United States Patent [19]

Giambazi

[11] **3,782,725**

[45] **Jan. 1, 1974**

[54] **GOLF CLUB WITH ECCENTRIC GRIP THEREFOR**

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[22] Filed: **May 1, 1972**

[21] Appl. No.: **249,045**

[52] **U.S. Cl.** ..... **273/81.3,** 273/81 B

[51] **Int. Cl.** **A63b 53/14**

[58] **Field of Search** ..... 273/81 R, 81 B, 81.2–81.6, 273/162 R, 164, 167 G

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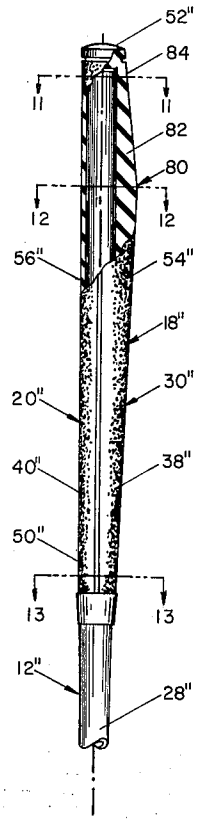
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[57] **ABSTRACT**

An improved grip for a golf club having a head, hosel, shaft and a grip including an eccentric grip having generally normal external dimensions, the grip including a thick portion extending longitudinally along the grip on the inner side of the shaft corresponding to the face of the club and a thin portion extending along the grip on the other, outer, side of the shaft.

