



US 20110165956A1

(19) **United States**

(12) **Patent Application Publication**
Park

(10) **Pub. No.: US 2011/0165956 A1**

(43) **Pub. Date: Jul. 7, 2011**

(54) **SMART GOLF CLUB**

Publication Classification

(76) Inventor: **Othili Park**, West Warwick, RI
(US)

(51) **Int. Cl.**
A63B 69/36 (2006.01)
A63B 53/00 (2006.01)
A63B 53/06 (2006.01)

(21) Appl. No.: **12/986,161**

(52) **U.S. Cl.** **473/239; 473/242; 473/256**

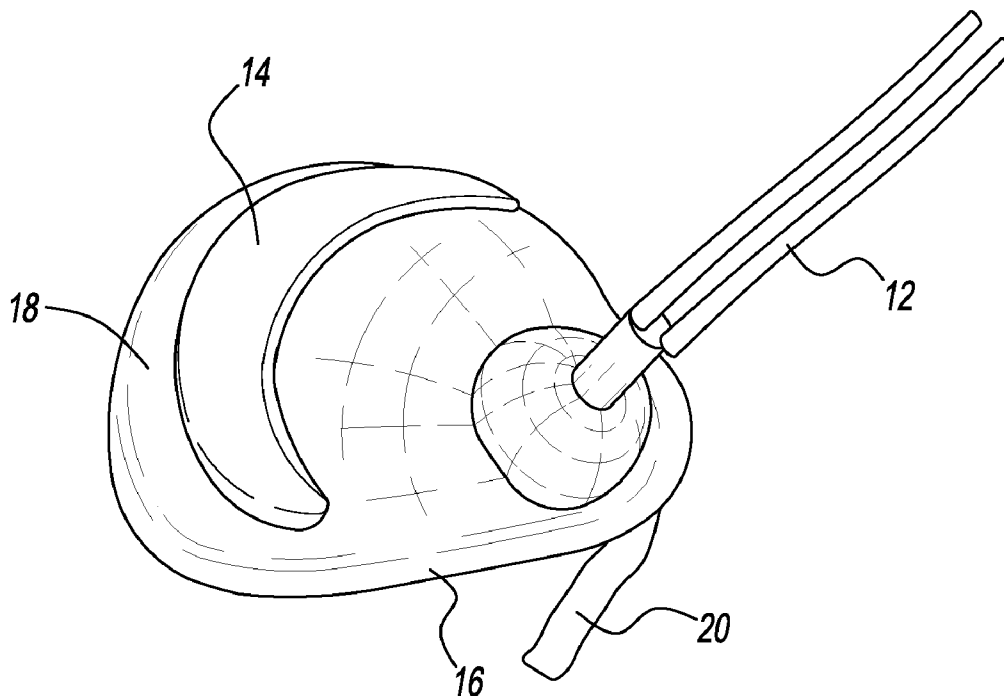
(22) Filed: **Jan. 6, 2011**

(57) **ABSTRACT**

Related U.S. Application Data

(60) Provisional application No. 61/335,367, filed on Jan. 6, 2010.

A golf club that gives instant feedback for helping a player improve his/her ball striking skills while practicing a swing where the golf club has a shaft which is permanently or removably attached to the club head and the club head may have added weights. A shaft extension is attached to the heel of the club face. The toe area of the club head is higher than the club face and the toe and toe area curves down with a sharp indentation.



