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(54) **GOLF CLUB**

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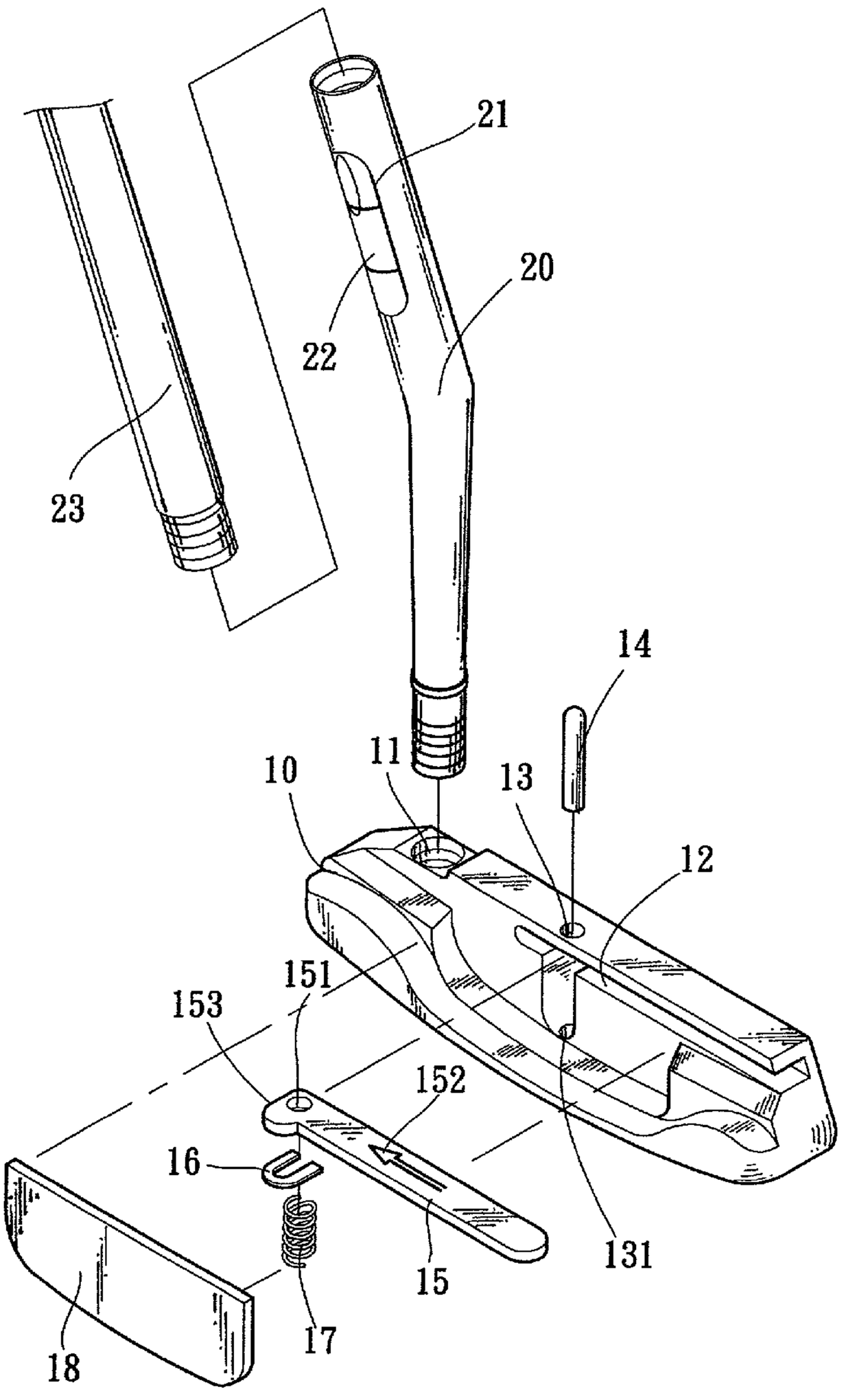
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(57) **ABSTRACT**

The invention provides a golf club that comprises a club head connected to a club shaft. Within the club head is formed a hollow chamber to pivotally receive an indicator. The indicator can be outwardly turned to assist the practicer in targeting a golf hole. The club shaft and a rear side of the club head are respectively provided with inclination indicator devices to assist the practicer in evaluating the ground inclination.