1 Claim, 14 Drawing Figures



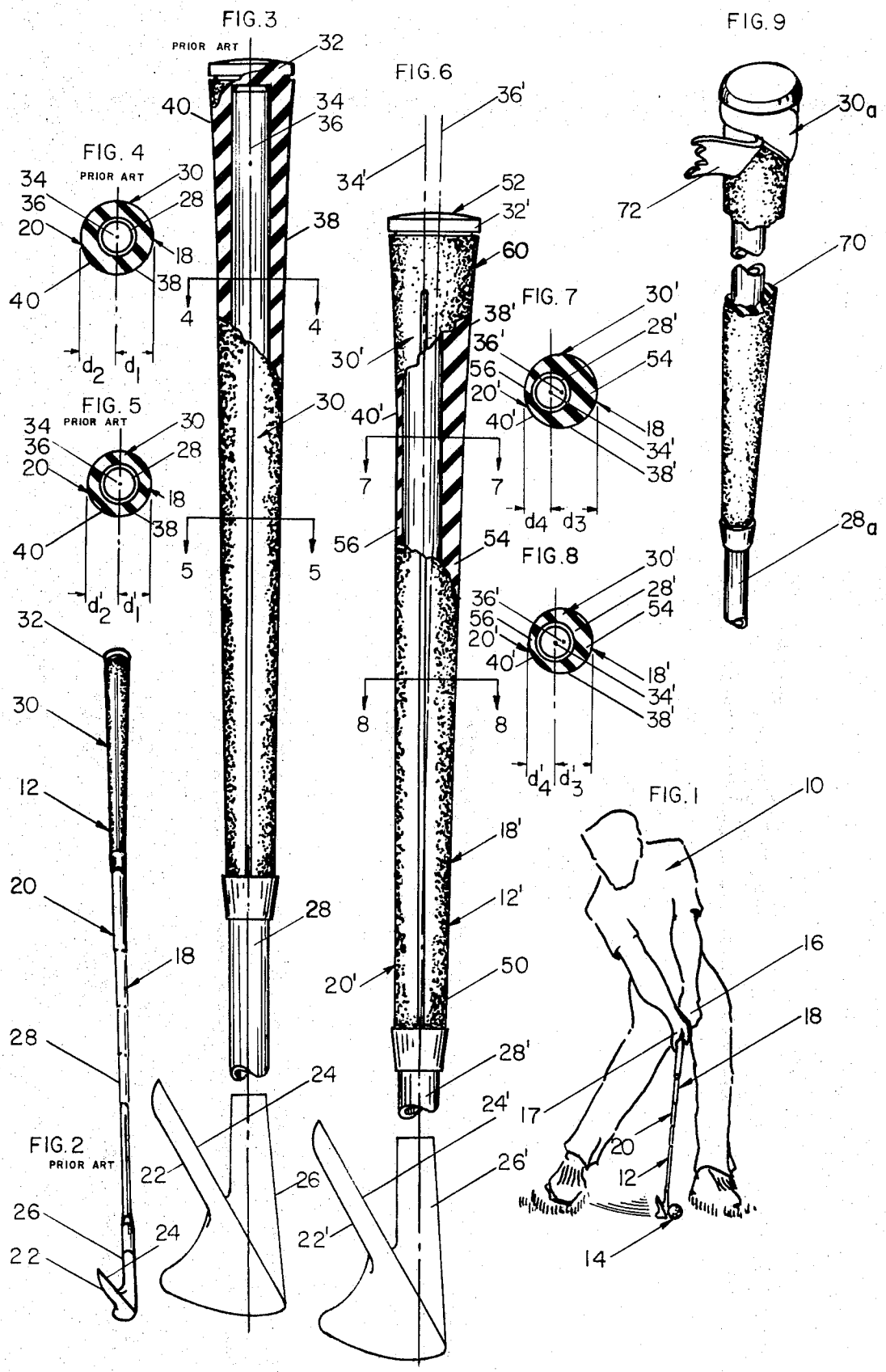

FIG. 3
PRIOR ART
FIG. 4
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FIG. 6
FIG. 7
FIG. 8
FIG. 9
FIG. 1