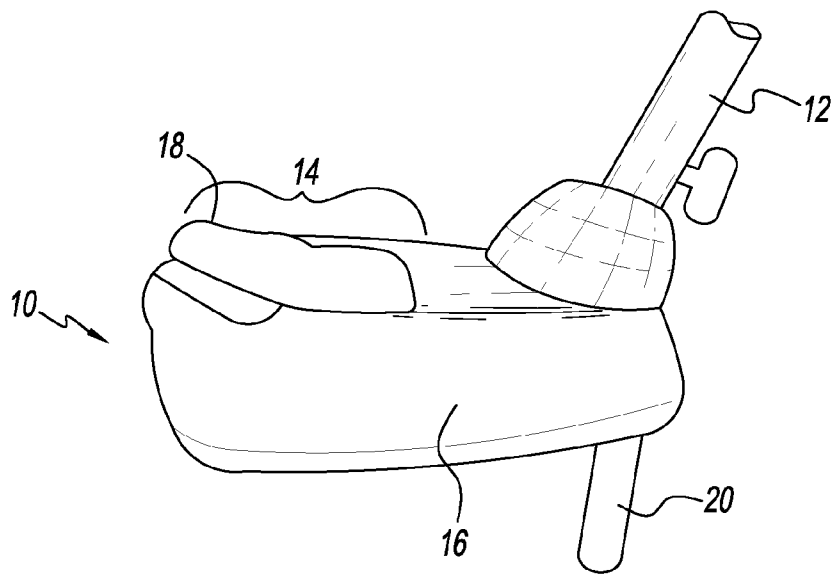


FIG. 1

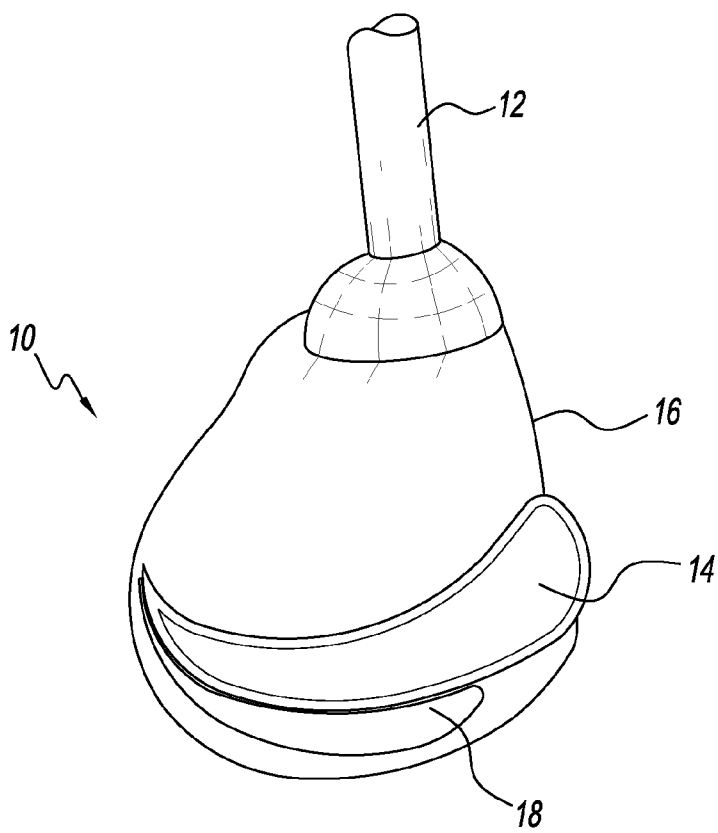


FIG. 2

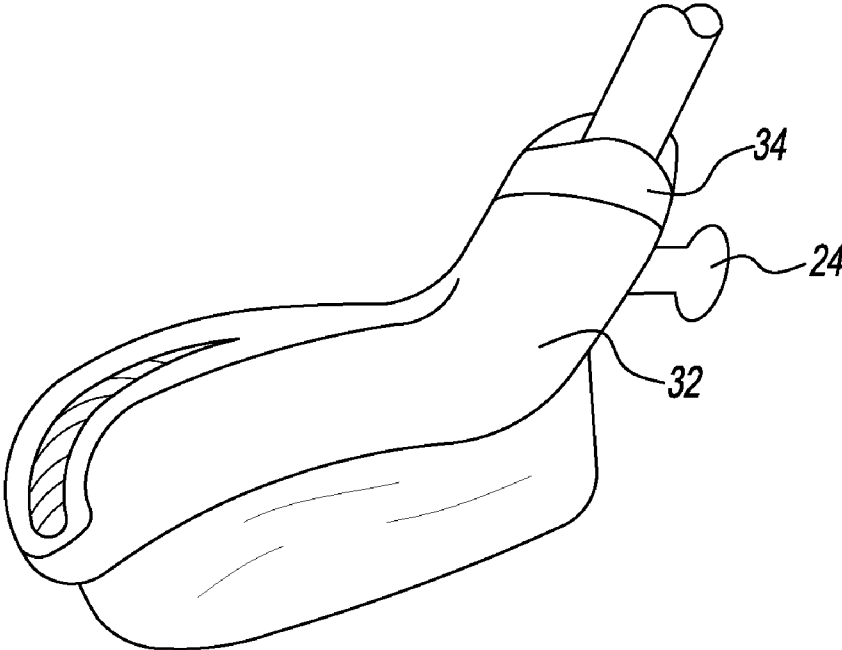


FIG. 3

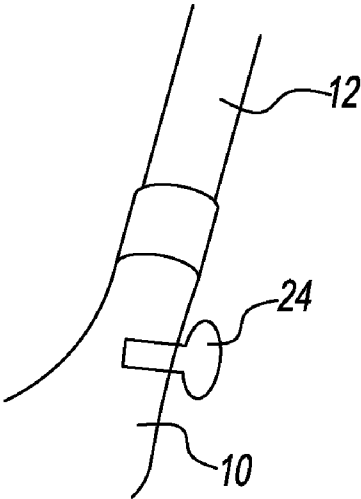


FIG. 4

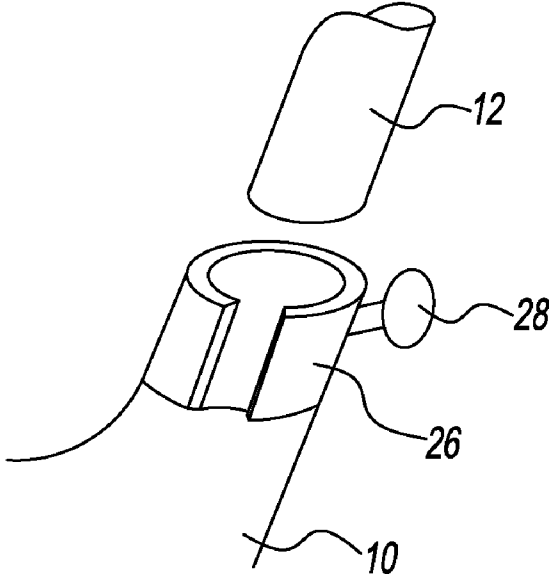


FIG. 5

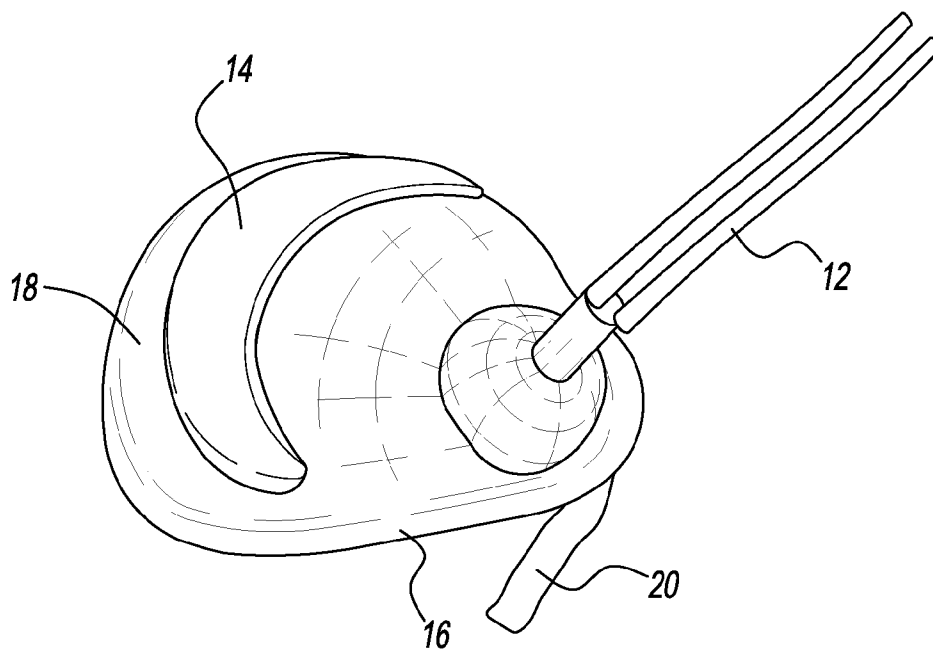


FIG. 6

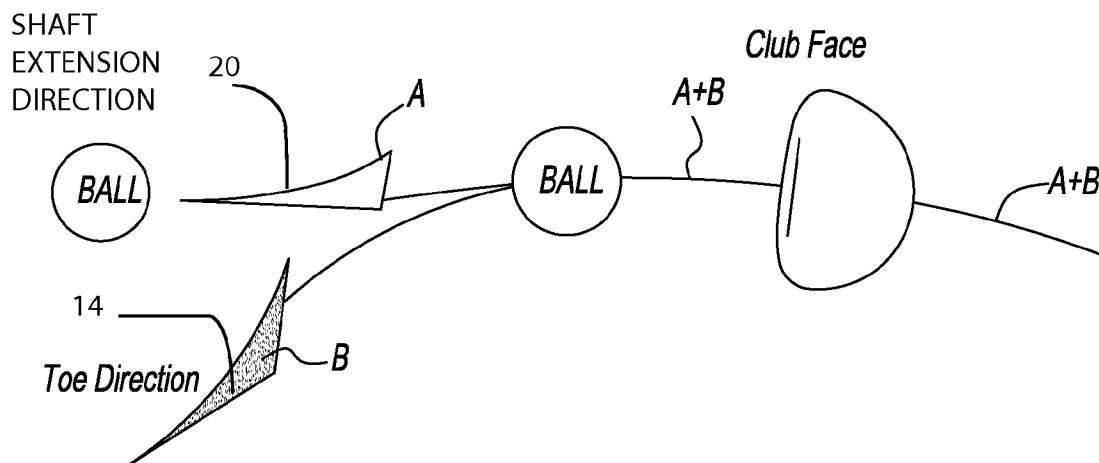


FIG. 7

SMART GOLF CLUB

REFERENCE TO RELATED APPLICATIONS

[0001] This patent application claims the benefit of U.S. Provisional Application No. 61/335,367 filed on Jan. 6, 2010, the disclosure of which is incorporated herein in its entirety by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to a training and practice aid for golfers more particularly to a golf club that gives instant feedback to help a golfer improve his/her ball striking skills while practicing a swing.

[0004] 2. Description of Related Art

[0005] A variety of golf teaching aids is available to golfers to help them with their swing. More specifically, by way of example, U.S. Pat. No. 7,018,301 to Cascerceri, et al. discloses a rocking footplate which alerts an athlete such as a golfer to the occurrence of improper rear foot weight placement. The footplate is placed under the athlete's rear foot and