes 11 are spaced apart equi-distantly around said section 6 closer to the side of said intermediate section facing the side 5 of the finger grip section 3 than the other side of said section 6. The finger grip holes 11 are of different diameters relatively.

The described thumb and finger grip sections 2, 3 and 6 are relatively adjustable rotatably into different set positions about a shaft 13 extending through the same in the axis thereof with a pair of end wing nuts 14 threaded thereon and adapted to seat in concave sockets 15 formed in the circumferential portions of the thumb and finger grip sections 2, 3, said wing nuts 14 seating against stepped metal bushings 16, 17 set into said circumferential portions and surrounding said shaft. A pair of axial stepped metal bushings 18, 19 surrounding said shaft 13 are set into the intermediate finger grip section 6 from opposite sides thereof to bear against a pair of similar bushings 20, 21 also surrounding said shaft 13 and set into the sides 4, 5 of said sections 2, 3.

As will now be seen, by virtue of the described arrangement of the series of thumb and finger grip holes 7, 9, 11, in the thumb and finger grip sections 2, 3, 6, said series may be revolved relatively about a common axis by setting of said sections 2, 3 and 6 relatively to space the thumb grip holes in the series 7 variably, laterally of the finger grip holes in the series 9, 11, and the finger grip holes in the series 11 variably, laterally of the holes in the series 7 and 9, and always with the holes in the series 11 of the intermediate finger grip section 6 closer to the finger grip holes in the series 9 than to the series 7. Thus, a large number of three hole combination grips, or spans, may be attained for a large number of bowlers in each of which the fingers are spaced closer together than to the thumb as is required in obtaining the perfect grip on a bowl-

ing ball. Also, two hole combination grips may be attained as will be readily apparent, and either right or left hand grips by virtue of the described relation of grip holes 7, 9 and 11 it being merely necessary for the bowler to turn the ball around according to whether he be right or left handed. After a grip has been selected suitable to the bowler, a ball, or balls, may be bored to provide corresponding grip holes in the ball.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention, without further explanation.

Manifestly, the invention, as described, is susceptible of modification, without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the appended claims.

What I claim is:

1. A grip measuring device for bowlers omprising a ball including a pair of side segmental sections with flat sides facing, a diametrical flat sided intermediate section interposed between said side sections, a bolt extending axially through said sections with end nuts thereon and upon which said sections are relatively rotatable into different set positions established by tightening of said nuts, one of said side sections being provided with a circular series of thumb grip holes therein, the other side section and said intermediate section having respectively a circular series of finger grip holes therein, the holes in said series being of different diameters in each series to accommodate thumbs and fingers of different sizes and the series of holes in the side sections being differently spaced from the sides of said intermediate section, whereby in different set positions of said sections plural hole combination grips may be attained with finger grip holes therein spaced closer together laterally than to a thumb grip hole and the holes in each combination varying in size relatively.

2. A grip measuring device for bowlers comprising a ball including a pair of side segmental sections with flat sides facing, a diametrical flat sided intermediate section interposed between said side sections, a bolt extending axially through said sections with end nuts thereon and upon which said sections are relatively rotatable into different set positions established by tightening of said nuts, one of said side sections being provided with a circular series of thumb grip holes therein, the other side section and said intermediate section having respectively a circular series of finger grip holes therein, the holes in said series being of different diameters in each series to accommodate thumbs and fingers of different sizes and the series of holes in the side sections being differently spaced from the sides of said intermediate section, whereby in different set positions of said sections plural hole combination grips may be attained with finger grip holes therein spaced closer together laterally than to a thumb grip hole and the holes in each combination varying in size relatively, said series of thumb grip holes extending into said one section tangentially to provide a secure thumb grip.

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No references cited.