FIG. 13

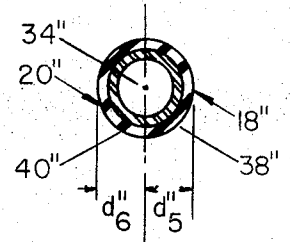


FIG. 11

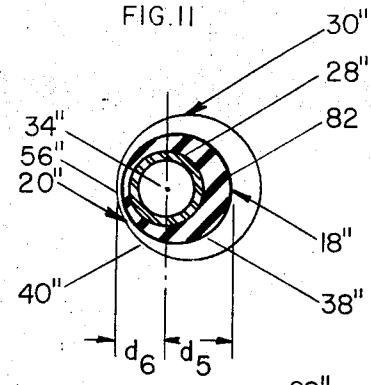


FIG. 10

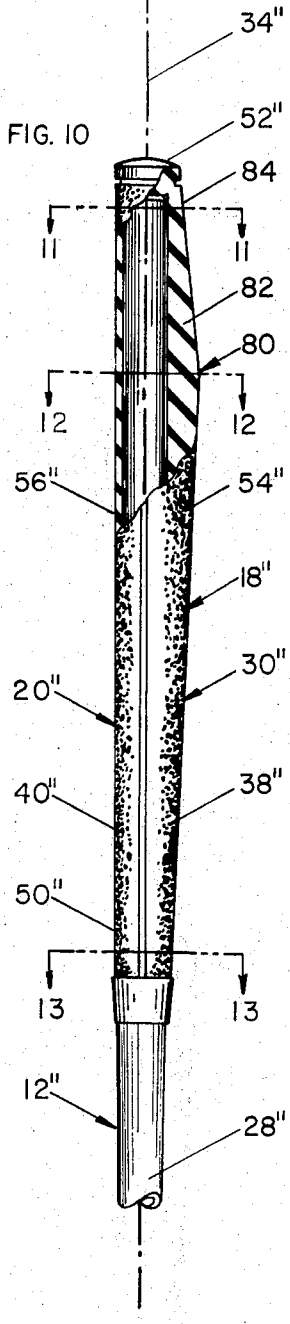


FIG. 12

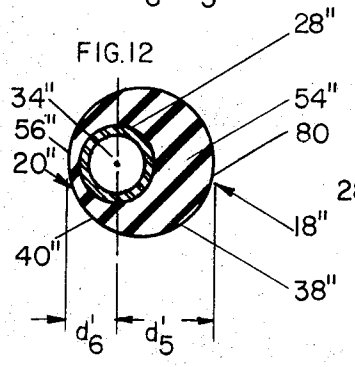


FIG. 14

GOLF CLUB WITH ECCENTRIC GRIP THEREFOR

FIELD OF INVENTION

This invention relates to an eccentric grip for a golf club and more particularly to such a grip which increases the thickness of the grip on the inner side of the shaft corresponding to the face of the club and decreases the thickness of the grip on the outer side of the shaft.

BACKGROUND OF INVENTION

Conventional golf grips are quite symmetrical to the shaft and uniform in size among major manufacturers. At a point 2 ½ inches from the top they measure twenty-eight thirty-seconds inches in diameter, and at a point 5 ½ inches from the top they measure twenty-five thirty-seconds inches. An undersized grip is one thirty-second inches less at these sections. An oversized grip is one thirty-second inches greater in diameter and a full oversized grip one-sixteenth inches larger than standard. Empirical development has determined these size ranges to be suitable for the controlled gripping of a golf club. It has also been determined that a large diameter grip in small or average hands has a tendency to make the player "fade" or produce a left to right flight of the ball, while smaller grips in large or average hands account for "hooked" shots or those with a right to left path. The far greater majority of grips are "bell shaped, " that is, they taper from a diameter almost the equivalent of the club shaft at the base and gradually increase concentrically to the top. The final 2 inches or so sees a slight flaring similar to the lip configuration of a bell. In recent years, several geometrical changes have been attempted in an effort to present a superior grip design. In one, the top of the grip, which is gripped by the left hand, is made smaller. The reduced diameter allows the generally weaker last two fingers of the upper hand, i.e., the left hand of right-hand golfers, to better grip this section of the club. In another design, the lower section of the grip is increased in diameter, producing a bulge at the lower hand forefinger area. In this manner, less chance of right hand downward slippage is incurred. These and other attempts at golf club grip design seem minor, but in order to ba accepted for play by the United States Golf Association (U.S.G.A.) and the Royal and Ancient Golf Club of St. Andrews, Scotland, Rule 2 of the U.S.G.A. golf rules must be met.

RULE 2. *f.* Grip.

The grip shall be a continuation of the shaft to which material may be added for the purpose of obtaining a firm hold. The grip shall be substantially straight and plain in form, may have flat sides, but shall not have a channel or a furrow or be molded for any part of the hands.

A device designed to give the player artificial aid in gripping the club, other than a plain glove, shall be deemed to violate this Rule even though it be not part of the club.

It therefore can be seen that the humam factor problem of gripping a golf club has extreme limitations of design. It is small wonder that the conventional technique of wrapping a piece of leather about the hickory shafts of early golf clubs has changed so little. It is true that the advent of steel, aluminum, and fiberglass shafting has allowed smaller diameters at the grip portions, but these sections were wrapped with filler material to build up to the grip dimensions described in the opening paragraph. Molded grips generally of elastomers with a cork or other non-slip filler have become an adequate substitute for the leather wrap technique for gripping golf clubs. In this design, a grip is molded to the same basic sizes of the standard golf grip. Two-sided masking tape is wound on the shaft portion accepting the grip, and a quick drying lubricant aids in slipping the grip over the tape. On evaporated of the lubricant, the two-sided tape adequately adheres the grip to the shaft. A plastic trim ferrule then covers the raw edge of the grip for a neater appearance. The choice of grip then is left to the golfer. Both leather and composition grips have their followers. Individual determination for the "feel" and "tackiness" lead to the grip selection. One prior art device discloses a typical grip whose axis is offset from that of the shaft to "alter the playing characteristics of the club."However, club." the offset is toward and away from the head of the club, i.e., the center line of the shaft extends upwardly and forwardly relative to the axis of the grip material below and to the rear of the shaft so as to shift the center of gravity of the club. This offset is at right angles to that proposed by the present invention and achieves none of its advantages.