includes upper and lower plates which are joined by a hinge having an axis of rotation which is aligned with the center of the foot. The bottom of the device includes spikes which engage the ground to provide a stable base for the hinged top plate. The top plate is in the anatomical shape of a foot to aid proper foot placement on the device.

[0006] U.S. Pat. No. 6,723,004 to Florian discloses a golf training apparatus comprising a base pad with indicia for locating a golfer's feet for different golf swings, and a pair of footpads, one of which rocks on a fulcrum and the other is disposed in a non-rocking position for teaching a golfer a proper weight shift during his swing.

[0007] U.S. Pat. No. 5,976,027 to Kachmar discloses a device for stabilizing a golfer's feet and stance while he practices his swing. The device has a substantially flat mat in which a left foot gripping element and a right foot gripping element are each slidably engaged. The gripping element can secure a golfer's feet parallel to each other in a given stance while the golfer practices a golf swing. The gripping element can be slid nearer or farther away from each other and locked in the selected position to provide a variety of widths of stance.

[0008] U.S. Pat. No. 5,916,036 to Hamilton discloses a flat horizontal platform mounted on a base by a central board between the two. A golfer stands on the platform addressing a ball in front of the platform. The platform tilts left or right about the left or right side of the center board if the golfer's center of weight shifts beyond the left or right side of the center board. A clicker between the base and platform on the back-swing side, alerts the golfer to an improper weight shift toward the back-swing, providing feedback during training to eliminate this stroke motion error.

[0009] U.S. Pat. No. 5,810,673 to Castleberry discloses a golf-swing training apparatus having a base, a rotator disc for receiving one foot of a user, and means for anchoring the apparatus to a playing surface. The rotator disc is pivotably coupled to the base by a screw. Friction reducing means is coupled between the rotator disc and the base to reduce rotational friction. Using the apparatus when making a golf swing, the user's foot will rotate on the rotator disc allowing the user to rotate her torso easily with minimal swaying. In

addition, the user will be able to lift her heel while keeping the ball of her foot on the rotator disc.

