

[54] **GOLF PUTTER**
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[22] Filed: **Aug. 3, 1972**
[21] Appl. No.: **277,807**
[52] U.S. Cl. **273/164, 273/78, 273/167 R, 273/167 F, 273/183 D**
[51] Int. Cl. **A63b 53/04**
[58] Field of Search **273/77 R, 78, 80 R, 80 C, 273/163-175, 193, 194, 183 D**

3,333,854	8/1967	White	273/173 X
3,708,172	1/1973	Rango	273/164
3,779,398	12/1973	Hunter	273/175 X
D161,790	1/1951	Sappington	273/167 D X

FOREIGN PATENTS OR APPLICATIONS

8,954	5/1893	Great Britain	273/167 R
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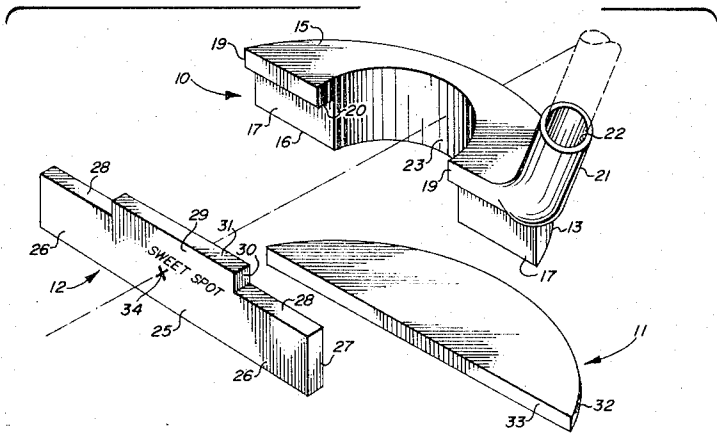
ABSTRACT