SUMMARY OF INVENTION

It is therefore an object of this invention to provide an improved golf club grip which enables greatest coordination between hands and the club and which allows most advantageous placement of hands on the club.

It is a further object of this invention to provide an improved golf club grip which positions the lower, power, hand to receive maximum information transferred from the shaft.

It is a further object of this invention to provide an improved golf club grip which positions the upper hand to exert a greater moment of force on the shaft to help combat overpowering by the lower hand.

It is a further object of this invention to provide an improved golf club grip which positions more sensitive finger joints closest to the palm area of the lower hand at the thinnest portion of the grip where information transfer is best.

It is a further object of this invention to provide such an improved golf club grip whose contours at its upper end extend to more nearly match the cavity formed in the palm of the upper hand.

The invention results from the discovery that the control of the lower hand is improved by placing it closer to the shaft on the outer side of the club away from the ball while coincidentally the upper hand may be given greater leverage to oppose overcontrol by the lower hand by moving its contact area away from the shaft on the inner side of the shaft proximate the ball. The removal of grip material on the outer side is compensated for by the addition of material on the inner side so that the grip may be maintained at regulation size without drastic modification.

The invention features an improved grip for a golf club having a head, a hosel, a shaft and a grip. The grip is eccentrically structured having generally normal external dimensions. The grip includes a thick portion extending longitudinally along the grip on the inner side of the shaft corresponding to the face of the club and a thin portion extending along the grip on the other, outer side of the shaft. In one embodiment the surface

of the thickened portion on the inner side of the grip is reverse tapered from an area before the top to the top of the grip to produce a salient portion which more closely matches the concavity of the palm of the upper hand. In another embodiment the grip has its longitudinal axis generally coincident with the longitudinal axis of the club at the bottom of the grip and spaced therefrom at the top of the grip. The axis of the grip diverges from the axis of the shaft on the inner side of the shaft corresponding to the face of the club from bottom to top of the grip.

DISCLOSURE OF PREFERRED EMBODIMENT

Other objects, features and advantages will occur from the following description of a preferred embodiment and the accompanying drawings in which:

FIG. 1 is a diagrammatic view of a golfer in an address position with the golf club about to meet the ball.

FIG. 2 is a front view of a conventional golf club.

FIG. 3 is an enlarged, partially sectioned view of a golf club with a conventional grip.

FIG. 4 is a sectional view taken along lines 4—4 of FIG. 3.

FIG. 5 is a sectional view taken along lines 5—5 of FIG. 3.

FIG. 6 is an enlarged partially sectioned view of a grip according to this invention.

FIG. 7 is a cross-sectional view taken along lines 7—7 of FIG. 6.

FIG. 8 is a cross-sectional view taken along lines 8—8 of FIG. 6.

FIG. 9 is a partially broken away view of a leather wrap grip made according to this invention with a composition filler between the leather wrap and shaft.

FIG. 10 is a partially sectioned elevational view of an alternative embodiment of the grip of this invention mounted on the upper end of a golf club shaft.

FIG. 11 is a sectioal view taken along line 11—11 of FIG. 10.

FIG. 12 is a sectional view taken along line 12—12 of FIG. 10.

FIG. 13 is a sectional view taken along line 13—13 of FIG. 10.

FIG. 14 is a partially broken away axonometric view of the grip of FIG. 10 with the golf club head superimposed on it showing the proper orientaiton of the head relative to the grip.

There is shown in FIG. 1 a man 10 in an address position with the golf club 12 about to hit the ball 14; the upper hand 16 of the man is on the inner side 18 of the club 12, the side facing ball 14 and the lower hand 17 of the man is on the outer side 20 of club 12 on the side away from ball 14. Since the man is shown as a right-handed golfer his right hand is the lower hand 17 and his left hand is the upper hand 16. If the man 10 were a left-handed golfer the reverse would be true.