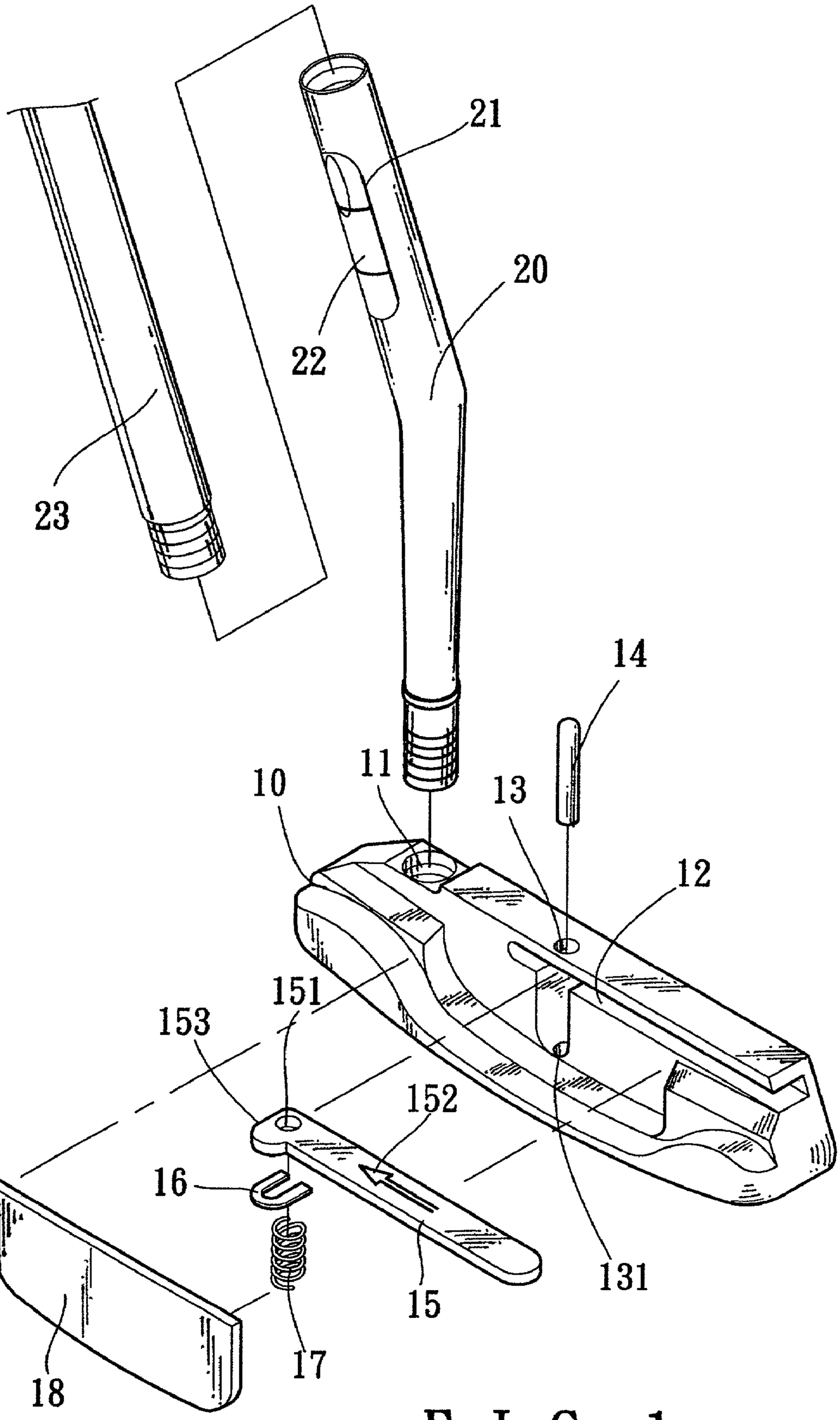


FIG. 1

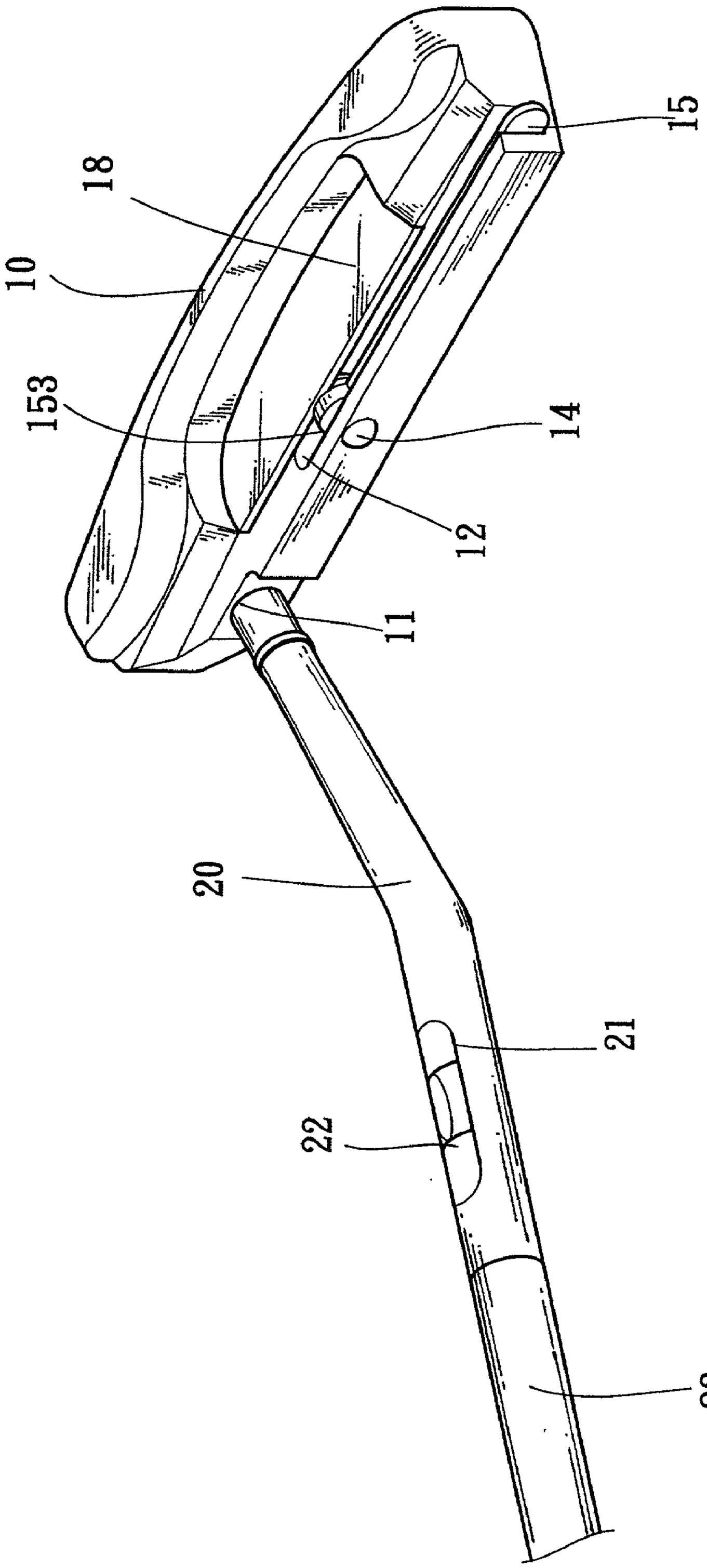


FIG. 2

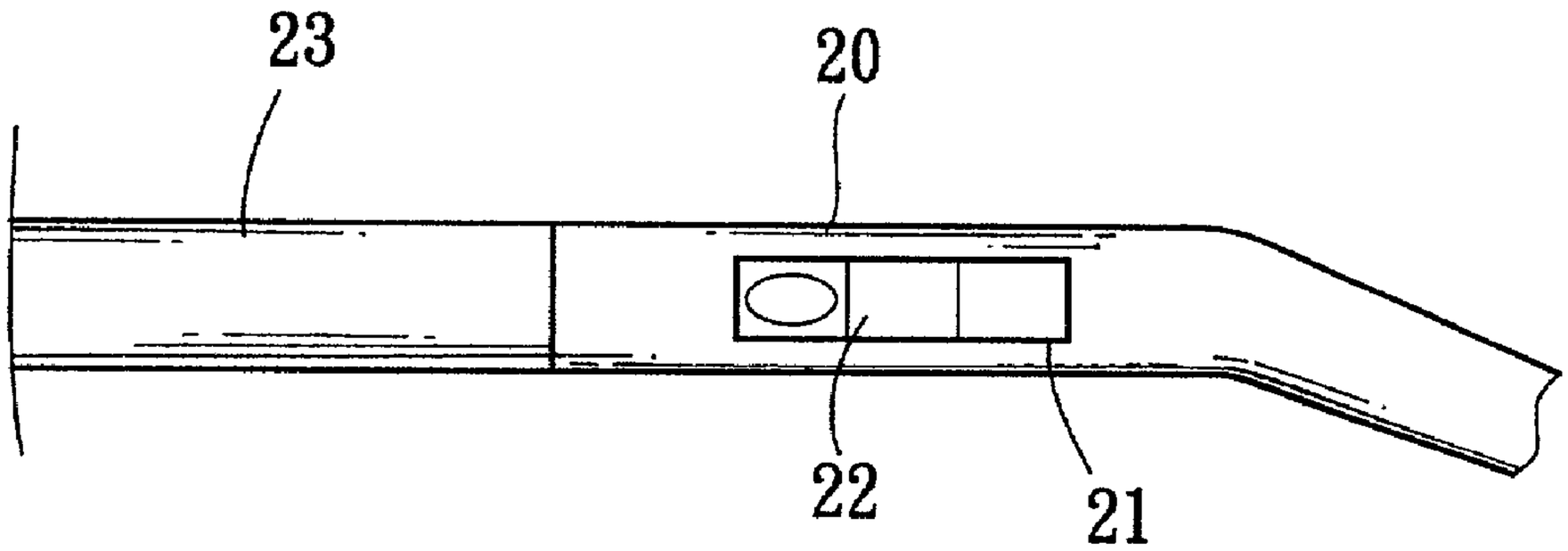


FIG. 2A

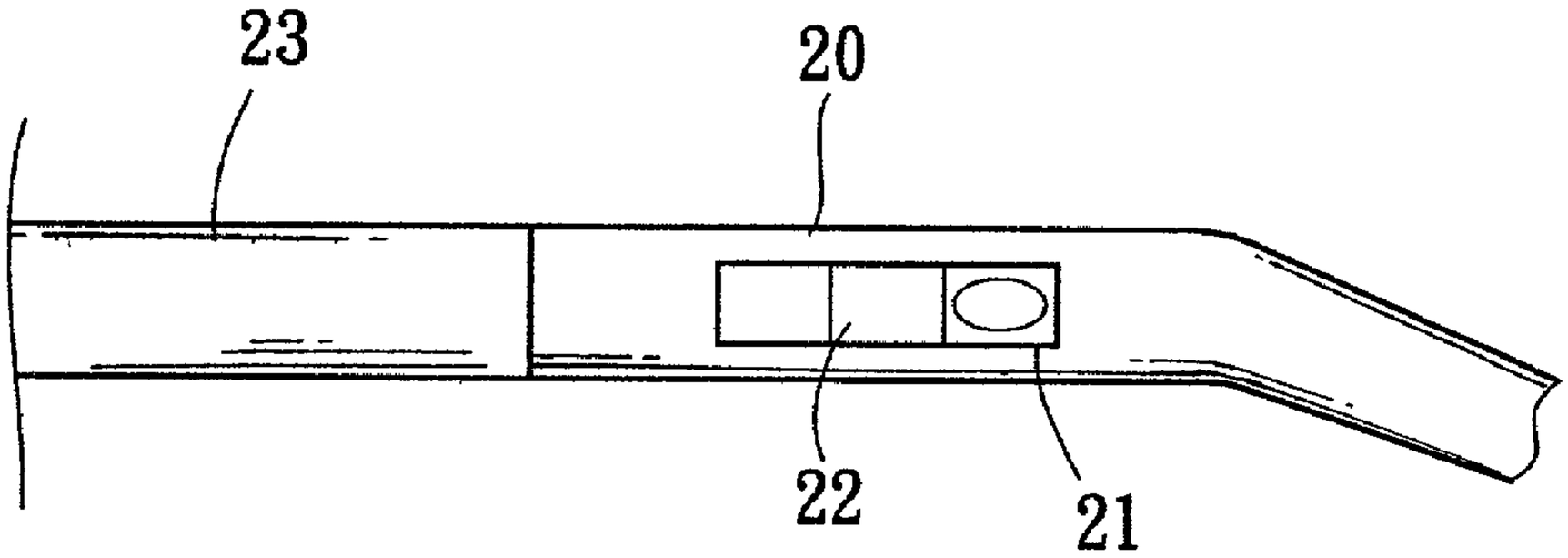


FIG. 2B

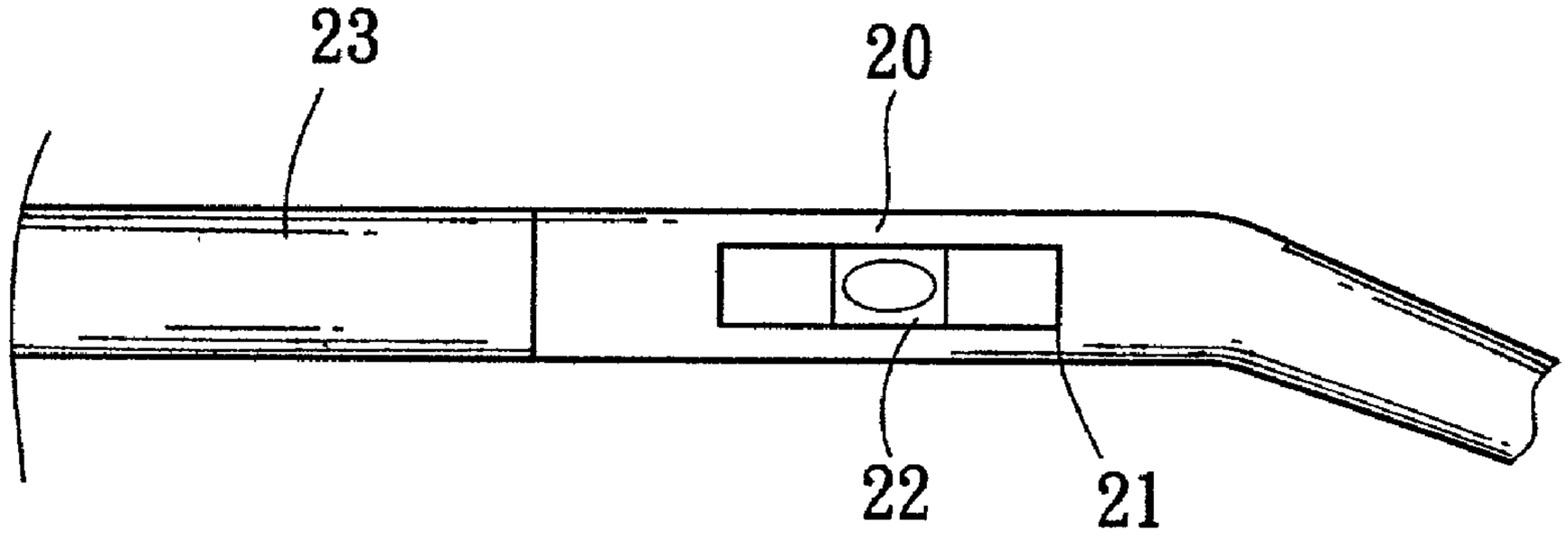


FIG. 2C

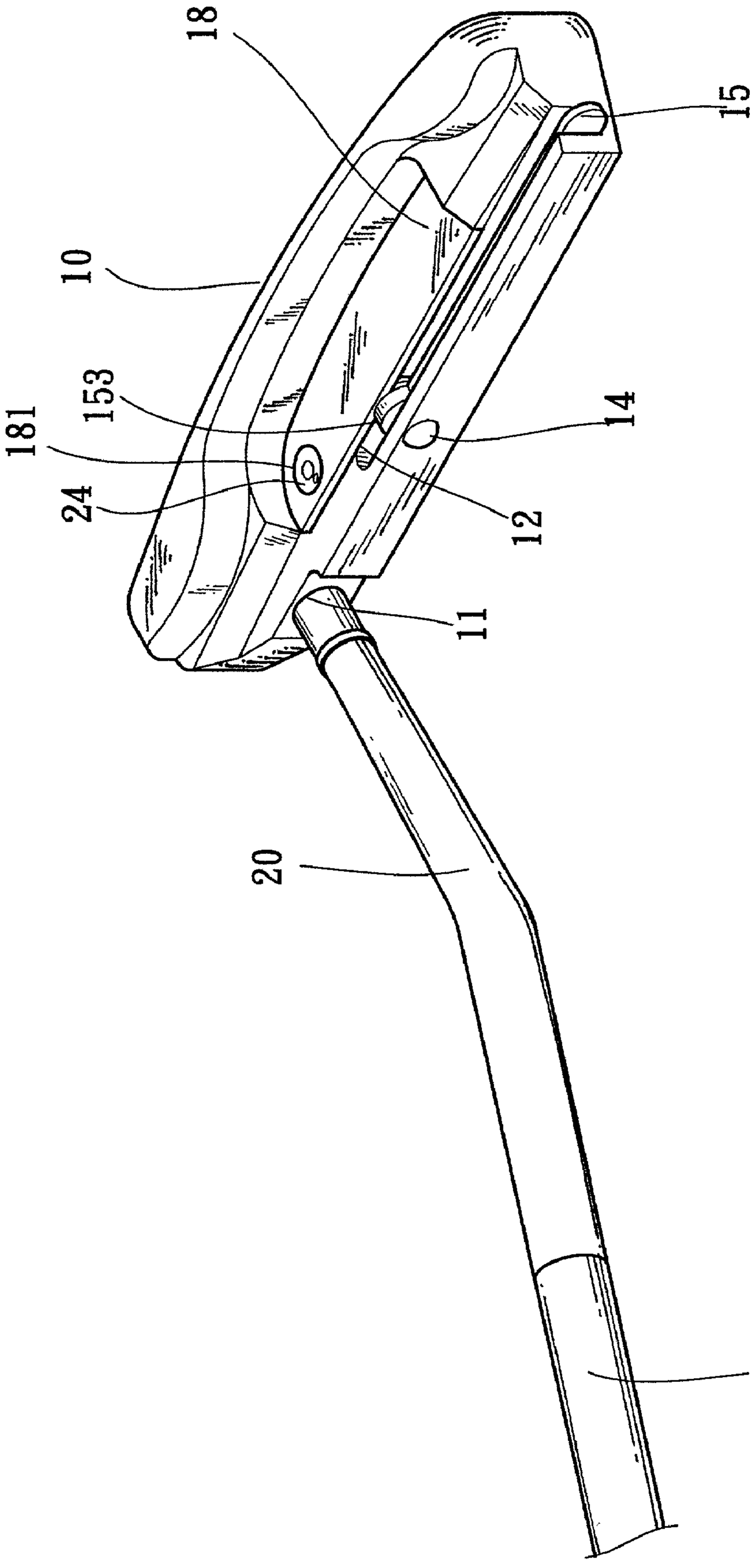


FIG. 3

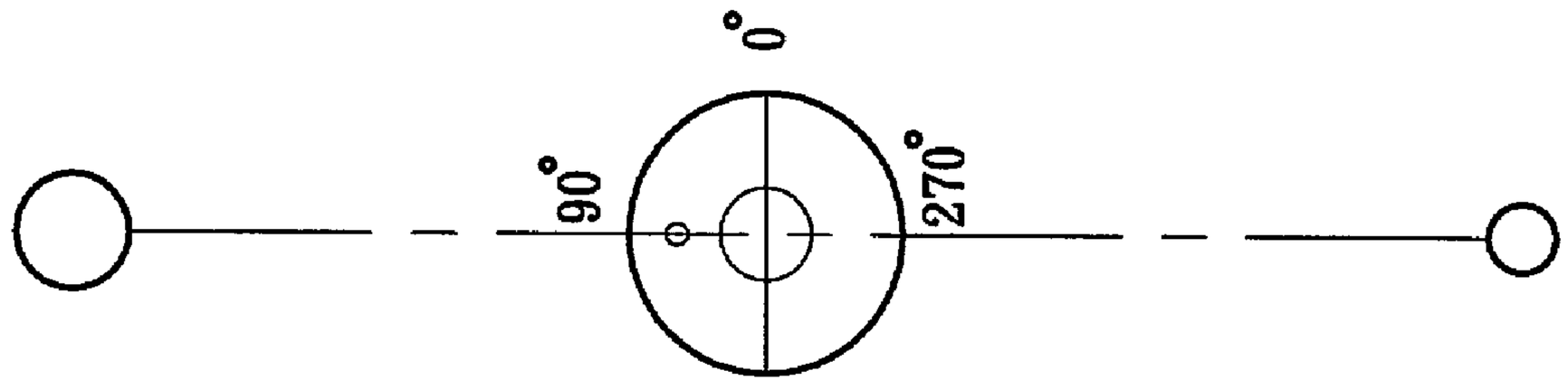


FIG. 3C

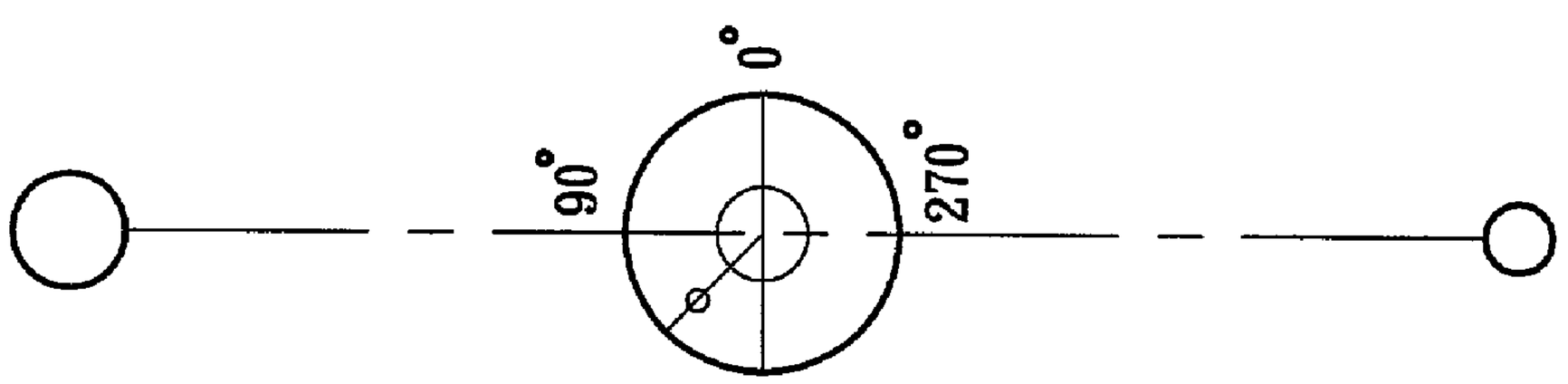


FIG. 3B

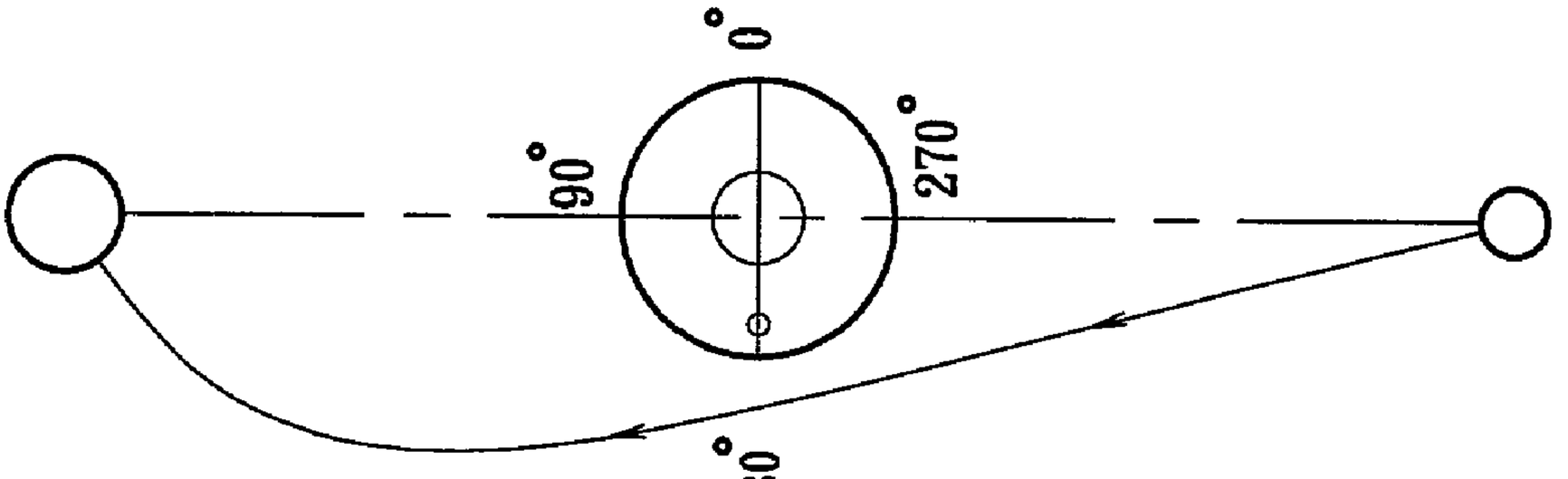


FIG. 3A

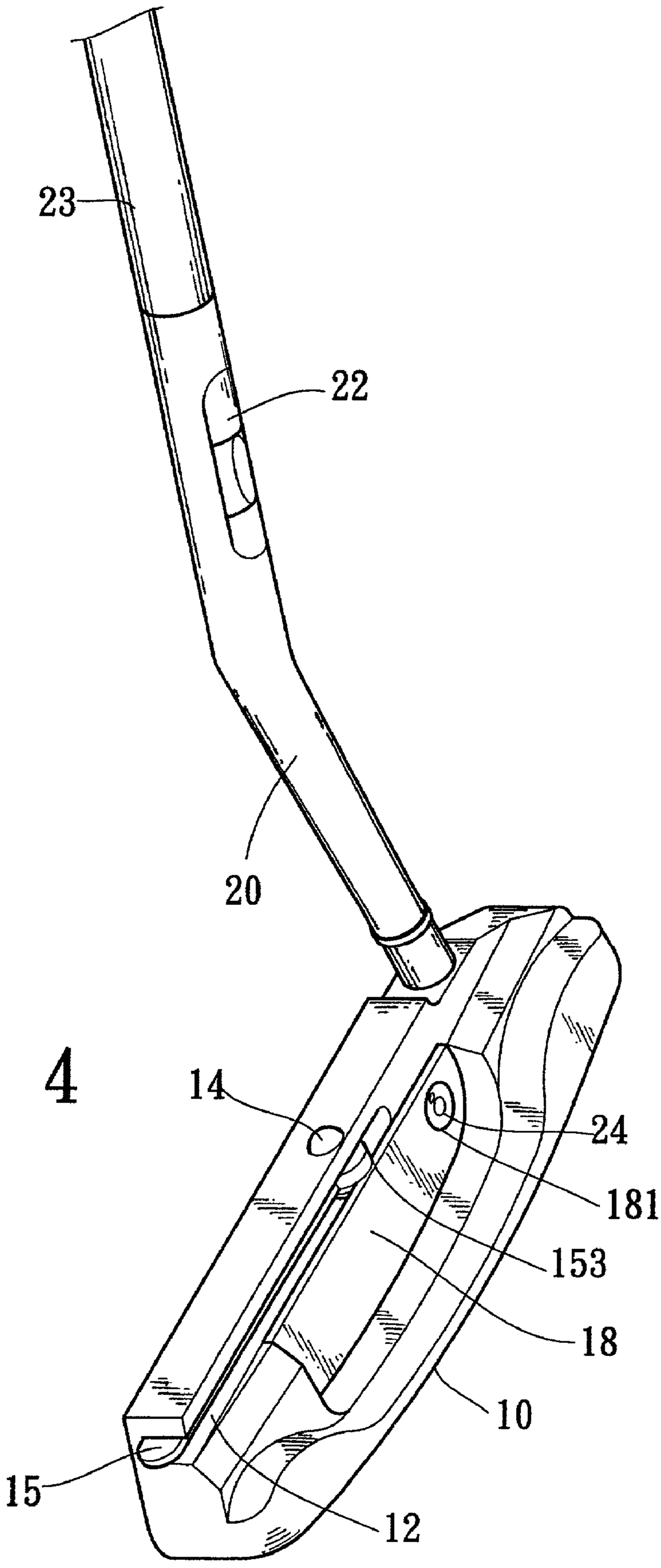


FIG. 4

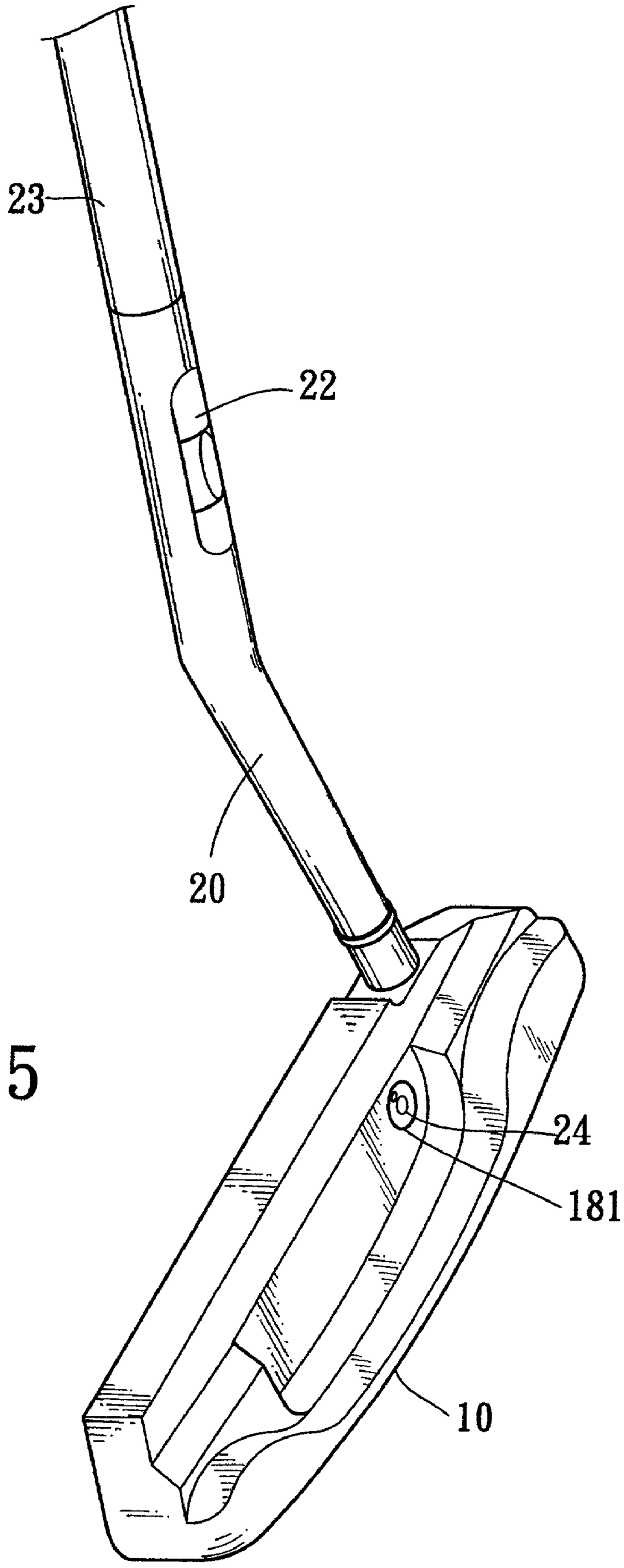


FIG. 5

GOLF CLUB

FIELD OF THE INVENTION

[0001] The invention relates to a golf club and, more particularly, a golf club that is configured in such a manner to be capable of assisting the practicer in targeting and ground inclination evaluating operations.