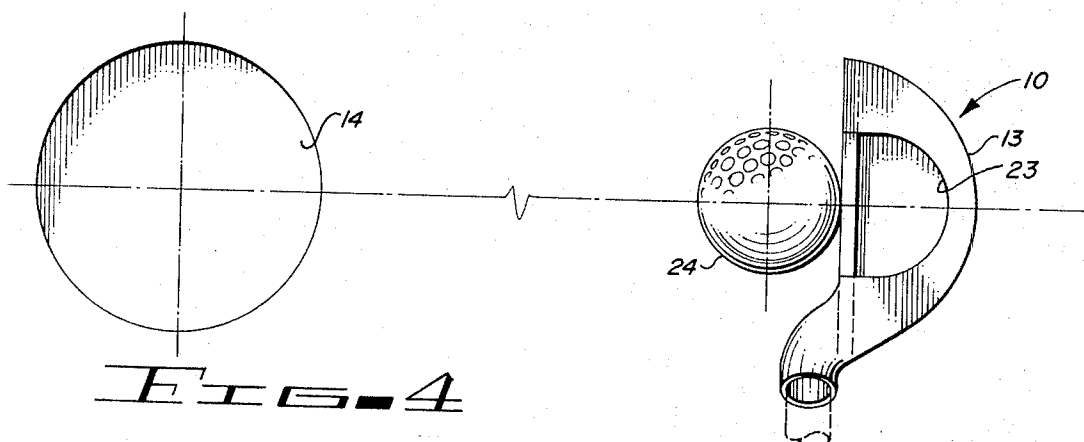
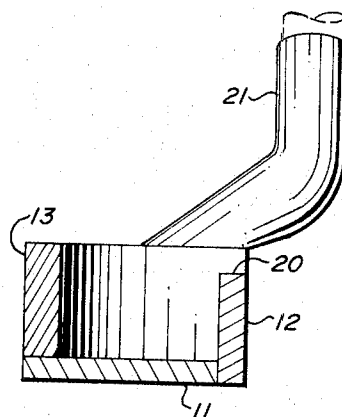
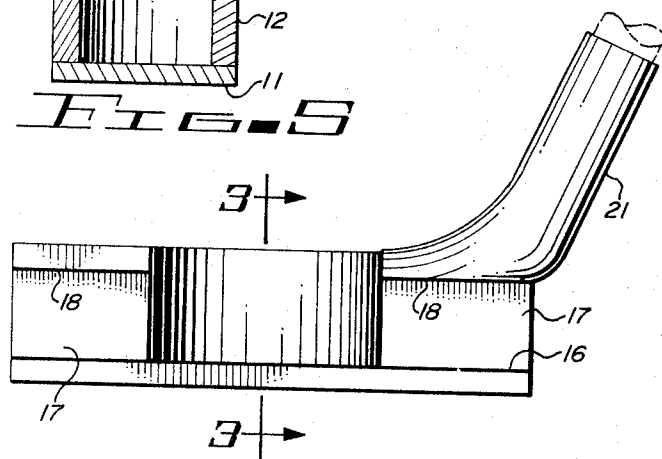
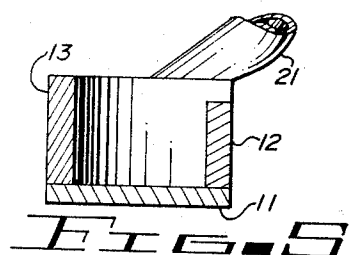
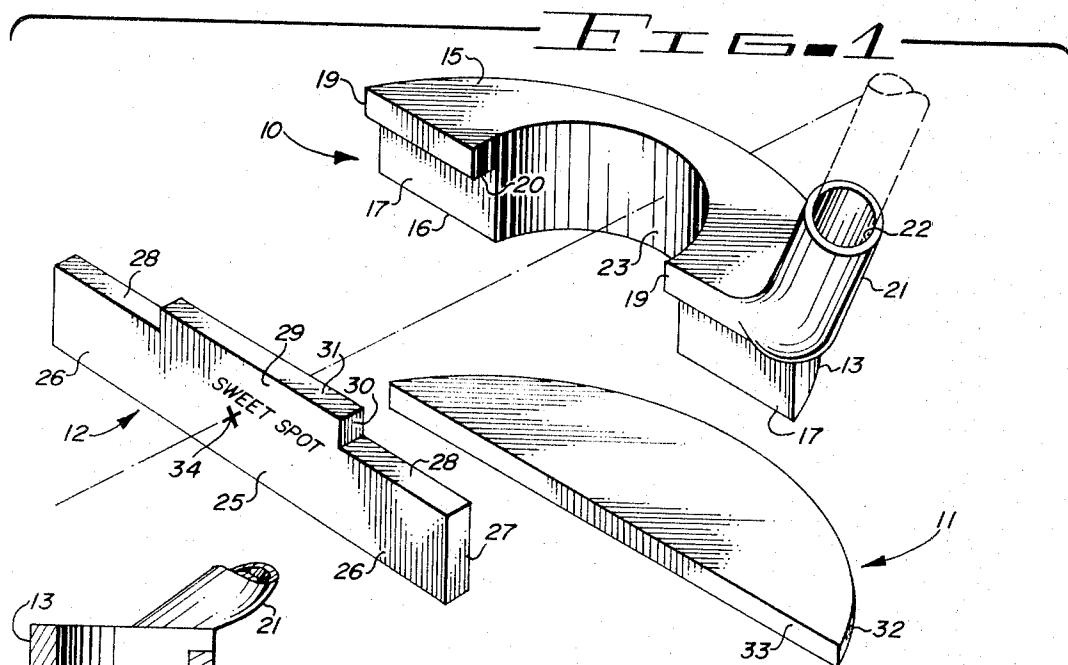
This specification discloses a golf putter having a head comprising three components. These are a main body, a face plate and a sole plate. The body has a rear surface that is a segment of a cylinder having a diameter substantially the same as that of a standard putting green cup. The body has a stepped front face into which opens a recess defined by a segment of a cylindrical surface of a diameter substantially the same as that of a standard golf ball. A plane bisecting the rear and recess surfaces passes through their centers and the sweet spot on the face plate.