Golf club 12 is shown in more detail in FIG. 2 with a head 22 having a face 24 which strikes the ball 14, and hosel 26 which interconnects head 22 and shaft 28. At the upper end of shaft 28 is mounted grip 30 which as shown is a molded or rubber composition material and has a cap 32 at its upper end to cover the end of shaft 28. The inner side 18 of club 12 is the side corresponding to face 24 which strikes the ball 14 and the outer side 20 is the opposite side from side 18. In conventional grip 30, FIG. 3, the longitudinal axis 34 of grip 30 coincides with the longitudinal axis 36 of shaft 28. Further, the material of grip 30 is evenly distributed concentrically about shaft 28, as illustrated in FIG. 4: the distance d_1 from axes 34, 36 to the external surface 38 of grip 30 on inner side 18 is equal to the distance d_2 from the longitudinal axes 34, 36 to the surface 40 of the outer side 20 of grip 30. The concentric relationship of grip 30 to shaft 28 and the uniformity of distribution of material in grip 30 is further shown in FIG. 5 where the distances d_1' and d_2' are somewhat smaller but are nevertheless equal to one another; they are somewhat smaller because of the taper of 30 as is apparent in FIG. 5 but are nonetheless equal as were d_2 and d_2.

In contrast to this, as shown in FIG. 6, where like parts have been given like numbers primed, the grip 30' of this invention is eccentrically formed so that it is not concentric to shaft 28' and its longitudinal axis 36' is not coincident with the longitudinal axis 34' of shaft 28' along their entire extent. Axes 34' and 36' are coincident at the lower end 50 of grip 30' but diverge moving from bottom to top so that they are fully separate at the upper end 52. The axis 34' of shaft 28' diverges from the axis 36' of grip 30' so that the axis 34' is closer to the outer side 20' of club 12' and farther from the inner side 18' of club 12' at the top of the club. This results in the thick portion 54 of grip 30' being aligned longitudinally along the inner side 18' of club 12' and the thin portion 56 being disposed longitudinally along the outer side 20' of club 12'. The thin portion 56 is generally of uniform thickness and its outer surface 40' is generally parallel to shaft 28' for most of the extent of grip 30' and at least for as much of grip 30' as extends from the lower end 50 to the flared area 60 of grip 30'. The thick portion 54 is of increasing thickness from bottom to top of grip 30' in keeping with the taper as is apparent from the surface 38' which diverges farther from shaft 28' towards top 52. As a result more of the tapered characteristic occurs around inner side 18' than along outer side 20'.

The eccentricity of grip 30' can be better understood with reference to FIG. 7 wherein the distance from side 18' to the axis 34' of shaft 28' is d_3 and the distance from side 20' to the axis 34' is d_4 and d_3 is substantially larger than d_4 by virtue of the fact that it includes the thick portion 54 whereas d_4 includes the thin portion 56. The increased length of d_3 over d_4 provides a larger moment for the upper hand about the axis 34' of shaft 28' to enable the upper hand to more easily overcome any inadvertant rotational or twisting action by the lower hand. In addition, the fact that d_4 is substantially smaller than d_3 decreases the effect of any rotational movement by the lower hand about the axis 34' of shaft 28'; thus this grip increases the effect of the upper hand to prevent rotation of the shaft while it simultaneously decreases the rotational effect of the lower hand, and thereby provides a doubly increased improvement in coordination between the hands and the golf club. In addition the thin portion 56 permits the lower hand to be positioned closer to the shaft 28' where it is more able to feel the action of the club through the shaft and further provides, by means of thick portion 54, more mass on the inner side 18' of club 12' where it is needed to improve contact of the finger joints at the palm of the upper hand where they contact the grip 304'.

The taper of grip 30' may be kept the same as the taper associated with grip 30 as illustrated in FIG. 8

where the distances d_3' and d_4' are still unequal with d_3' being the larger of the two but each of them having been reduced proportionately in accordance with the taper.

