Oct. 30, 1962 E. S. GIZA 3,061,310

HOLLOW HEADED GOLF PUTTER

Filed Sept. 4, 1959

Fig. 1.

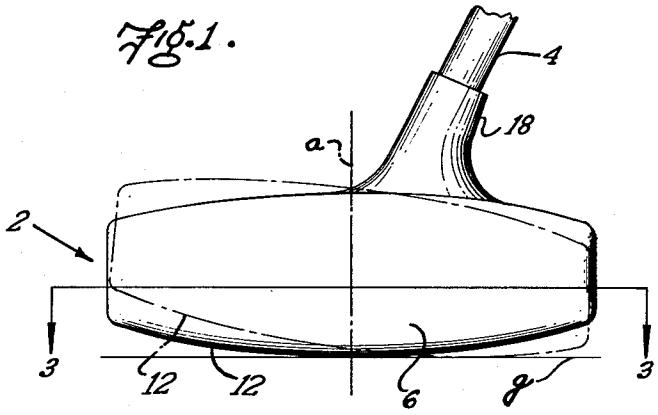


Fig. 2.

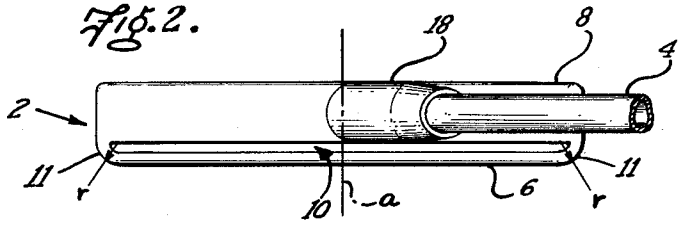


Fig. 3.

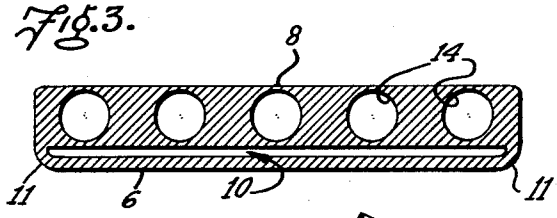
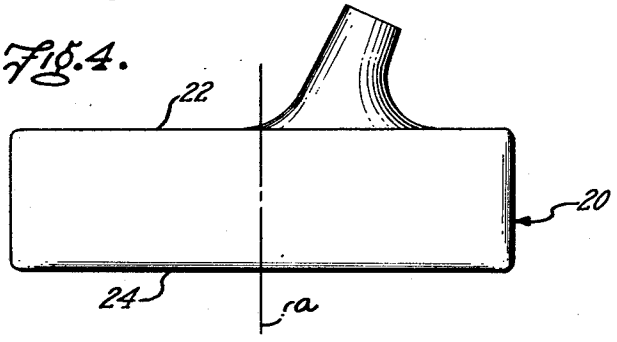


Fig. 4.



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HOLLOW HEADED GOLF PUTTER

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2 Claims. (Cl. 273—78)

This invention relates to golf clubs and more particularly to an improved type of putter.

This application is a continuation in part of my earlier filed application, Serial No. 774,641, filed November 18, 1958, now abandoned.

In the game of golf, the most exacting and difficult part of the game for most golfers is putting. This is indicated by the fact that many golfers change their putters several times during the course of a golf season in an attempt to discover a putter with the "right feel." In the construction of putters as well as other types of golf clubs, it is well recognized that the degree of resilience of the club head plays an important role in the accuracy and distance imparted to a golf ball by the club head. Club head resilience also has a great effect on the "feel" of a putter in striking a golf ball.

It is the principal object of this invention to provide an improved head for putters and the like.

These and other objects and advantages of this invention will be more readily apparent from a reading of the following description with reference to the following drawing:

FIG. 1 is a front elevation of putter head embodying this invention;

FIG. 2 is a plan view of the putter head shown in FIG. 1;

FIG. 3 is a section taken along line 3—3 of FIG. 1; and

FIG. 4 is a modified form of the putter head shown in FIGS. 1–3.

Referring now in detail to the drawing, **2** indicates generally the head of a golf club of the putter type and **4** indicates the putter shaft. The club head **2** is in the form of an integral casting having an upright, resilient front wall **6**, and a block portion or rear wall **8**, spaced rearwardly of the front wall, the space being indicated at **10** in FIG. 2. The front wall **6** of the putter head provides the ball engaging wall or striking face of the club head. The outer end portions of the front wall are cylindrically curved rearwardly to the block **8**, as indicated at **11**. The curved wall portions are of equal radius *r* and of generally the same wall thickness as the front wall **6**. The club head is of symmetrical configuration about a vertical plane *a* bisecting the front wall **6** and the block **8**. The perfect symmetry of the club head, particularly its front wall **6**, allows for symmetrical deflection of the front wall when a ball is struck by the center of the club face. This symmetrical configuration insures that a ball properly struck will travel in the desired direction. The block **8** and the hitting wall **6** are both of generally the same configuration and of integral construction. Moreover, the ball engaging wall **6** is of generally uniform thickness.

