A sole with a shaft adjusting hole for a golf club head includes a recessed portion adjacent to a striking portion and a root of the golf club head. The recessed portion includes a shaft adjusting hole. The sole of the golf club head is a plate separate from the striking portion and a crown of the golf club head. The shaft adjusting hole includes a bottom wall and a peripheral wall extending upward from the bottom wall. The peripheral wall includes a plurality of inclined plane faces.
SOLE WITH A SHAFT ADJUSTING HOLE FOR A GOLF CLUB HEAD

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention
[0002] The present invention relates to a sole for a golf club head and, more particularly, to a sole with a shaft adjusting hole for a golf club head.

[0003] 2. Description of the Related Art
[0004] In conventional processes for producing a golf club head, a mold is made according to the shape of the whole golf club head, and casting is subsequently carried out to form the whole structure. However, the pouring procedure of casting is decided by the control of the centrifugal speed. In a case that the control is not proper, the cast product has deficiencies due to insufficient pouring or is apt to break at the casing of the product.

SUMMARY OF THE INVENTION

[0005] In view of the disadvantages of the conventional golf club heads, the present invention provides a sole for a golf club head that can easily be produced while allowing flexible production of the product.

[0006] The present invention fulfills the above objective by providing a sole with a shaft adjusting hole for a golf club head. The sole includes a recessed portion adjacent to a striking portion and a root of the golf club head. The recessed portion includes a shaft adjusting hole. The sole of the golf club head is a plate separate from the striking portion and a crown of the golf club head. The shaft adjusting hole includes a bottom wall and a peripheral wall extending upward from the bottom wall. The peripheral wall includes a plurality of inclined plane faces.

[0007] Preferably, a ledge is formed between the root and one of the inclined plane faces adjacent to the root. The shaft adjusting hole is parallel to a tubular portion of the golf club head. The ledge has a width not greater than 2 mm. A vertical spacing between the ledge and the bottom wall of the shaft adjusting hole is not larger than 10 mm. The shaft adjusting hole has a diameter not smaller than 10 mm.

[0008] Preferably, an angle between one of the inclined plane faces adjacent to a toe of the golf club head and the bottom wall is not smaller than 98 degrees. An angle between the inclined plane face adjacent to the ledge and the bottom wall is not smaller than 98 degrees.

[0009] Preferably, an angle between one of the inclined plane faces adjacent to the striking portion and the bottom wall of the shaft adjusting hole is not smaller than 98 degrees.

[0010] Preferably, an angle between one of the inclined plane faces adjacent to a rear of the golf club head and the bottom wall of the shaft adjusting hole is not smaller than 100 degrees.

[0011] The present invention will become clearer in light of the following detailed description of illustrative embodiments of this invention described in connection with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The illustrative embodiments may best be described by reference to the accompanying drawings where:

[0013] FIG. 1 is a top view of a sole with a shaft adjusting hole for a golf club head according to the present invention.

[0014] FIG. 2 is a cross sectional view taken along section line I-I of FIG. 1.

[0015] FIG. 3 is a cross sectional view taken along section line II-II of FIG. 1.

DETAILED DESCRIPTION OF THE INVENTION

[0016] With reference to FIGS. 1-3, a sole with a shaft adjusting hole for a golf club head includes a recessed portion adjacent to a striking portion S and a root R of the golf club head. The recessed portion includes a shaft adjusting hole I. The sole of the golf club head is a plate separate from the striking portion S and a crown of the golf club head. The shaft adjusting hole I includes a bottom wall and a peripheral wall extending upward from the bottom wall. The peripheral wall includes a plurality of inclined plane faces 2.

[0017] In the form shown, a ledge 3 is formed between the root R and one of the inclined plane faces 2 adjacent to the root R. The shaft adjusting hole I is parallel to a tubular portion of the golf club head. The ledge 3 has a width E not greater than 2 mm. A vertical spacing F between the ledge 3 and the bottom wall of the shaft adjusting hole I is not larger than 10 mm. The shaft adjusting hole I has a diameter G not smaller than 10 mm.

[0018] Preferably, an angle C between one of the inclined plane faces 2 adjacent to a toe T of the golf club head and the bottom wall is not smaller than 98 degrees. An angle D between the inclined plane face 2 adjacent to the ledge 3 and the bottom wall is not smaller than 98 degrees.

[0019] Preferably, an angle A between one of the inclined plane faces 2 adjacent to the striking portion S and the bottom wall of the shaft adjusting hole I is not smaller than 98 degrees.

[0020] Preferably, an angle B between one of the inclined plane faces 2 adjacent to a rear B of the golf club head and the bottom wall of the shaft adjusting hole I is not smaller than 100 degrees.

[0021] Since the crown, the striking portion S, and the sole are separate from each other, a plurality of workpieces is formed. The procedures for connecting the workpieces are simple and efficient. The yield rate of the products is higher, increasing the overall yield of the products. Furthermore, the recessed portion includes a ledge 3 having a height of about 5 mm and located adjacent to the root R. By the cooperation between the ledge 3 and the angles of the inclined plane faces 2, the demands of adjusting the shaft and changing the shaft can be fulfilled. A golf club head using the sole meets the standards of golf clubs.

[0022] Thus since the invention disclosed herein may be embodied in other specific forms without departing from the spirit or general characteristics thereof, some of which forms have been indicated, the embodiments described herein are to be considered in all respects illustrative and not restrictive. The scope of the invention is to be indicated by the appended claims, rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are intended to be embraced therein.

What is claimed is:

1. A sole with a shaft adjusting hole for a golf club head, with the sole comprising a recessed portion adjacent to a striking portion and a root of the golf club head, with the recessed portion including a shaft adjusting hole, with the sole of the golf club head being a plate separate from the striking portion and a crown of the golf club head, with the shaft adjusting hole including a bottom wall and a peripheral
wall extending upward from the bottom wall, and with the peripheral wall including a plurality of inclined plane faces.

2. The sole with a shaft adjusting hole for a golf club head as claimed in claim 1, with a ledge formed between the root and one of the plurality of inclined plane faces adjacent to the root, and with the shaft adjusting hole being parallel to a tubular portion of the golf club head.

3. The sole with a shaft adjusting hole for a golf club head as claimed in claim 2, with the ledge having a width not greater than 2 mm, and with a vertical spacing between the ledge and the bottom wall of the shaft adjusting hole not larger than 10 mm.

4. The sole with a shaft adjusting hole for a golf club head as claimed in claim 1, with the shaft adjusting hole having a diameter not smaller than 10 mm.

5. The sole with a shaft adjusting hole for a golf club head as claimed in claim 1, with an angle between one of the plurality of inclined plane faces adjacent to a toe of the golf club head and the bottom wall being not smaller than 98 degrees, and with an angle between the inclined plane face adjacent to the ledge and the bottom wall being not smaller than 98 degrees.

6. The sole with a shaft adjusting hole for a golf club head as claimed in claim 1, with an angle between one of the plurality of inclined plane faces adjacent to the striking portion and the bottom wall of the shaft adjusting hole being not smaller than 98 degrees.

7. The sole with a shaft adjusting hole for a golf club head as claimed in claim 1, with an angle between one of the plurality of inclined faces adjacent to a rear of the golf club head and the bottom wall of the shaft adjusting hole being not smaller than 100 degrees.

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