[0010] U.S. Pat. No. 5,547,195 to Callanan discloses opposing right-hand and left-hand gripping portions or areas of a frame or circular disc. The gripping portions are spaced apart a distance somewhat equal to the golfer's waist width so that the arms are correctly positioned as in a proper golf stance and swing. By firmly grasping each gripping portion with the device positioned in front of the golfer similar to that of a golf club, the device may be swung and properly rotated during an entire practice golf swing to accurately simulate the hand, arm and body movement of a proper golf swing. Viewable arrow indicia positioned centrally on an obverse surface of the device viewably advises the golfer of the proper rotational orientation at each stage of the swing.

[0011] U.S. Pat. No. 5,318,290 to Sawyer discloses a swing training apparatus for temporarily immobilizing a users back foot except for pivotal movement; where the apparatus has a base member rotatably secured to a platform member; and, releasable securing means secures the user foot to the platform member for teaching the user the proper swing technique for baseball, softball and golf.

[0012] U.S. Pat. No. 5,263,863 to Stefani, et al discloses a base with a first foot pad and a second foot pad supported thereon, one of the foot pads being movable toward or away from the other foot pad. Each foot pad has a support surface upon which one foot of the golfer is placed. The support surface of the first foot pad is rotatable only from a horizontal position to an inwardly-facing position in relation to the second foot pad and the support surface of the second foot pad forms a predetermined angle with the base.

[0013] U.S. Pat. No. 5,197,739 to Johnson, III discloses a stepped surface upon which the golfer places his rear foot and a wand which extends in proximity to the rear hip. The upper surface of the base member, at the location of the rear foot of the golfer, includes a single step with the lower level beneath the inside edge of the foot and the upper level beneath the outside edge of the foot, the step itself being located approximately along the longitudinal center-line of the foot's position. Extending upwardly from the surface of the base member, a wand, positioned to be proximate the rear hip of the golfer during the normal pre-swing stance, indicates substantial body sway during the backswing by contact with the hip. The base member may include an artificial grass-like upper surface.

SUMMARY OF THE INVENTION

[0014] In an exemplary embodiment of the present invention, there is disclosed a golf club that gives instant feedback for helping a player improve his/her ball striking skills while practicing a swing where the golf club has a flexible shaft which is permanently or removably attached to the club head and the club head may have an added weight. A downward projecting spike is attached to the heel of the club face. The toe area of the club head is higher than the club face and the toe and toe area curves down with a sharp indentation.

[0015] The more important features of the invention have thus been outlined in order that the more detailed description that follows may be better understood and in order that the present contribution to the art may better be appreciated. Additional features of the invention will be described hereinafter and will form the subject matter of the claims that follow.

[0016] Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[0017] As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

[0018] The foregoing has outlined, rather broadly, the preferred feature of the present invention so that those skilled in the art may better understand the detailed description of the invention that follows. Additional features of the invention will be described hereinafter that form the subject of the claims of the invention. Those skilled in the art should appreciate that they can readily use the disclosed conception and specific embodiment as a basis for designing or modifying other structures for carrying out the same purposes of the present invention and that such other structures do not depart from the spirit and scope of the invention in its broadest form.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] Other aspects, features, and advantages of the present invention will become more fully apparent from the following detailed description, the appended claim, and the accompanying drawings in which similar elements are given similar reference numerals.

