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(19) **United States**(12) **Patent Application Publication****Billings et al.**(10) **Pub. No.: US 2007/0259732 A1**(43) **Pub. Date: Nov. 8, 2007**(54) **GOLF CLUB GRIP AND METHOD OF USE****Publication Classification**(76) Inventors: **David P. Billings**, McKinney, TX (US);
Hank Haney, McKinney, TX (US)(51) **Int. Cl.**
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CARR LLP**670 FOUNDERS SQUARE****900 JACKSON STREET****DALLAS, TX 75202 (US)**(52) **U.S. Cl.** **473/303; 473/282**(21) Appl. No.: **11/548,634**(22) Filed: **Oct. 11, 2006****Related U.S. Application Data**

(60) Provisional application No. 60/725,558, filed on Oct. 11, 2005. Provisional application No. 60/792,181, filed on Apr. 14, 2006.

(57) **ABSTRACT**

An ergonomically designed golf club grip including a butt portion which is raised above the axis of the shaft of the club, on the side of the axis closest to the club head toe, to facilitate a proper hand position on the club. The grip is preferably held in the lifeline of the palm of the upper hand, which produces a straighter wrist position and a freer release of the club through the hitting area and follow through.

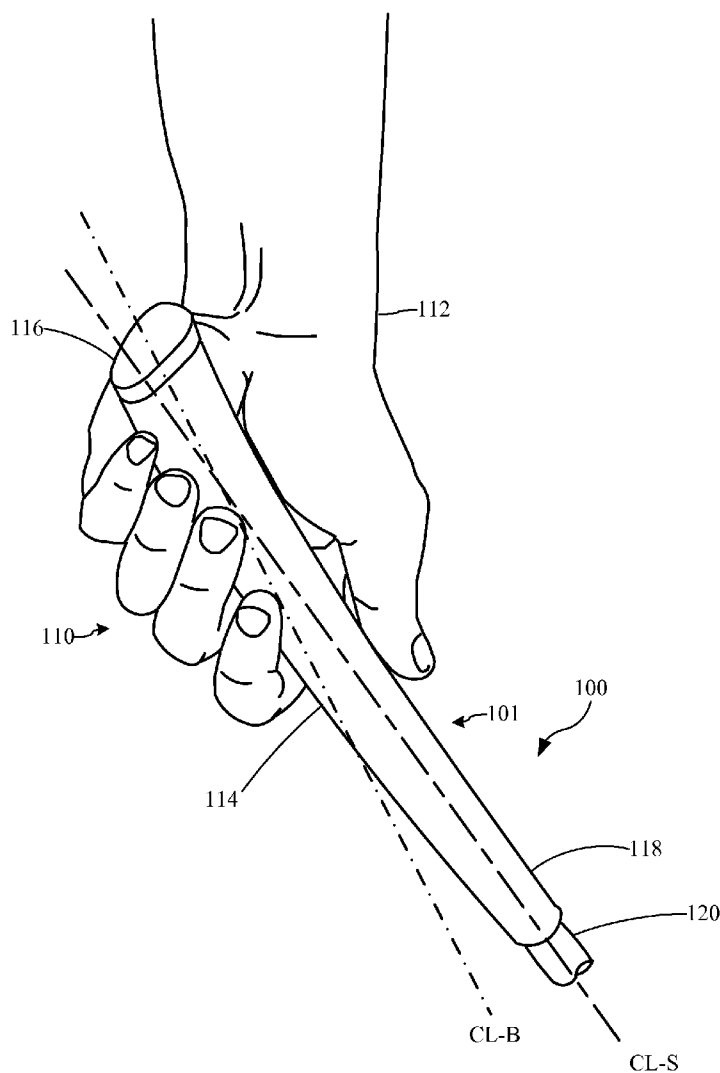


FIG. 1A

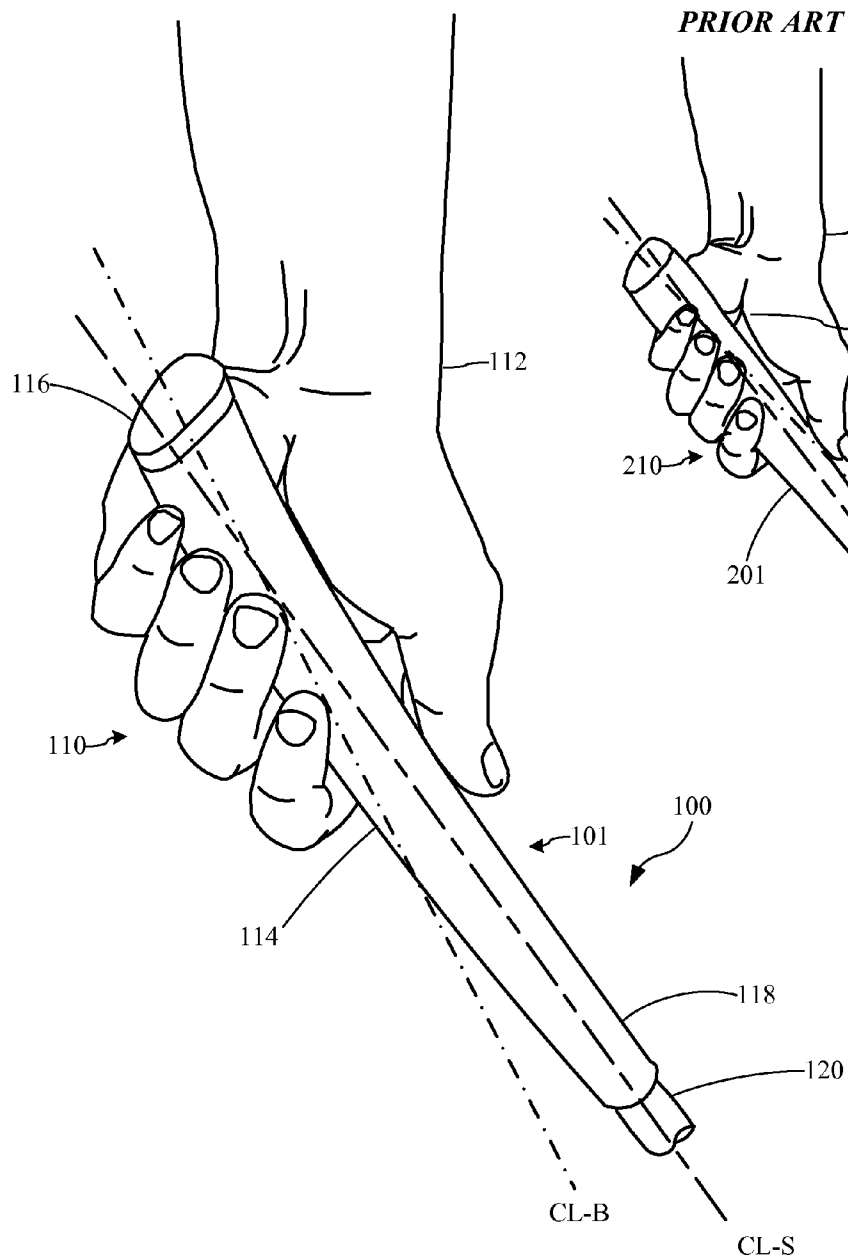


FIG. 2
PRIOR ART

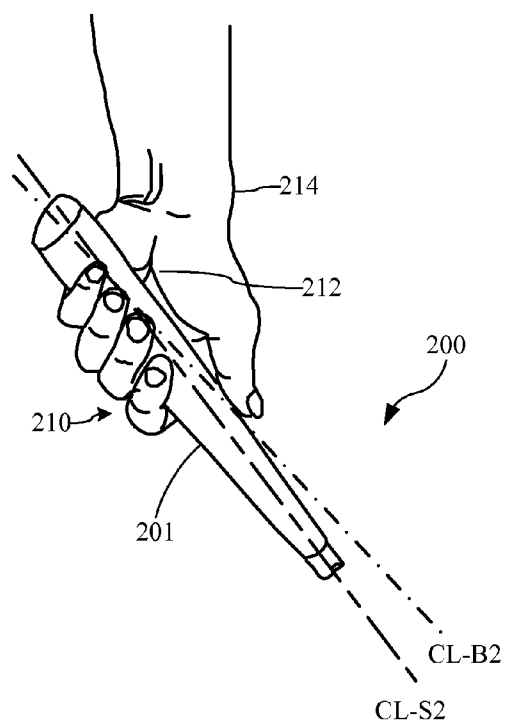
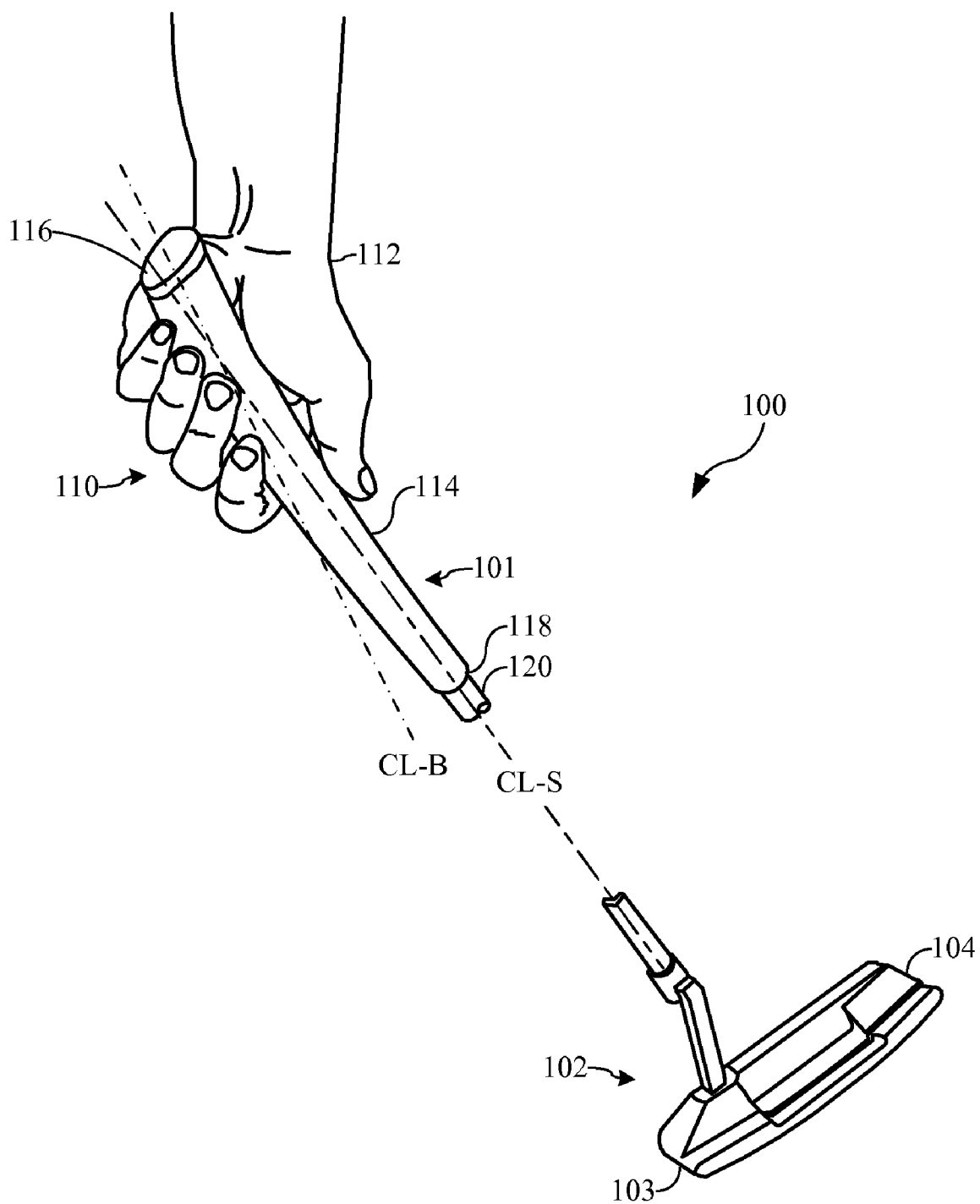


FIG. 1B



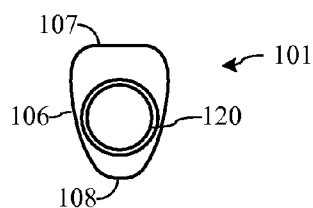
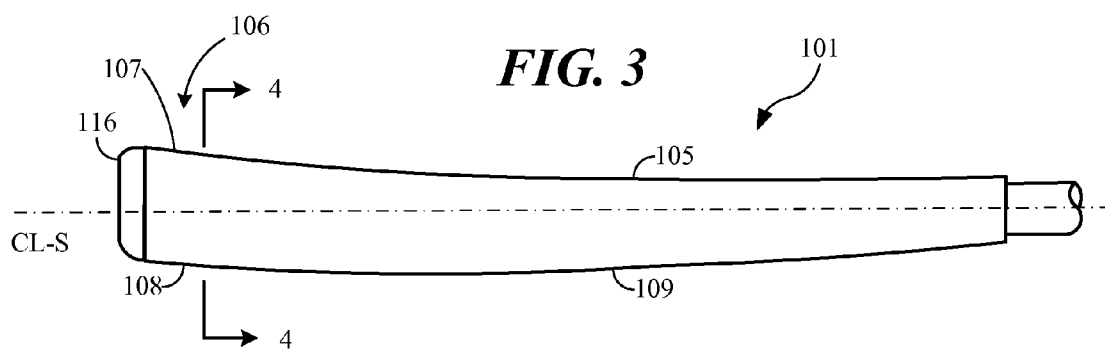


