Jan. 29, 1946. J. G. HUBBARD 2,393,908

BOWLING BALL

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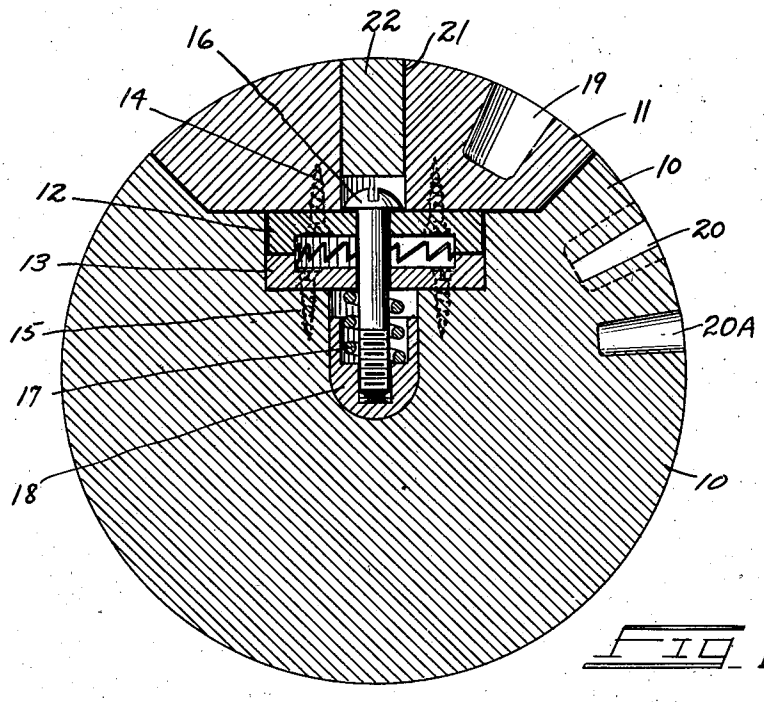


FIG. 1

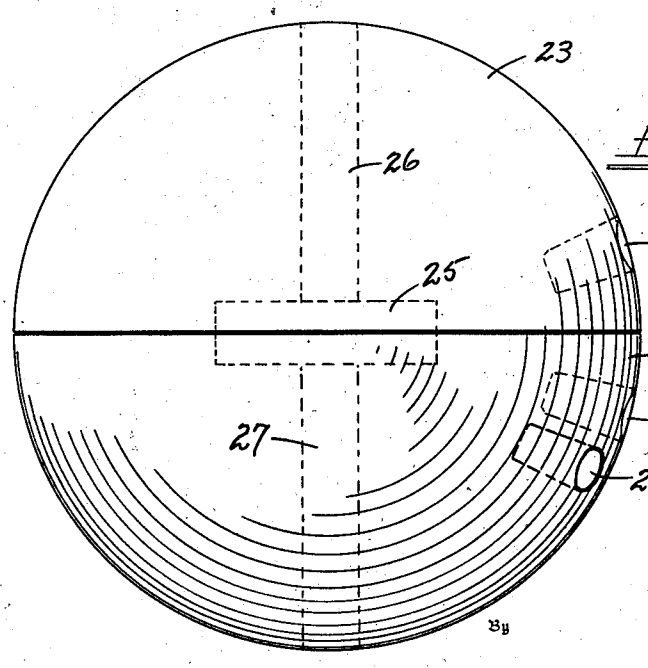


FIG. 2

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BOWLING BALL

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5 Claims. (Cl. 273—63)

This invention relates to a bowling ball.

The principal object of the invention is the provision of a bowling ball with adjustably positioned gripping means.

A further object of the invention is the provision of a bowling ball of customary size, weight and balance provided with a movable segment in which segment one or more of the depressions used for holding the ball are located so as to be adjustable with respect to one or more of the customary holding depressions located in the ball structure proper.

A still further object of the invention is the provision of a bowling ball, the holding or gripping means of which is positioned in two sections thereof, the sections otherwise being approximately duplicates in size and shape and balance.

The invention disclosed herein contemplates the provision of a bowling ball in which the finger and thumb holes, the means by which the ball is normally held, are adjustable with respect to one another thereby providing a bowling ball readily adaptable to any or all sized hands and finger lengths. The bowling ball disclosed herein is otherwise exactly symmetrical, of even balance and capable of being used in bowling in exactly the same manner as conventional bowling balls heretofore employed.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a center line, cross sectional, side elevation of a bowling ball formed in accordance with the invention.

Figure 2 is a plan view of a bowling ball formed in accordance with a modification of the invention, the adjustable portions comprising oppositely disposed halves.