BACKGROUND OF THE INVENTION

[0002] When playing golf, the practicer traditionally uses a golf club to push a golf ball into a golf hole. However, depending on whether the ground is substantially planar or presents protruded bosses, the intensity and direction of the force applied to hit the golf ball substantially varies. On a horizontal ground, the practicer usually targets the golf hole along a direct line to push the golf ball in the golf hole. However, when the ground presents a slight inclination, the intensity and direction of the hitting force should be determined depending on the position of the golf ball with respect to the inclination, as known by the basic golf amateur. However, an accurate evaluation of the ground inclination only by the practicer's sight perception may be particularly difficult, the angle of view of the practicer's eyes with respect to the golf hole being different from the actual distance between the club head and the golf hole. Hence visual misjudgment often let the practicer think that the golf hole is close to the golf ball, but after the golf ball is actually hit, it does not reach the golf hole.

SUMMARY OF THE INVENTION

[0003] It is therefore a principal object of the invention to provide a golf club that can assist the practicer in adequately target the golf hole and apply the adequate force to hit the golf ball.

[0004] To accomplish the above and other objectives, a golf club of the invention, provided with a club shaft connected to a club head, further comprises an indicator that pivotally mounted to the club head in a manner to be outwardly extendable. When not used, the indicator is received in the club head. To use the indicator, the practicer manually turns the indicator outwardly out of the club head so that the indicator can assist the practicer in targeting the golf hole. The club shaft is further provided with an inclination indicator device to assist the practicer in evaluating the inclination of the ground.

[0005] To provide a further understanding of the invention, the following detailed description illustrates embodiments and examples of the invention, this detailed description being provided only for illustration of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The drawings included herein provide a further understanding of the invention. A brief introduction of the drawings is as follows:

[0007] **FIG. 1** is a perspective view illustrating a golf club according to a first embodiment of the invention;

[0008] **FIG. 2** is a perspective view illustrating the assembly of a golf club according to the first embodiment of the invention;

[0009] FIGS. **2**A~**2**C are various schematic views illustrating different configuration of an inclination indicator device mounted to the golf club according to the first embodiment of the invention;

[0010] **FIG. 3** is a perspective view illustrating a golf club according to a second embodiment of the invention;

[0011] FIGS. **3**A~**3**C are various schematic views illustrating different configurations of a circular inclination indicator device mounted to the golf club according to the second embodiment of the invention;

[0012] **FIG. 4** is a perspective view illustrating a golf club according to a third embodiment of the invention; and

[0013] **FIG. 5** is a perspective view illustrating a golf club according to a fourth embodiment of the invention.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0014] Wherever possible in the following description, like reference numerals will refer to like elements and parts unless otherwise illustrated.