FIG. 4

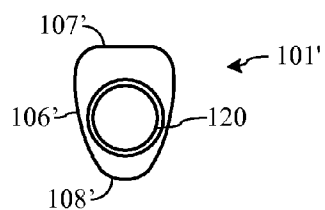
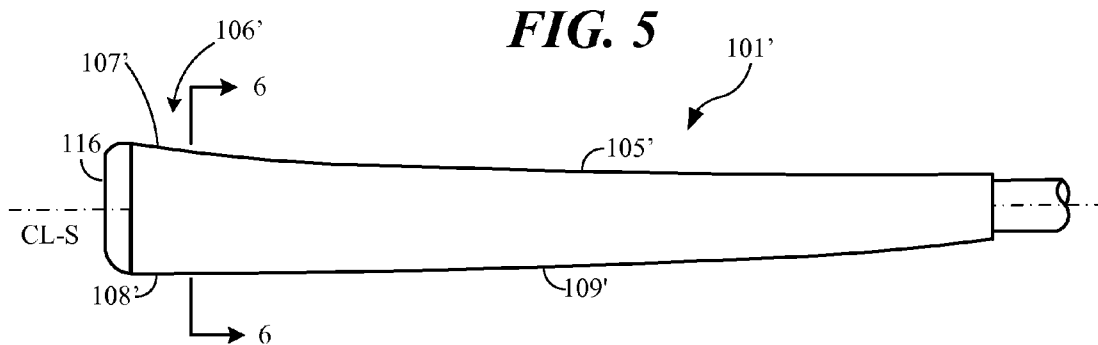


FIG. 6

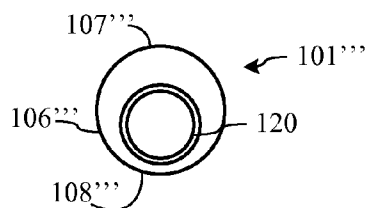
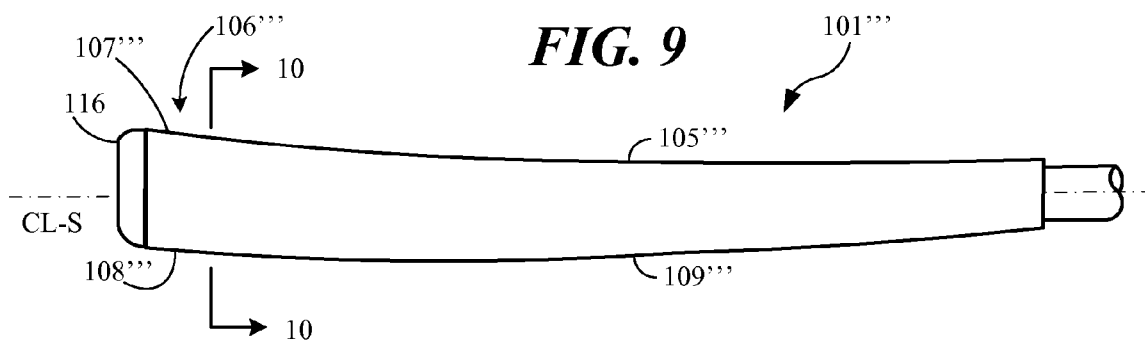
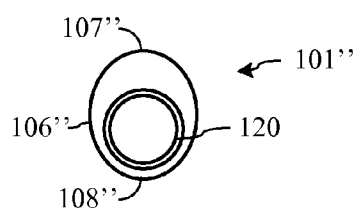
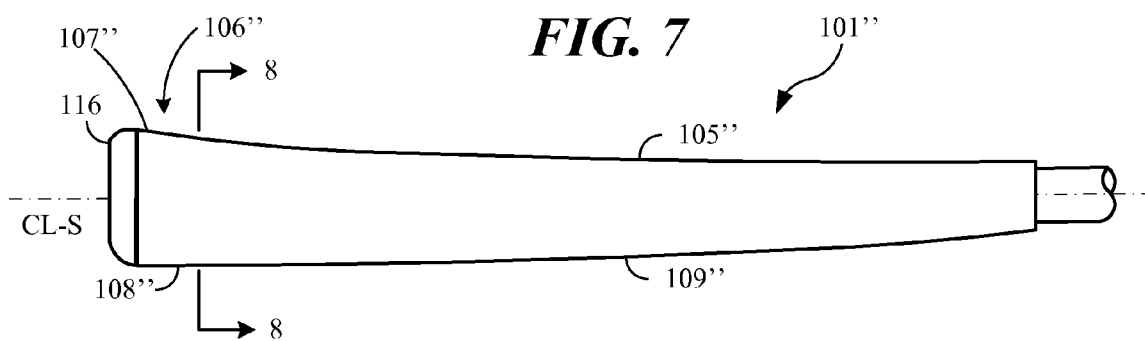