6 Claims, 5 Drawing Figures

[56] **References Cited**

UNITED STATES PATENTS			
1,485,685	3/1924	McMahon	273/173 X
1,589,363	6/1926	Butchart	273/172
1,690,388	11/1928	Waldron	273/167 G
1,703,199	2/1929	McClure	273/164 X
1,960,110	5/1934	Iles	273/162 E
2,056,335	10/1936	Wettlaufer	273/171 X
2,213,190	9/1940	Haverbach	273/167 E X
2,445,718	7/1948	Sternberg et al.	273/164 UX
3,042,405	7/1962	Solheim	273/80 R
3,240,497	3/1966	Taylor	273/173 X





GOLF PUTTER

The present invention relates to golf putters and is concerned primarily with a putter head which is designed to aid a player in lining up a putt with respect to a putting green cup.

BACKGROUND OF THE INVENTION

Much inventive and developmental work has been directed to the end of aiding a golfer in making a putt. As a general rule, it may be stated that this involves two factors. One of these is the balance and distribution of weight in the head to facilitate the making of a smooth, even putting stroke. The other involves including in the head either a structural design or markings which will assist the player in lining up a putt.

Every putter head includes on the face which engages the ball a so-called "sweet spot." This is the spot where the head should engage the ball to provide the best effect. In many putters, this spot is marked by a cross, and even if not so marked, it is inherently present. It is important that the ball-engaging face of a putter be nicely finished to provide a smooth, even surface which is not marred by dents or other disfiguring elements.

The cups of putting greens are now standardized as to their size as determined by the diameter thereof. Golf balls are also fairly well standardized as to their diametric size. At the present time, it is known to provide a putter including a head having a front face including the sweet spot above mentioned and a curved rear face defined by an arc of a circle, the diameter of which is substantially the same as that of a standard putting green cup. The head is formed with a recess which opens into this rear face and which is defined by a circular surface that is a segment of a cylindrical surface having a diameter substantially the same as that of a standard golf ball. A plane bisecting the arcs of the circular rear face and the recess passes through the sweet spot. A putter of this type has proven to be greatly beneficial in aiding a golfer in lining up his putting stroke with respect to the ball and the cup. The aforesaid putter is fully disclosed in the application of James T. Hunter, Ser. No. 119,301, filed Feb. 26, 1971 and entitled "Golf Putter Head" and now U.S. Pat. No. 3,779,398.

The putter head above described is an integral one-piece affair and its manufacture presents certain problems in providing the proper distribution of weight with respect to the sweet spot and also in providing a nicely finished putting face. Moreover, while the two arcs which intersect on the rear surface afford assistance to the golfer in lining up a putt to a noticeable degree, it is believed that this property of the head may be improved.

OBJECTS OF THE INVENTION

With the foregoing conditions in mind, the present invention has in view the following objectives:

1. To provide a golf putter head comprising three components which are susceptible of individual manufacture and which are subsequently assembled into the head structure.

2. To provide a golf putter head of the type noted which comprises a main body, a sole plate and a face plate.

3. To provide, in a golf putter head of the character aforesaid, a body having a curved rear surface that is

a segment of a cylinder having a diameter substantially the same as that of a standard golf cup, and a stepped front face into which opens a recess defined by a cylindrical surface that is a segment of a cylinder, the diameter of which is substantially the same as a standard golf ball.

4. To provide a golf putter head of the type noted in which a plane bisecting the rear and recess surfaces passes through the sweet spot on the face plate.

5. To provide, in a golf putter head of the kind described, a body having a front face that is divided into two sections by the recess which opens therein, with an overhanging shoulder at the upper edge of each section, with the face plate having wing portions in face-to-face engagement with the sections of the front face of the body and an upward central extension that is received between said shoulders.