[0020] FIG. 1 is a side view of the club face showing a flexible or rigid shaft extension attached to the heel of the club face, where the toe area of the club is higher than the club face top, where the toe and toe area curve down with a sharp indentation like a water fall, and where the tip of the flexible shaft is parallel to the target line;

[0021] FIG. 2 is a top view of the golf club showing the toe and toe area curving down with a sharp indentation like a water fall;

[0022] FIG. 3 is a partial perspective of an embodiment where the club head has a cover that does not cover the club face, the tip of the shaft is a part of the cover or the cover has an opening for the tip of the shaft;

[0023] FIG. 4 is a view of a screw method of attaching the flexible shaft to the golf head;

[0024] FIG. 5 is an exploded view of a clip method of attaching the flexible shaft to the golf head;

[0025] FIG. 6 is a perspective view of the golf head in accordance with the principles of the invention; and

[0026] FIG. 7 is a view of a simple to follow color chart of the focal path of the club which gives a visual understanding of the important part of the golf swing before, during and after impact with a ball.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0027] The conventional club designed by club makers make an effort to provide a larger sweet spot for forgiveness

when a golfer miss hits a ball and provide a sloped design for low center of gravity to promote lift rather than teach a golfer how to hit the sweet spot and what is the proper way to use the golf club to improve his/her game. In most instances golfers are on their own when they buy clubs.

[0028] Instructional manuals have never been available for golf clubs. All conventional club designs force golfers to visualize a scooping swing to the ball rather than rotating down through the ball. A golfer does not need to scoop the ball to hit high because the loft of the club will make the ball go high.

[0029] The result is that golfers are confused by the many wrong teaching methods and different ways that are suggested to use the golf club.

[0030] Except for special situation shots, to get a solid hit there is only one way to contact the ball with the club face. For a right hand golfer, rotate the club handle counterclockwise. The toe of the club should be past the heel of the club. The tip of the shaft should stay parallel to the target line.

[0031] Thus, when playing golf it is important that the player first perfect his/her golf swing. One aspect that is required to obtain a proper swing in golf is the coordinated movement of the various parts of the players body to transfer energy from the feet to the hips, and then through the shoulders to the arms where the energy is released through the golf club head or the tennis racket.

[0032] To obtain a proper swing a player must first learn to coordinate the rotation of the various parts of his/her body while swinging a golf club. An important aspect of a proper swing is the follow through after the golf ball is hit. For example, in golf after the ball is hit the player must rotate his/her body about one leg to continue swinging the golf club all the way up and behind the player's back.

[0033] All of these various movements of a person's body must be performed with a smooth and graceful rhythm which can only be obtained if the player maintains his/her balance from start to finish.

[0034] One aspect of a golfer swing is the extent that the golfer is able to continuously hit a golf ball with the same smooth coordinated movement of his/her body and arm swing while maintaining his/her balance.

[0035] Referring to FIGS. 1 and 2, there is shown a side and top view of the club head showing the flexible or rigid shaft extension of any color attached to the heel of the club head, where the toe area of the club is higher than the club face top, where the toe and toe area curve down with a sharp indentation like a water fall, and where the tip of the flexible shaft is parallel to the target line.

[0036] The club head is attached to a flexible shaft and is made of a material which, in one embodiment, is not designed to hit a golf ball or any other object and where forcefully bending of the flexible shaft by hand may break or damage the shaft.

[0037] Continuing with FIGS. 1 and 2, the toe area 14 is higher than the club face 16 and the club toe 18 and toe area 14 curve down with a sharp indentation that is similar to a water fall. Projecting down from the heel of the golf head is a colorful flexible or rigid shaft extension that has a diameter of between one thirty seconds of an inch and three inches, and a length of between one quarter and fifteen inches where a length of about one and three eighths inches, more or less is preferable. The club head may be made of a rigid metal, titanium or rubber, and the flexible shaft may be made of graphite, steel or a plastic

[0038] Referring to FIGS. 4 and 5, attached to the end of the flexible shaft is a small colorful object 22 which is removably or permanently attached to the club and is used to attach the club head to the flexible shaft. In one embodiment, see FIG. 4, the flexible shaft 14 can be permanently attached to the club head or removably attached to the club head. In the embodiment where the flexible shaft is removably attached to the club head, the flexible shaft is inserted into an opening in the club head and locked to the club head with a thumb screw 24 which threads into a threaded opening in the flexible shaft. In this embodiment the head of the thumb screw can be painted a bright color such as red to also function as the small colorful object 22.

[0039] In another embodiment, see FIG. 5, the flexible shaft 14 is removably attached to the club head with a clip 26 which is a part of the club head and is sized to receive the end of the flexible shaft. A fastening means such as a thumb screw, a clamp, a strip of Velcro, etc can be used to removably attached the flexible shaft to the club head.