FIG. 10

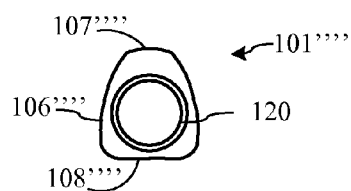
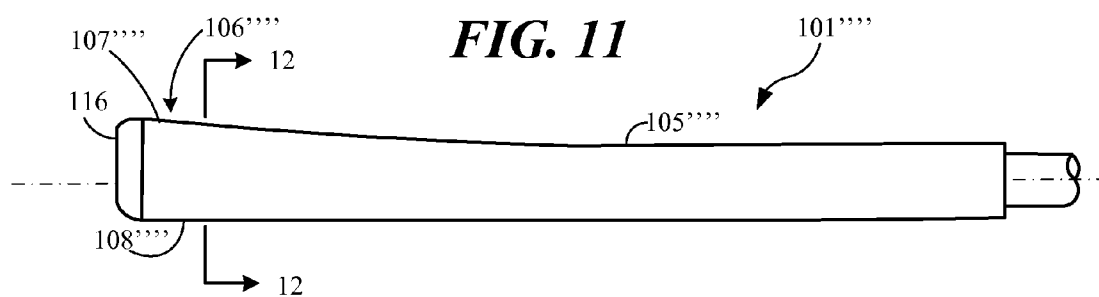


FIG. 12

GOLF CLUB GRIP AND METHOD OF USE

PRIOR APPLICATIONS

[0001] This application claims the benefit of priority from U.S. Provisional Application Ser. No. 60/725,558, filed Oct. 11, 2005, from U.S. patent application Ser. No. 11/467,160, filed Aug. 24, 2006, and from U.S. Provisional Application Ser. No. 60/792,181, filed Apr. 14, 2006, pending, the contents of which are hereby incorporated by reference.

FIELD OF THE INVENTION

[0002] The invention relates generally to golf clubs and, more particularly, to an ergonomically shaped golf club grip and its method of use.

BACKGROUND

[0003] In recent years, a significant amount of attention has been given by golf club grip manufacturers to golf club grip materials and manufacturing techniques intended to increase the traction and improve the tactile feel of those components used in golf clubs. However, the overall exterior geometry and shapes offered by these major grip manufacturers are usually very similar to if not almost entirely unchanged from previous designs and shapes used for many, many decades.

[0004] Golf club grips are generally either designed for full swing golf clubs, such as drivers, woods, irons and wedges, or they are designed for putters. This is due to regulation by the USGA and the Royal & Ancient of St. Andrews (R&A), the governing bodies of the game of golf, of the shapes permissible under their Rules for full swing clubs and for putters. Rules for putter grips allow various shapes, including features deviating from the Rules mandating that full swing clubs be generally round and concentric to the shaft. Therefore, putter grips are typically and historically more complex, and designed with the intent to allow both a comfortable grip and more consistent putter alignment than a round grip. Nonetheless, the major grip manufacturers have not offered many new shapes for putters or full swing clubs as they have developed their new materials, but rather continue to replicate or even duplicate older and traditional grip shapes.

[0005] Traditional shapes for putters include such styles as the pistol grip, the arched grip and the paddle grip and various derivations and combinations of those styles. These shapes yield putter grips that are familiar to experienced users, but offer no new advantages for the user in performing an improved and/or more consistent putting stroke.

