

US 20060030424A1

# (19) United States (12) Patent Application Publication (10) Pub. No.: US 2006/0030424 A1 Su

## Feb. 9, 2006 (43) Pub. Date:

## (54) GOLF CLUB HEAD STRIKING FACE

(76) Inventor: Charles Su, Tainan Hsien (TW)

Correspondence Address: NIKOLAI & MERSEREAU, P.A. 900 SECOND AVENUE SOUTH **SUITE 820** MINNEAPOLIS, MN 55402 (US)

- 10/914,315 (21) Appl. No.:
- (22) Filed: Aug. 9, 2004

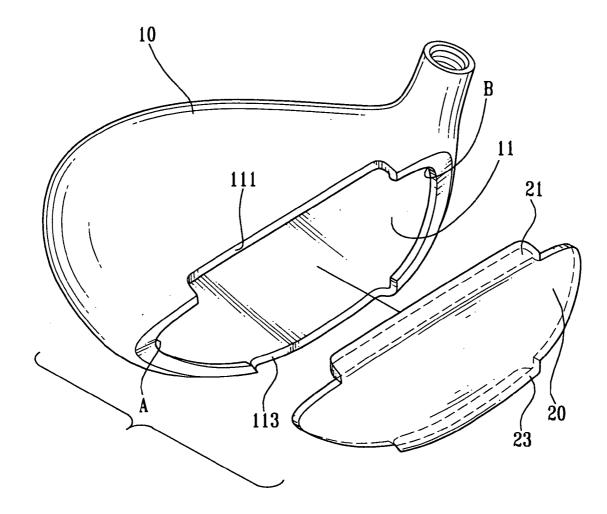
## **Publication Classification**

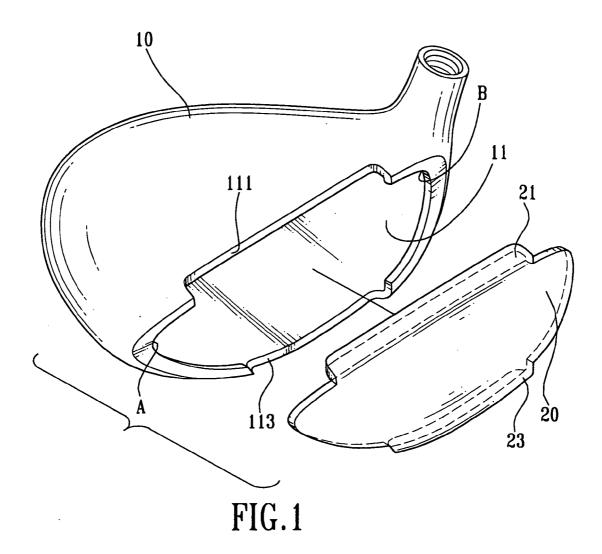
(51) Int. Cl. (2006.01)A63B 53/04

## (52) U.S. Cl. ..... 473/342; 473/345

ABSTRACT (57)

A golf club includes a body having an opening with a first cutout defined in a periphery defining the opening and a second cutout defined in the periphery defining the opening and opposite to the first cutout and a striking face securely received in the opening and having an upper ledge corresponding to and abutting a periphery defining the first cutout and a lower ledge corresponding to and abutting a periphery defining the second cutout so that the striking face has a uniform thickness after the striking face is soldered to the body.