Various other more detailed objects and advantages of the invention such as arise in connection with carrying out the above ideas in a practical embodiment will, in part, become apparent, and, in part, be hereafter stated as the description of the invention proceeds.

SUMMARY OF THE INVENTION

The foregoing objects are achieved by providing a putter head comprising a main body, a sole plate and a face plate. The body has a rear segmental, cylindrical surface, the diameter of which is substantially the same as that of a standard golf cup. The body has a front face into which opens a segmental, cylindrical surface having a diameter substantially the same as that of a standard golf ball and which divides the front face of the body into two sections of substantially the same size and shape. At the top of each of these sections there is a forwardly extending flange presenting an overhanging shoulder. The face plate has wing portions which engage the sections of the face of the body beneath said overhanging shoulders and a central upward extension that is positioned between the flanges. The face plate has a sweet spot and a vertical plane bisecting the segmental surfaces passes through this sweet spot. The sole plate has a rear edge surface of a size and curvature corresponding to that of the body and a straight front edge which aligns with the face sections of the body.

For a full and more complete understanding of the invention, reference may be had to the following description and the accompanying drawing wherein:

FIG. 1 is a perspective illustrating the components of the golf putter head of this invention in exploded relation;

FIG. 2 is a view in front elevation of the body and sole plate as assembled, but with the face plate omitted;

FIG. 3 is a transverse vertical section of the putter head as fully assembled and as taken along the plane of the line 3—3 of FIG. 2; with the face plate added

FIG. 4 is a top plan view of the putter head and illustrating somewhat diagrammatically a golf ball and a putting green cup, and

FIG. 5 is a section of a modification.

DESCRIPTION OF THE EMBODIMENT

Referring now to the drawing, wherein like reference characters denote corresponding elements throughout the several views, and first more particularly to FIG. 1, the golf putter head of this invention is shown as com-

prising a main body which is identified in its entirety by the reference character 10, a sole plate 11 and a face plate 12. At this point, it is well to note that these elements 10, 11 and 12 may be made of any material having the required specific gravity, with metal being indicated as the preferred material. Under ordinary conditions, body 10 and face plate 12 will be of the same material, and one having a high specific gravity such as brass, while the sole plate 11 is of a lighter metal such as aluminum.

Body 10 presents a rear surface 13 which is a segment of a cylinder having the diameter of a standard putting green cup such as represented at 14 in FIG. 4. Body 10 has a flat upper face 15, a flat lower face 16 and a front face comprising two sections 17. Each of the face sections 17 terminates at its upper end in edge 18. Body 10 is continued forwardly of these edges 18 to provide flanges 19 which present shoulders 20 which overhang face sections 17.

Integrally joined with body 10 is a hosel 21 which presents a socket 22 which receives the end of a shaft, as depicted in broken lines throughout the views.

Body 10 is formed with a central recess which opens into its front face between the face sections 17. This recess is defined by a segmental, cylindrical surface 23 having a diameter substantially the same as that of a standard golf ball which is represented at 24 in FIG. 4.

Face plate 12 includes a front face 25 which is accurately machined and finished to provide a smooth surface uninterrupted by dents or other mars. It includes wings 26 each having a rear face 27 in face-to-face engagement with one of the face sections 17. Each wing 26 also includes a top edge surface 28 which engages one of the shoulders 20. Between these top edge surfaces 28 is a central upward extension 29 defined by end edges 30 and a top surface 31. When assembled with body 10, end surfaces 30 engage the ends of flanges 19 and top surface 31 is flush with the top surface 15 of body 10.

A sole plate 11 takes the form of a segment of a disc defined by rear curved surface 32 of the same diameter as segmental rear surface 13 of body 10 and a straight front edge surface 33 which aligns with the face sections 17. When assembled, face plate 12 overlies sole plate 11 and engages front edge surface 33.