[0006] Therefore, there is a need for a golf club grip with an ergonomically designed shape that naturally promotes a more natural stroke and release of the club, improving the accuracy, consistency, success and enjoyment of the golfer.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] For a more complete understanding of the present invention, and the advantages thereof, reference is now made to the following description taken in conjunction with the accompanying drawings, in which:

[0008] FIG. 1A illustrates an exterior side view of a golf club in accordance with an embodiment of the present invention, as it is held by the golfer;

[0009] FIG. 1B illustrates an exterior side view of a reverse arch golf club in accordance with an embodiment of the present invention, showing the relative position of the club head, as it is held by the golfer;

[0010] FIG. 2 illustrates an exterior side elevation of a prior art golf club grip as held by a golfer;

[0011] FIG. 3 illustrates an exterior side elevation of a golf club in accordance with an embodiment of the present invention;

[0012] FIG. 4 illustrates a sectional end view taken along the line 4-4 of the golf club depicted in FIG. 3;

[0013] FIG. 5 illustrates an exterior side elevation of a golf club in accordance with another embodiment of the present invention;

[0014] FIG. 6 illustrates a sectional end view taken along the line 6-6 of the golf club depicted in FIG. 5;

[0015] FIG. 7 illustrates an exterior side elevation of a golf club in accordance with another embodiment of the present invention;

[0016] FIG. 8 illustrates a sectional end view taken along the line 8-8 of the golf club depicted in FIG. 7;

[0017] FIG. 9 illustrates an exterior side elevation of a golf club in accordance with another embodiment of the present invention;

[0018] FIG. 10 illustrates a sectional end view taken along the line 10-10 of the golf club depicted in FIG. 9;

[0019] FIG. 11 illustrates an exterior side elevation of a golf club in accordance with another embodiment of the present invention; and

[0020] FIG. 12 illustrates a sectional end view taken along the line 12-12 of the golf club depicted in FIG. 11.

DETAILED DESCRIPTION

[0021] Referring to FIGS. 1A and 1B of the drawings, the reference numeral 100 generally designates a golf club embodying features of certain aspects of the present invention. The golf club 100 has a grip 101, depicted as held by a golfer in the lifeline of the palm of the upper hand 110, in the playing position, with a straight wrist 112. The grip 101 can generally comprise a tapered main body grip portion 114, a butt or top end cap portion 116, and a tip or bottom end portion 118. The golf club grip 101 is shown mounted on a golf club shaft 120 that forms a part of golf club 100. As depicted in FIG. 1B, the golf club 100 also has a club head 102 having a heel 103 and a toe 104. The centerline of the shaft axis is shown as CL-S, while the centerline of the arched butt section is shown as CL-B.

[0022] FIG. 2 illustrates a typical prior art golf club 200 having a grip 201 as held by a golfer more in the fingers of the hand 210 away from the palm 212. This illustrates the golfer's resultant bowed wrist 214. If held in the lifeline of the hand, both the pistol or typical arched grip generally help keep the user's wrist straight, in a more direct line between the hand and forearm, because the lie angle of most putters is more upright than full swing clubs, as the golfer generally places the ball closer to his or her feet and putts from a more crouched position than full swing clubs. The flat wrist hand position is now known by the inventor and others experi-

enced in the art of teaching and swing mechanics to allow the golfer to release the club more naturally through the contact and follow through, a natural action that is now favored by more of today's top teachers, instructors, coaches, top amateur and professional golfers.

[0023] However, the vast majority of golfers tend to grasp these pistol or arched grips more in the fingers of the left hand, instead of the lifeline, as this is where they are taught to, and are used to holding the club for all their full swing clubs. Holding the arched or pistol putter grip in the fingers causes the golfer to arch or bow his or her wrist to compensate for the change in hand position on the more upright lie of the putter shaft. During the putting stroke, an arched or bowed wrist inhibits the free, natural flow of the hand and wrist during the putting stroke, especially during the critical approach to and through the contact area and during the follow through. This inhibited wrist position and related stroking motion can result in a "push," where the wrist is inhibited from completely releasing, causing the blade to remain open and directing the ball at contact to the right of the intended target line or, for the right handed golfer with the bowed left wrist, can "pull" the putt by over-compensating for the lack of release of the hands and the putter, which over-rotates the left wrist and thus pulls the putter to the left, causing the ball to travel left of the intended target line.

[0024] While many golf teaching professionals, instructors and the like have tried to teach the advantageous lifeline hand grip position, the arch or pistol shaped grips work against this teaching as the lower pistol portion falls naturally more towards or in the fingers for most golfers. Since these golfers are used to holding their full swing clubs in this manner, they usually or automatically revert to this way of holding the putter.