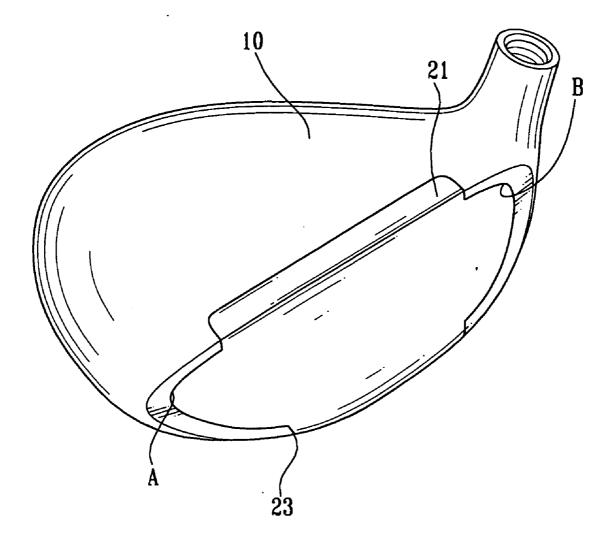


FIG.2

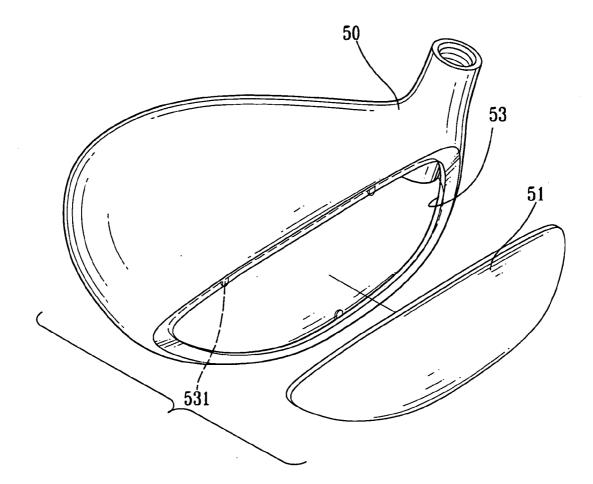


FIG.3 PRIOR ART

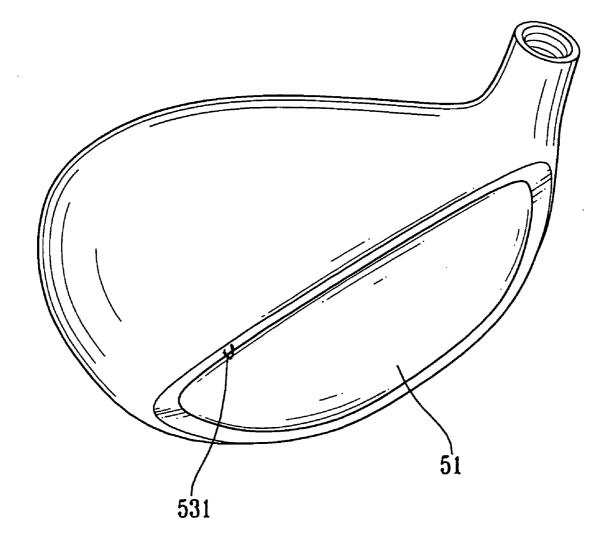
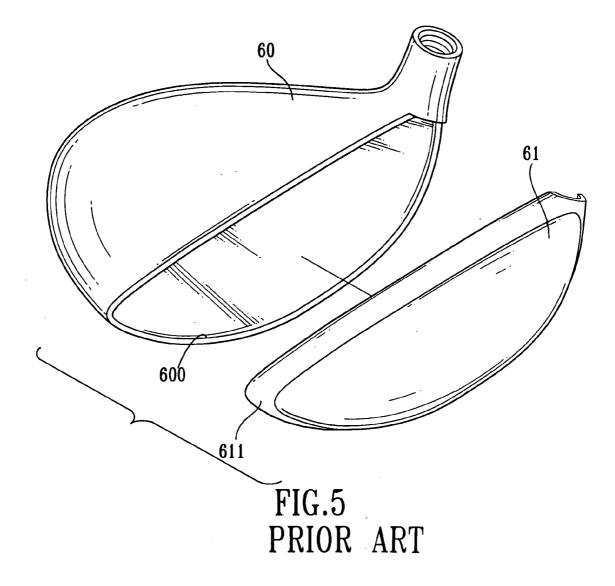


FIG.4 PRIOR ART



## **GOLF CLUB HEAD STRIKING FACE**

#### BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

**[0002]** The present invention relates to a golf club head, and more particularly to a striking face of the golf club head to ensure a smooth face on the striking face of the golf club head.

[0003] 2. Description of Related Art

[0004] With reference to FIGS. 3 and 4, a first embodiment of a conventional golf club head is shown and has a body (50) with a striking face (51). Conventionally, the body (50) has an opening (53) defined to correspond to the striking face (51) such that the striking face (51) is able to be received in the opening (53) with the peripheral edge of the striking face (51) securely soldered to a periphery defining the opening (53). Furthermore, in order to position the striking face (51) in the opening (53) multiple stubs (531) are formed on the periphery defining the opening (53) so that after the striking face (51) is received in the opening (53) with the periphery of the striking face engaging with the periphery defining the opening (53), an inner side of the striking face (51) abuts the stubs (531). Thereafter the soldering process to fix the striking face (51) to the body (50) is able to properly position the striking face (51) in relation to the body (50).

[0005] However, after the striking face (51) is soldered to the body (50), the residue of the solder inside the body (50)influences the overall thickness of the striking face (51) such that when a golfer uses this kind of golf club to hit a golf ball and misses the sweet spot on the striking face (51), the trajectory of the golf ball is varied depending on the thickness of the striking face (51) at which the striking face (51)engages with the golf ball. Thus the golfer has difficulties controlling how far the golf ball goes.

[0006] With reference to FIG. 5, it is noted that a second embodiment of a conventional golf club head has a body (60) and a striking face (61). The body (60) has an opening (600) defined in a side face of the body (60) to correspond to the striking face (61). Thus when in assembly, the striking face (61) is received in the opening (600) with the peripheral edge of the striking face (61) engaging with a periphery defining the opening (600). Thereafter the operator is able to solder the periphery defining the opening (600) to the peripheral edge of the striking face (61). Because the striking face (61) has a slanted peripheral flange (611) with respect to and extending out from the striking face (61), the solder along the slanted peripheral flange (611) of the striking face (61) and the periphery of the opening (600) will not influence the thickness of the striking face (61) so as to maintain uniform thickness of the striking face (61) and thus the golfer is able to control better how far the golf ball goes even if the sweet spot of the striking face (61) is missed. However, there is no positioning mechanism for the striking face relative to the body so that the striking face may not be engaged with the body properly.