[0040] Referring to FIG. 2, a strip of material 30 having a distinctive color and a long tapering shape is attached to the top and front of the club head.

[0041] Referring to FIG. 3, there is shown a partial perspective of an embodiment where the club head has a cover 32 that covers the top of the golf head but does not cover the club face, where the tip of the shaft is a part of the head cover or the head cover has an opening for the tip of the shaft. The cover may be removably attached to the club head with a strip of Velcro 34 which wraps around the club shaft. In an embodiment the cover may be of a specific color such as orange, red, etc., which has a desired design imprinted thereon. In another embodiment a decal may be attached to the cover or the cover is not used and a decal is located directly on the club head.

[0042] In an embodiment, a weight in the form of lead may be added to the club head to provide a club head that has a desired weight of between one-half of a pound and ten pounds. The weight of the golf head in combination with the flexible shaft of the club helps to create lag for maximum club head speed at impact and helps to build muscle memory for repeatable golf swings.

[0043] Referring to FIG. 6, there is shown a perspective view of the golf head in accordance with the principles of the invention.

[0044] Looking at FIG. 7, there is shown a simple to follow color chart of the focal path of the club which gives a visual understanding of the important part of the golf swing before, during and after impact with a ball. The golf club here disclosed has a unique and unparalleled design that gives instant feedback to improve ball striking skills for all levels. The flexible shaft and weight of the club create lag for maximum club head speed at impact and helps to build muscle memory for repeatable golf swings. The club's simple to follow color chart gives a clear visual understanding of the most important part of the swing immediately before, during and after impact with a ball. Looking at FIG. 7, at the start of a swing and prior to impact the path of the tip of the shaft "A" which may be colored blue and the path of the toe "B" which may be colored orange are identical. Upon impact, the shaft extension 20 follows the blue line "A" staying parallel to the target line while the toe 14 of the head rotates through impact following the orange line "B".

[0045] While there have been shown and described and pointed out the fundamental novel features of the invention as

applied to the preferred embodiments, it will be understood that the foregoing is considered as illustrative only of the principles of the invention and not intended to be exhaustive or to limit the invention to the precise forms disclosed. Obvious modifications or variations are possible in light of the above teachings. The embodiments discussed were chosen and described to provide the best illustration of the principles of the invention and its practical application to enable one of ordinary skill in the art to utilize the invention in various embodiments and with various modifications as are suited to the particular use contemplated All such modifications and variations are within the scope of the invention as determined by the appended claims when interpreted in accordance with the breadth to which they are entitled.

What is claimed is:

1. A golf club that gives instant feedback for helping a player improve his/her ball striking skills while practicing a swing, the golf club comprising:
 - a club head;
 - a shaft attached to the club head; and
 - a flexible or rigid shaft extension of any color extending down from the heel of the club head;
 wherein the toe area is higher than the club face; and wherein the toe and toe area curves down with a sharp indentation.
2. The golf club of claim 1 wherein the shaft is flexible.
3. The golf club of claim 2 wherein the shaft extension is flexible.
4. The golf club of claim 3 wherein the shaft extension has a length of between one quarter and fifteen inches.
5. The golf club of claim 3 wherein the shaft extension has a diameter of between one-thirty seconds of an inch and three inches.
6. The golf club of claim 3 wherein the tip of the flexible shaft is parallel to the target line.
7. The golf club of claim 3 wherein the club head may be made of a rigid metal, titanium or rubber and the flexible shaft is made of graphite, steel, or a plastic.
8. The golf club of claim 3 wherein the flexible shaft is permanently attached to the golf head.
9. The golf club of claim 3 wherein the flexible shaft is removably attached to the golf head with a screw that connects the shaft to the golf head.
10. The golf club of claim 3 wherein the flexible shaft is removably attached to the golf head with a clip that is a part of the club head.
11. The golf head of claim 3 wherein a cover is removably attached to the club head but does not cover the club head.
12. The golf head of claim 3 wherein a decal is attached to the club head or to a cover on the club head.
13. The golf head of claim 3 wherein a weight is added to the head of the golf club.
14. The golf head of claim 13 wherein the weight of the golf club is between one-quarter and three pounds after adding weight to the head.
15. The golf head of claim 3 wherein a small colorful object is attached to the club head.

* * * * *