Since the club head is symmetrical with respect to the plane of symmetry *a* and since the ball engaging wall **6** is resilient and of uniform thickness from end to end, the flexure of the hitting wall in striking a ball is uniformly distributed over the hitting wall and uniformly transmitted to the block portion **8**. This results in a reaction of the hitting wall which is imparted to the ball to project it accurately along a desired line of travel. It can be readily apreciated that a manufacturer may produce a plurality of types of putter heads such as described, having varying degrees of resilience by varying

the thickness of the hitting wall. Even though the upper and lower surfaces of the putter, shown in FIG. 1, are of convex curvature, the hitting wall is nevertheless symmetrical with respect to the plane *a*. Thus when a ball is struck by the center of the wall **6** it is uniformly deflected insuring a high degree of accuracy.

As described above the extent of deflection of the wall **6** may be varied by the manufacturer by producing putters having walls of different thickness, so also may the "feel" of the putter be changed in this manner. Furthermore, the relative thickness of the ball engaging portion **6** and the block engaging the putter may also be varied to give a different "feel."

As seen in FIG. 1 the undersurface **12** of the putter is of convex curvature throughout its length and thus makes only tangential contact with the ground. This minimizes the tendency of "scuffing." This curved undersurface also enables the putter head to be tilted relative to the ground *g* for changing the inclination of the shaft **4** in accordance with the personal preference of the individual golfer. As shown in FIG. 1, even though the club head is tilted the advantage of tangential contact is maintained.

The upper surface of the club head is also of convex curvature opposite to the curvature of the lower surface. Thus, the front wall **6** is of absolutely symmetrical configuration about the hitting line and insures uniform deflection of the front wall, as described above.

As seen in FIG. 3, the block **8** may be provided with a plurality of holes **14** to give the club head a desired weight. The holes **14** furthermore provide means for insertion of weights, if the individual golfer desires a heavier putter.

Means for receiving the golf club shaft **4** comprising an upwardly extending boss **18** into which the lower end portion of the shaft may be fitted and secured in conventional fashion.

In FIG. 4 a modified form of club head **20** embodying this invention is shown. In this form the upper and lower surfaces **22** and **24** respectively are generally straight and parallel. The club head **20** is in all other respects identical to the club head shown in FIGS. 1–3. The undersurface **24** of the club head **20** is designed to engage the ground in line contact as opposed to the tangential contact of the putter shown in FIG. 1. Many golfers will prefer this form of my invention since it will insure uniform angular disposition of the golf club shaft relative to the ground.

Not only does the putter disclosed in this application have a more sensitive feel than those presently available, but also emits a bell-like tone when a ball is struck. This tone is of generally pleasing character which many golfers will find psychologically advantageous, somewhat in the nature of the sharp "crack" emitted by a well-hit drive.

Having thus described my invention what is claimed is:

1. A golf club putter head comprising a relatively thin, resilient, ball engaging wall, the forward face of said wall providing the striking face of said club head, a block, having generally the same configuration as said wall, disposed in spaced opposed relation to the after-surface of said ball engaging wall, said block and ball engaging wall being of integral construction, said wall having curved outer end portions of equal radius extending to the outer ends of said block, said outer end portions being coextensive with the outer ends of said block, said wall being of generally uniform thickness, said block being provided with means for receiving a golf club shaft inwardly of the curved end walls, the plane of symmetry of the club head, including said wall and block, being defined by a vertical plane normal to and bisecting said front wall.

2. A golf club head as set forth in claim 1 in which the upper and lower surfaces of both the ball engaging wall and the block are of opposite convex curvature enabling varying tangential contact of the lower surface of the club head with the ground.

References Cited in the file of this patent

UNITED STATES PATENTS

550,976	Jennings	Dec. 10, 1895
777,400	Clark	Dec. 13, 1904
1,250,296	Fitzjohn et al.	Dec. 18, 1917
1,334,189	Swanson	Mar. 16, 1920
1,695,598	MacClain	Dec. 18, 1928

FOREIGN PATENTS

1,554	Great Britain	1895
4,291	Great Britain	1896
10,497	Great Britain	1907
379,032	Great Britain	1932