[0025] FIG. 3 illustrates an elevation view of the grip 101, viewed with the toe 104 of the club head 102 above the centerline CL-S. As can be seen, the butt end 107 of the club grip 101 is wider above the centerline CL-S (that is, closer to the toe 104 of the club head 102) than it is below the centerline CL-S (i.e., closer to the heel 103 of the club head 102). Also, in accordance with one embodiment of the present invention, the golf club grip 101 of the golf club 100 has an upper arched portion 105 and the enlarged upper, or elevated, portion 107 of butt portion 106 of the grip 101. The club 100 has a smaller lower portion 108 of butt portion 106 of the grip 101, on the side of centerline CL-S that is closest to the heel 103 of the club head 102. The golf club grip 101 of the golf club 100 further can have a lower arched side 109 that is arched in the same direction as upper arched portion 105, but with a somewhat lesser arch (i.e., as somewhat greater arch radius).

[0026] FIG. 4, which illustrates a sectional view 4-4 of an embodiment wherein the upper, or elevated, portion 107 of butt portion 106 of the grip 101 on the top of the grip designed for a putter is generally flat and has a generally rounded side 108 on the opposite side. As can be seen, the portion of the butt end 116 has an enlarged upper, or elevated, portion 107 of butt portion 106 of the grip 101.

[0027] FIG. 5 illustrates an elevation view of another embodiment including a grip 101', viewed with the toe 104' of the club head 102' above the centerline CL-S. As can be seen, the butt end 106' of the club grip is wider above the

centerline CL-S (i.e., closer to the toe 104' of the club head 102') than it is below the centerline CL-S (i.e., closer to the heel 103' of the club head 102'). Also, in accordance with one embodiment, the golf club grip 101' of the golf club 100' has an upper arched portion 105' and the enlarged upper, or elevated, portion 107' of butt portion 106' of the grip 101'. The grip 101' has a smaller lower portion 108' of butt portion 106' of the grip 101', on the side of centerline CL-S that is closest to the heel 103' of the club head 102'. In this embodiment, however, the lower side 109' is generally straight, rather than arched.

[0028] FIG. 6, which illustrates a sectional view 6-6 of an embodiment wherein the upper, or elevated, portion 107' of butt portion 106' of the grip 101' on the top of the grip designed for a putter is generally flat and has a generally rounded side 108' on the opposite side. As can be seen, the portion of the butt end 106' includes an enlarged upper, or elevated, portion 107' of butt portion 106' of the grip 101'.

[0029] The upper portion 107 and 107' of the club grips 101 and 101', respectively, need not be flat, is illustrated in FIGS. 3-5. In yet another embodiment, depicted in FIGS. 7 and 8, the grip 101" is generally oval in cross section. The golf club grip 101" of the golf club 100" still has an upper arched portion 105" and the enlarged upper, or elevated, portion 107" of butt portion 106" of the grip 101". The club 100" has a smaller lower portion 108" of butt portion 106" of the grip 101", on the side of centerline CL-S that is closest to the heel 103" of the club head 102". In this embodiment, however, the lower side 109" is generally straight, rather than arched.

[0030] In another embodiment, illustrated in FIGS. 9 and 10, the upper portion 107''' of the grip 101''' is generally round in cross section. The golf club grip 101''' of the golf club 100''' still has an upper arched portion 105''' and the enlarged upper, or elevated, portion 107''' of butt portion 106''' of the grip 101'''. The club 100''' has a smaller lower portion 108''' of butt portion 106''' of the grip 101''', on the side of centerline CL-S that is closest to the heel 103''' of the club head 102'''. The lower side 109''' can be arched.

[0031] In another embodiment, illustrated in FIGS. 11 and 12, the lower portion 108'''' of the grip 101'''' is generally flat. The golf club grip 101'''' of the golf club 100'''' still has an upper arched portion 105'''' and the enlarged upper, or elevated, portion 107'''' of butt portion 106'''' of the grip 101'''. The club 100'''' has a smaller lower portion 108'''' of butt portion 106'''' of the grip 101''', on the side of centerline CL-S that is closest to the heel 103'''' of the club head 102'''. In yet another embodiment the grip is wrapped in a leather or synthetic material. In yet another preferred embodiment the grip is milled.

[0032] There can also be different versions of the golf club that vary to a degree in certain characteristics, such as identifying marks, logos, proper hand placement guides, size, weight or center of gravity. However, in other respects, the club will still have a raised butt area above the centerline CL-S, which can be achieved by a reverse arch or a reverse pistol shape.