By referring to Figure 1 of the drawing, a cross sectional elevation of a bowling ball will be seen formed in accordance with the invention and it will be observed that the major portion thereof is indicated by the numeral 10 and that a smaller movable portion thereof is indicated by the numeral 11. The portion 11 forms a segment of the ball and is normally held in the position illustrated in Figure 1 whereby the exterior surface of the bowling ball is smooth and unbroken for desirable bowling ball characteristics. In Figure 1 the segment 11 is shown movably affixed to the ball portion 10 by means of a circular ratchet assembly, the upper portion of which is indicated by the numeral 12 and the lower portion by the numeral 13. These two sections of the ratchet assembly are affixed to the segment 11 and the ball portion 10, respectively, by means of a plurality of screws 14 and 15. A bolt 16 is positioned centrally through the ratchet assembly comprising the portions 12 and 13 and extends downwardly toward the centermost section of the ball where it passes through a tensioning spring 17 and threadably engages a movably positioned combined bolt and bushing 18. This construction serves to normally hold the segment 11 tightly against the ball portion 10 although it permits the segment 11 to be rotated as the segment will rise upwardly in accordance with the ratchet 12 and 13 compressing the spring 18 in so doing. This permits the segment to be revolved on the axis of the bolt 16 in order to alter the location of the holding or gripping means 19 therein with respect to the holding or gripping means 20 positioned in the main portion 10 of the ball. It is understood that the conventional number of finger and thumb holes are provided and that either the thumb hole or finger holes may be located in the revolvable segment 11. However, it is believed that the desirable construction is as shown wherein the hole 19 forms the thumb hole while one of the finger holes is represented by the numeral 20, and another by the numeral 20A.

The bolt 16 must be adjusted in assembling the ball and a drilled opening 21 is, therefore, provided through the center of the revolvable segment 16 and is in the finished ball permanently closed with a plug 22, the exterior surface of which conforms exactly with the exterior surface of the segment 11.

It will thus be seen that the construction shown permits the ready adjustment of the holding holes 19 with respect to those indicated by the numeral 20 and thereby permits the grip area on the ball to be varied in accordance with the individual requirements of the user. It is obvious that the balance of the ball may be kept in exact conformance with a solid ball by utilizing materials for the various parts of the ratchet and bolt assembly which will not weigh more than the material of the ball removed for their

positioning. It will be noted in this respect that the center section of the ratchet assembly comprising the portions **12** and **13** is hollow to off-set any additional weight of these parts. The finished ball is, therefore, exactly balanced.

In Figure 2 a plan view of a modified form of the invention will be seen, the modification consisting of positioning the adjusting mechanism heretofore described in connection with Figure 1 on a horizontal axis of the ball which is indicated in Figure 2 by the numerals **23** and **24**, the adjustment mechanism being indicated generally by the numerals **25** and **27** and the plugged opening in the upper half **23** being indicated by the numeral **26**. In the ball formed in accordance with the modification illustrated in Figure 2 the holding means comprising the finger and thumb holes indicated by the numerals **28** and **29**, respectively, are positioned so that some lie on each side of the horizontal axis of the ball and are, therefore, variable with respect to one another by rotating the halves of the ball. The adjustment possible with this modified form of the ball is somewhat different from the adjustment possible with the construction set forth in Figure 1 as the sizes of the movable portions of the ball are different.

It will thus be seen that an adjustable bowling ball has been disclosed wherein the gripping portions comprising the thumb and finger holes may be readily adjusted to suit the individual's requirements.

Having thus described my invention, what I claim is:

1. A bowling ball having a segment thereof rotatably positioned with respect to the remainder, means for holding the rotatable segment in any one of a number of locations with respect to the remainder of the ball, ball gripping means positioned partly in the ball proper and partly in the rotatable segment.

2. A bowling ball comprising a ball, the main ball section having a smaller rotatable segment pivotally positioned therein, means for holding the rotatable section in any one of a number of positions, and tensioning means positioned between the two portions of the ball adapted to hold the same together, ball gripping means provided in the rotatable segment and in the main ball section so as to provide for adjustment therebetween by the rotation of the said segment.

3. A bowling ball comprising a ball section having a smaller segment thereof rotatably affixed thereto, a ratchet positioned between the two segments and means for normally holding the sections in close relation, a thumb hole positioned in the rotatable segment and finger holes positioned in the main ball portion.

4. A bowling ball comprising oppositely disposed equal halves rotatably positioned with respect to one another, tensioning means for holding the halves together and pivot means for permitting the rotation of the halves with respect to one another, ball holding depressions positioned some in one of the halves of the ball and in the other half so as to provide for adjustment of the distances between the said holding depressions.

5. A bowling ball comprising a ball section having a smaller segment thereof rotatably affixed thereto, a ratchet positioned between the two segments and means for normally holding the sections in close relation, finger holes positioned in the rotatable segment and the thumb hole positioned in the main ball portion.

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