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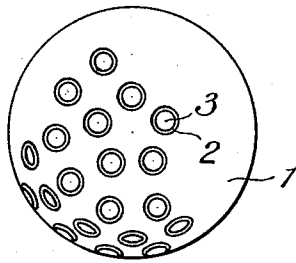
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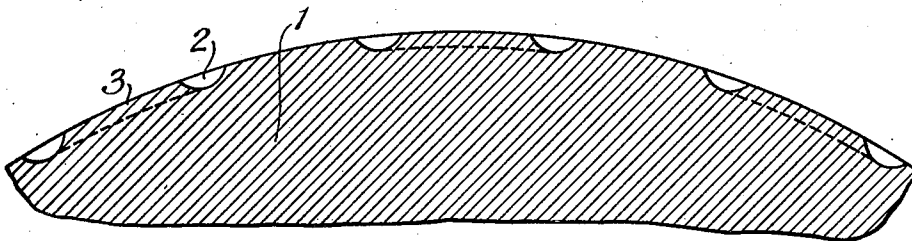
GOLF BALL

Filed May 29, 1928

*Fig. 1.*



*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

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## GOLF BALL.

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This invention relates to improvements in balls, more particularly golf balls and the marking thereon.

From experience it has been discovered that a smooth golf ball does not fly truly nor for any great distance. It has been learned that by marking the surface of a golf ball with indentation both the accuracy and the distance of the flight are improved. It has been the practice to provide golf balls with the well known "dimple" and "mesh" markings for this purpose.

While various markings or indentations have been applied heretofore on golf balls it is the object of this invention to provide a new type of golf ball marking which will increase the length of the flight in the air of the ball and which will also increase the distance which the ball will roll after falling. Other objects of the invention are to provide such a marking as will result in a golf ball which is truer in flight in either head, tail or cross winds. The invention disclosed herein also provides a marking which results in a ball which putts more accurately and which has a greater durability than those heretofore produced.

The preferred embodiment of the invention is described hereinafter and is shown in the accompanying drawings in which:

Fig. 1 is an elevation of the golf ball embodying my invention; and

Fig. 2 is an enlarged fragmentary sectional view showing the shape and size of the marking.

In the drawings, 1 designates a golf ball, which may be of any suitable construction and in the surface, according to the present invention, the cover of the ball is provided with endless, preferably annular recesses 2 illustrated, having, in cross section preferably the shape of the arc of a circle of .0285 inches radius. The annular recesses 2 shown intersect the surface of the sphere to form circles the larger of which has a diameter of .218 inches and the smaller of which has a diameter of .125 inches. The smaller circle defines a projection 3 which is surrounded by the recess 2 and the surface of which lies in the external spherical surface of the ball. The depth of the annular recesses is .012 inches and, in the ball shown, the number of recesses is 84, although this number may be varied. The above di-

mensions are taken from the ball before painting the thickness of which of course varies.

In providing markings for a golf ball, it is desirable to so design and arrange the marking as to provide closed recesses which will prevent the air in the recess from flowing along the recess. It is also desirable to provide a marking such that a large extent of edge is presented without unduly diminishing the area of the surface of the ball which lies in the spherical surface. These desiderata are satisfied in the present invention by providing a projection in the recess 2 which has a sharp edge therearound so that each recess provides two endless and preferably concentric sharp edges which is believed to be of considerable advantage when compared with such a marking as a dimple or mesh which provides only one edge for each recess. The relatively great area lying in the spherical surface of the ball is obtained in the present design by the use of the projections in the centers of the annular recesses and by making the endless recesses narrow relative their length and not too numerous. This relatively great surface area of the ball is of value in that the force of the blow from the club, when the ball is struck, is distributed over a larger surface area than is the case with balls employing other designs with the result that the ball is rendered more durable. This relatively great surface area of the ball is also of great advantage in that it gives a more nearly perfectly spherical surface which is desirable in putting in that it enables the ball to roll further and also results in more accurate putting.

The diameter of golf balls has been fixed at a maximum of approximately 1.63 inches and a perfectly smooth ball of that diameter would have a surface area of approximately 8.4 square inches. In the ball of my invention the area of the undepressed portion of the surface of the sphere is approximately 6.3 square inches while the area of the spherical surface which is occupied by the depressions or recesses is approximately 2.1 square inches.

From the values of the areas above given it is seen that with my marking a surface is presented to the club which is about 75% of the maximum possible area, that is the

area of a perfectly smooth golf ball, while the area of the depressed portion of the surface is only about 25% of the equivalent perfectly smooth spherical surface. Thus it is seen that my marking provides a ball having a relatively great area presented as compared with golf balls having markings such as have heretofore been used.

It has been shown by tests that a golf ball provided with the marking of this invention has a flight of from 5-10 yards greater than the same type of ball provided with the old markings and that it will roll from 10-25 yards further because apparently of its more nearly perfect or complete spherical surface.

While a specific embodiment of the invention has been disclosed herein it is not intended to limit the invention thereto, as a wide variety of endless markings may be employed as also the size, shape, and number of the markings.

For an understanding of the scope of the invention reference should be made to the claims.

Having thus described my invention, what I claim and desire to protect by Letters Patent is:

1. A golf ball having a cover provided with a plurality of endless recesses each surrounding a projection whose free surface lies in the external spherical surface of the ball, both side walls of said recesses meeting the spherical external surface of the ball at an obtuse angle to provide relatively sharp edges, and the maximum width of said recesses being approximately four times the depth.

2. A golf ball having a cover provided with a plurality of endless recesses each surrounding a projection whose free surface lies in the external spherical surface of the ball, the side walls defining said recesses meeting the external spherical surface at an obtuse angle to provide sharp edges, the outside diameter of said recesses being less than twice the inside diameter of said recesses.

3. A golf ball having a cover provided with a plurality of endless recesses each sur-

rounding a projection whose free surface lies in the external spherical surface of the ball, the outside diameter of said recesses before painting being approximately .22 of an inch, the inside diameter of said recesses being approximately .12 of an inch, and the depth of said recesses being approximately .01 of an inch.

4. A golf ball having a cover provided with a plurality of endless recesses each surrounding a projection whose free surface lies in the external spherical surface of the ball, the area of the external non-depressed spherical surface of the ball before painting being about three times the area of the spherical surface occupied by the recesses.

5. A golf ball having a cover provided with a plurality of endless recesses each surrounding a projection whose free surface lies in the external spherical surface of the ball, the ball having a diameter of approximately 1.63" and an undepressed spherical surface of an area of approximately 6.3 square inches.

6. A golf ball having a cover provided with a plurality of endless recesses each surrounding a projection whose free surface lies in the external spherical surface of the ball, the ball having a diameter of approximately 1.63" and the endless recesses occupying not more than 30% of the spherical surface of the ball.

7. A golf ball, the spherical surface of which is provided with annular recesses, the outer walls of which are concavely curved, the tops of the portions within the recesses lying in the spherical surface of the ball.

8. A golf ball, the spherical surface of which is provided with annular recesses, the inner and outer walls of which are curved from the spherical surface of the ball to the bottoms of the recesses.

9. A golf ball, the spherical surface of which is provided with annular recesses having concavely curved outer walls.

Signed at New York, county and State of New York, this 28th day of May, 1928.

GEORGE L. FOTHERINGHAM.