[0033] Combinations of any or all of the afore-mentioned patterns may be applied to various parts of the grip as desired. Standard grip patterns can be duplicated, for example: a wrap pattern mimicking the shape of a leather-

wrapped grip, including ridges wrapped diagonally and holes or indentations replicating perforations, and the like. Holes can also be formed in the grip pattern to reduce weight. Such holes can also be filled with materials such as rubber, plastic, epoxy, cork, leather, synthetics and the like for increased traction, or the hollow grip can have holes placed into a co-mold to then cast or inject rubber, plastic, Delrin or other injectable, castable or moldable materials into and through the openings for an integrated two or multi-material grip.

[0034] In another embodiment, the butt portion of the grip is raised as with an upside-down pistol shape. In another embodiment, the grip can be made of rubber or synthetic material. In another embodiment, the golf club grip can be composed of a relatively rigid material. In another embodiment, the grip can be made of rubber wrapped in leather or other material. In another embodiment, the golf club grip can be such that the body portion and the tip portion are machined from a single piece of stock. In another embodiment of the golf club, the body portion and the tip portion are cast as a unit to a near-net shape. In another embodiment, the body portion includes a textured surface. In another embodiment, the textured surface includes troughs, grooves or dimples. In another embodiment, the body portion and the tip portion are milled. In one embodiment, the grip is made from metal, and machined, cast, stamped or otherwise formed. In another embodiment, the body portion and the tip portion are hydro-formed. In another embodiment, the tip portion includes an alignment mark. In another embodiment, the butt portion can include an alignment mark.

[0035] Particular attention should be used to design and manufacture grips that conform to the Rules of Golf as determined by the United States Golf Association and the Royal and Ancient of St. Andrews, golf's two main governing bodies which dictate those rules and make decisions on new equipment's conformity.

[0036] The invention also provides a method of hitting a golf ball with a golf club built in accordance with an embodiment of the present invention, such that the golfer holds the inventive grip in the lifeline of the palm of the upper hand, and swings at the ball. The foregoing grip and swing using the club in accordance with the present invention produces a straighter wrist position and a freer release of the club through the hitting area and follow through.

[0037] It is understood that the present invention can take many forms and embodiments. Accordingly, several variations may be made in the foregoing without departing from the spirit or the scope of the invention.

[0038] Having thus described the present invention by reference to certain of its preferred embodiments, it is noted that the embodiments disclosed are illustrative rather than limiting in nature and that a wide range of variations, modifications, changes, and substitutions are contemplated

in the foregoing disclosure and, in some instances, some features of the present invention may be employed without a corresponding use of the other features. Many such variations and modifications may be considered obvious and desirable by those skilled in the art based upon a review of the foregoing description of preferred embodiments. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the scope of the invention.

1. A golf club, comprising:

a club head having a toe and a heel,

a shaft,

a grip comprising a body portion, a butt portion and a tip portion wherein the butt portion is wider above the centerline of the shaft of the golf club, on the side of the axis of the shaft closest to the toe of the club head, than below the centerline.

2. The golf club grip of claim 1, wherein the butt portion is raised on an inclined arch.

3. The golf club grip of claim 2, wherein the middle portion of the grip is lower from the shaft than the butt or tip portion.

4. The golf club grip of claim 2, wherein the grip features one or more flat paddle sections orientated lengthwise.

5. The golf club grip of claim 2, wherein a flat paddle section is on the top of the grip.

6. The golf club grip of claim 1, wherein the butt portion of the grip is raised as with an upside-down pistol shape.

7. The golf club grip of claim 1, made of rubber or synthetic material.

8. The golf club grip of claim 1, composed of a relatively rigid material.

9. The golf club grip of claim 1, made of rubber wrapped in leather or other material.

10. The golf club grip of claim 1, wherein the body portion and the tip portion are machined from a single piece of stock.

11. The golf club grip of claim 1, wherein the body portion and the tip portion are cast as a unit to a near-net shape.

12. The golf club grip of claim 1, wherein the body portion includes a textured surface.

13. The golf club grip of claim 12, wherein the textured surface includes troughs, grooves or dimples.

14. The golf club grip of claim 1, wherein the body portion and the tip portion are milled.

15. The golf club grip of claim 1, wherein the body portion and the tip portion are hydro-formed.

16. The golf club grip of claim 1, wherein the tip portion includes an alignment mark.

17. The golf club grip of claim 1, wherein the butt portion includes an alignment mark.

* * * * *