Front face 25 of face plate 12 has a sweet spot 34 and when the components are assembled, a vertical plane bisecting the segmental, cylindrical surfaces 13 and 23 passes through this sweet spot 34. Stating it another way, it will be noted that segmental, cylindrical surface 23 is continued over the ends of flanges 19 and these continued portions intersect front face 25 of face plate 12. Sweet spot 34 is midway between these points of intersection.

It will be understood that the so-called sweet spot 34 is the point on the face plate which will percussively engage the ball with the best effects. This term is now commonly used by golfers, both professional and amateur, with this meaning imparted thereto. The term "sweet spot" is more accurately defined as basically the center of percussion and is based upon the weight distribution in the club head, and common practice dictates that the center of weight distribution and the geometric center of the club face should coincide.

It will be appreciated that by manufacturing the body 10, sole plate 11 and face plate 12 as individual ele-

ments, they may be readily produced with the proper distribution of weight therein and with front face 25 of face plate 12 accurately finished. The components are then assembled and may be secured together in any preferred manner, such as by using an adhesive, solder or fastening elements, such as metal screws.

FIG. 5 illustrates a slightly modified form of the relation between the front portion of the sole plate and the face plate. In this form, face plate 12 has a height that is less than the height of this element in the embodiment of FIGS. 1, 2 and 3, with the difference being the thickness of the sole plate 11. Front edge surface 33 of the latter aligns with and is flushed with front surface 25 of face plate 12.

In using the putter, the player avails of the segmental, cylindrical surfaces 13 and 23 in lining up the putter head with respect to putting green cup 14 and ball 24. The segmental, cylindrical surfaces are particularly helpful in this respect, because, with the sole plate 11 resting on the green, they should be substantially vertical and the proper relation with the ball is readily ascertained.

While a preferred specific embodiment is herein disclosed, it is to be clearly understood that the invention is not to be limited to the exact construction, materials and devices illustrated and described, because various modifications of these details may be provided in putting the invention into practice.

What is claimed is:

1. In a golf putter, a head comprising:

a. a main solid body portion having an undersurface, a top surface, a rear segmental, cylindrical surface extending between said top and under surfaces and defined by a diameter substantially the same as that of a standard putting green cup, a pair of spaced substantially flat, coplanar face sections between which opens a recess defined by a segmental, cylindrical surface of a diameter substantially the same as that of a standard golf ball, a flange extending forwardly of each of said face sections and presenting a shoulder overhanging each of said sections, the top surface of said flanges being an extension of said top surface of said body portion, and a hosel integrally joined to said body at the top surface thereof;

b. an elongated substantially flat face plate having a finished front face with a sweet spot and a rear flat surface, a pair of wings, each of said wings having a top edge surface which engages said overhanging shoulders, said rear flat surfaces of each wing being in face-to-face engagement with said face sections, and a central portion upwardly extending from said top edge surfaces and upwardly extending between said flanges and being flush with the side surfaces of said flanges, said face plate and the front surfaces of said flanges being substantially coplanar and forming the front face of said putter;

c. a sole plate having a rear segmental, cylindrical surface of the same diameter as that of the rear surface of the body with which it aligns and a straight front edge surface below said face sections, and

d. means securing said body portion, face plate and sole plate in assembled relation,

said body and face plate being related so that a vertical plane bisecting said segmental, cylindrical surfaces passes through said sweet spot.

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2. The golf putter head of claim 1 in which said main body, face plate and sole plate are of metal.

3. The golf putter head of claim 2 in which the sole plate is of a metal of a lower specific gravity than that of said main body and face plate.

4. The golf putter head of claim 1 in which means for securing the body, face plate and sole plate together is an adhesive.

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5. The golf putter head of claim 1 in which the front edge of the sole plate aligns with the face sections of the body.

6. The golf putter head of claim 1 in which the front edge of the sole plate aligns with the front face of the face plate.

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