**[0007]** To overcome the shortcomings, the present invention tends to provide an improved golf club striking face to mitigate the aforementioned problems.

#### SUMMARY OF THE INVENTION

**[0008]** The primary objective of the present invention is to provide an improved golf club head striking face having an

upper ledge extending inclinedly relative to the striking face and a lower ledge extending oppositely from the striking face relative to the upper ledge to correspond to a first cutout and a second cutout defined in a periphery defining an opening in the golf head body so that when the striking face is to be soldered to the body, the upper ledge and the lower ledge respectively abut a periphery defining the first cutout and the second cutout to provide a positioning effect to the striking face relative to the body. Due to the formation of the upper ledge and the lower ledge, the first cutout and the second cutout, the striking face is securely positioned in the opening of the body.

**[0009]** Another objective of the present invention is that because of the upper ledge and the lower edge, the transverse length of the striking face is able to extend to maximum to reach the toe and heel of the body so that the overall area of the striking face is preserved without any solder residue influencing the thickness of the striking face.

**[0010]** Other objects, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0011] FIG. 1** is an exploded perspective view of the golf club head striking face of the present invention;

**[0012]** FIG. 2 is a perspective view of the present invention;

**[0013]** FIG. **3** is an exploded perspective view of a first embodiment of a conventional golf club head;

**[0014] FIG. 4** is a perspective view of the first embodiment of the conventional golf club head; and

**[0015] FIG. 5** is an exploded perspective view of the second embodiment of the conventional golf club head.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0016] With reference to FIG. 1, the golf club head in accordance with the present invention has a body (10) with an opening (11). A first cutout (111) and a second cutout (113) are defined in opposed side faces defining the opening (11). A striking face (20) is provided with an upper ledge (21) and a lower ledge (23) both inclinedly extending from opposed sides of the striking face (20) to respectively correspond to the first cutout (111) and the second cutout (113).

[0017] It is to be noted that in order to maintain the integrity of the striking face (20), the opening (11) has a transverse length reaching to a toe (A) and a heel (B) of the body (10). To mate with the configuration of the opening (11), the striking face (20) has a transverse length corresponding to the transverse length of the opening (11).

[0018] With reference to FIG. 2 and still using FIG. 1 for reference, when the striking face (20) is to be received in the opening (11), the upper ledge (21) and the lower ledge (23) abut a periphery defining the first cutout (111) and a periphery defining the second cutout (113) respectively to provide a positioning effect to the striking face (20) in relation to the body (10). Thereafter, the operator is able to solder the

striking face (20) to the body (10) without altering the thickness of the striking face (20) and thus the golfer is able to easily control the golf ball's distance. Preferably, the striking face (20) is made of titanium alloy or high strength steel. It is found that 5-25 mm is the best extension range of how far the upper ledge (21) extends from the periphery of the striking face (20) and 2-10 mm is the best extension range of how far the lower ledge (23) extends from the opposite periphery of the striking face (20).

**[0019]** From the aforementioned description, it is learned that with the upper ledge corresponding to the first cutout and the lower ledge corresponding to the second cutout, the striking face is securely positioned in the opening **(11)** and thus the positioning stubs as described in the conventional golf club head are eliminated. Furthermore, due to the slanted feature of the upper ledge and the lower ledge and the extended transverse length of the striking face, the overall thickness of the striking face is uniform such that the golfer will not have the trouble with prior art striking faces in regards to controlling how far the golf ball goes if the force applied to the golf ball is the same.

**[0020]** It is to be understood, however, that even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only, and changes may be made in detail, especially in matters of shape, size, and arrangement of parts within the principles of the inven-

tion to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A golf club head comprising:

- a body having an opening with a first cutout defined in a periphery defining the opening and a second cutout defined in the periphery defining the opening and opposite to the first cutout; and
- a striking face securely received in the opening and having an upper ledge corresponding to and abutting a periphery defining the first cutout and a lower ledge corresponding to and abutting a periphery defining the second cutout so that the striking face has a uniform thickness after the striking face is soldered to the body.

2. The golf club head as claimed in claim 1, wherein the upper ledge and the lower ledge are slanted in relation to the striking face.

**3**. The golf club head as claimed in claim 2, wherein the opening has a transverse length reaching to a toe and a heel of the body.

**4**. The golf club head as claimed in claim 3, wherein the upper ledge extends outwardly from the striking face for 5-25 mm and the lower ledge extends outwardly from the striking face for 2-10 mm.

\* \* \* \* \*