[0015] **FIG. 1** is a perspective view schematically showing a golf club according to an embodiment of the invention. The golf club of the invention comprises a golf club head **10** that has a hole **11** at an upper surface to attach a golf club shaft **20**. On a rear side of the club head **10** is defined a hollow chamber **12** that sidewise opens on one transverse side of the club head **10**. A hole **13** is further vertically formed through the club head **10** to enable the insertion of a bolt **14**. Through the hole **13**, the bolt **14** further passes through a hole **151** of a mounting portion of an indicator **15**, a pad **16**, and a resilient element such as spring **17** capable of axially extending, to then engage a recessed port **131** below the hole **13**. On a sidewall of the rear side of the club head **10** is further fixed a cover **18**. An outer peripheral portion of the indicator **15** extends out of the hollow chamber **12** so that a user using his/her hand can pivotally turn the indicator **15** out of the club head **10** around the axis of the bolt **14**. On the indicator **15** is marked an arrow **152** that indicates the front of the club head **10**.

[0016] The mount of the pad **16** between the indicator **15** and the spring **17** enables to prevent the spring **17** from backward rotating the indicator **15** a certain angle to an incorrect position once it is manually released, after the indicator **15** is outwardly extended at 90 degrees. The outer contour of the pad **16** matches the hole **13** through the club head **10**, and the indicator **15** is placed in superposition on the pad **16** without being attached thereto. To allow the indicator **15** to be manually turned outward to a precise position of 90 degrees, the mounting portion of the indicator **15** is provided with an abutment portion **153**. The abutment portion **153** protrudes in a direction that forms an angle of 90 degrees with the axis of the indicator **15**. Therefore, once the indicator **15** is completely outwardly turned 90 degrees, a side periphery of the abutment portion **153** abuts against an inner side of the hollow chamber **12**, corresponding to an proper orientation of the arrow **152** properly indicating the front of the club head **10**. As a result, the user is aided to target the golf hole with respect to the club head **10**.

[0017] Referring to **FIG. 2, a** perspective view schematically illustrates the club shaft **20** provided with a window **21**

where is mounted an inclination indicator device **22** according to an embodiment of the invention. An end of the club shaft **20** is further connected to a handle shaft **23**. The handle shaft **23** is mounted to the club shaft **20** in such a manner that the inclination indicator device **22** mounted to the club shaft **20** indicates the horizontal when both shafts **20**, **23** are placed on a standard horizontal surface. When the practicer wants to estimate the inclination of the ground, he/she disposes transversally the handle shaft **23** on the ground and can evaluate the inclination between the right and the left end of the handle shaft **23** via the level indicator device **22**. The user is therefore assisted in the control of the direction and the force to apply to hit the golf ball. As shown in **FIG. 2**A, the position of the bubble of the level indicator device **22** in a left zone indicates the level of the ground at the left side is higher. Oppositely, the position of the bubble in a right zone indicates the level of the ground at the right side is higher, as shown in **FIG. 2B**. The position of the bubble in the central zone indicates the ground is horizontal, as shown in **FIG. 2C**.

[**0018**] Referring now to **FIG. 3, a** perspective view schematically illustrates a second embodiment of the invention. In this embodiment, a circular inclination indicator device **24** is mounted on the rear side of the golf club head **10** to evaluate the ground inclination according to plural directions. The cover **18** hence is provided with a window **181** to expose the circular inclination indicator device **24**. To use the circular inclination indicator device **24**, the practicer disposes the golf club head **10** on the ground in a manner to have the circular inclination indicator device **24** turned upside. As shown in **FIG. 3**A, in the circular inclination indicator device **24**, the position of the bubble at 180° indicates that the ground on the left side is higher. In **FIG. 3**B, the position of the bubble at 135° indicates the ground on the left front side is higher. In **FIG. 3**C, the position of the bubble at 90° indicates the ground is higher at the front side than at the rear side.

[**0019**] Referring now to **FIG. 4, a** perspective view schematically illustrates a third embodiment of the invention. In this embodiment, the club head **10** is provided with the circular inclination indicator device **24**, meanwhile the club shaft **20** is also provided with the inclination indicator device **22**. Depending to the situations, the practicer thus can either use the indicator **22** or the indicator **24**.

[**0020**] As described above, the provided indicator **15** can be concealed within the hollow chamber **12**, and therefore protected from accidental shocks. When its use is required, the practicer can simply turn outwardly the indicator **15** so that its arrow **152** can assist the practicer in targeting the golf hole. Such a disposition thus provides an effective assistance to the practicer while not affecting the aesthetic aspect of the club head **10**.

[**0021**] As shown in **FIG. 5, a** variant example of the golf club of the invention may only include the circular inclination indicator device **24** on the rear side of the club head **10** and the inclination indicator device **22** to assist the practicer in evaluating the ground inclination.

[**0022**] It should be apparent to those skilled in the art that the above description is only illustrative of specific embodiments and examples of the invention. The invention should therefore cover various modifications and variations made to the herein-described structure and operations of the invention, provided they fall within the scope of the invention as defined in the following appended claims.

What is claimed is:

1. A golf club, comprising a club head at one side of which is connected a club shaft, wherein the club head inwardly includes a hollow chamber that opens on a rear side of the club head, the hollow chamber being capable of receiving an indicator that is vertically pivotally mounted to the club head, thereby the indicator is allowed to pivotally turn outward to assist a user in targeting a golf hole, or pivotally turn inward to be received within the hollow chamber.

2. The golf club of claim 1, wherein the indicator is pivotally connected to the club head by means of a bolt that inserts through the club head and respectively through a mounting portion of the indicator, a pad, and a spring capable of axially extending and retracting, the indicator being received in the hollow chamber with a portion thereof partially extending outward, the mounting portion of the indicator further being shaped in a manner to define an abutment portion that abuts against one inner side of the hollow chamber when the indicator is outwardly turned 90°, the abutment portion thereby ensuring a positioning function.

3. The golf club of claim 1, wherein a rear side of the club head and the club shaft (**20**) are respectively provided with an inclination indicator device.

4. A golf club, comprising club head at one side of which is connected a club shaft enabling a user to handle the golf club, wherein the club shaft and a rear side of the club head are respectively provided with an inclination indicator device.

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