Although the description of the grip has been carried out using a composition material for the grip this is not necessarily a limitation of the invention. For as shown in FIG. **9** a grip **30***a* may be used on a shaft **28***a* by first covering the shaft with a filler material **70** having the proper eccentricity and then wrapping the material **70** with a leather piece **72** in the conventional way.

In another embodiment the grip is further provided with a reverse taper at the top portion on the thick, inner side of the grip as shown in FIGS. **10, 11, 12, 13** and **14** wherein like parts have been given like numbers with double primes. In FIG. **10,** grip **30''** is also eccentrically formed so that it carries increased material, thick portion **54''**on its inner side **18''** corresponding to the face **24''** of club **12''**and carries decreased material, thin portion **56''**on its outer side **20''**. Grip **30''** is tapered in the typical fashion becoming larger towards the top of grip **30''** up to the area **80** whereupon the taper reverses towards top **52''**. Thick portion **54''** is still on the inner side **18''** of club **12''** and its surface **38''** inclines outwardly from shaft **28''** from bottom to top. However, the thickness of the upper portion **82** of thick portion **54''** above area **80** decreases after area **80** and the surface **84** of portion **82** assumes an opposite incline. Thin portion **56''** is of generally uniform depth and its surface **40''** remains parallel to shaft **28''** from bottom to top of grip **30''**.

The contour of grip **30''** is further illustrated in FIGS. **11, 12** and **13.** In FIG. **11** the distance d_5 from surface **38''** to shaft axis **34''** is larger than d_6 the distance from shaft axis **34''** to surface **40''** to provide a larger moment capability for the upper hand. However, at area **80,** FIG. **12,** the distance, d_5', from surface **38''** to axis **34''** has increased relative to the distance, d_6' from surface **40''** to axis **34''**. Thus this structure provides the largest moment capability and most salient part of the grip at **80** where it engages the concave portion of the palm of the upper hand: this grip **30'** provides a capability for accommodating the upper hand palm shape and for increasing the moment capability of the upper hand not heretofore available in regulation grips. In FIG. **13** the distances d_6'' and d_5'' between axis **34''** and surfaces **40''** and **38''**respectively, are equal.

The relationship of club **12''**head **22''**face **24''** to the inner **18''** and outer **20''** sides of shaft **28''** and more importantly to area **80** and the rest of grip **30''** is shown more clearly in FIG. **14.**

The longitudinal axis of grip **30''** is not shown in FIGS. **10–13.** It may be considered that that axis is coincident with axis **34''** at the bottom **50''** of grip **30''** and divergent toward the top **52''** as would be the case if that axis was selected with reference to the lower part of grip **30''** below area **80** or that axis is coincident with axis ÷'' at the top **52''** of grip **30''** and divergent toward the bottom **50''** as would be the case if that axis was selected with reference to the upper part of grip **30''** above area **80.** The important feature in grip **30''** as in grip **30'** is that there be an increased amount of material on the inner side of the shaft and a decreased amount of material on the outer side. Indeed the thickest area **80** on grip **30''** need not be located as illustrated in FIG. **10** but can be closer to the top **52''** as taught by the tapered construction of grip **30'**; or the thickest area **80** may be lower, as close to the bottom as it is shown to the top or closer, i.e., at the bottom. In face either grip **30'** or **30''** could be mounted upside down relative to their positions shown in drawings and the invention would still be featured: there would be increased material on the inner side of the shaft and decreased on the outer. The invention is not restricted to a grip having a single taper, a double taper or any taper, or to a grip having a single maximum thickness in its thick portion. For example a grip is constructed according to this invention having its axis parallel to the shaft axis and having its thick portion on the inner side of the shaft and having the same increased thickness from bottom to top of the grip, so that the surface of the thick portion is parallel to the shaft just as is the surface of the thin portion

Other embodiments will occur to those skilled in the art and are within the following claims:

What is claimed is:

1. The combination of a golf club and an improved grip therefor said grip being eccentric of the shaft and comprising:

a generally circular cross section area;

a longitudinal bore having a longitudinal axis coincident with the axis of said shaft;

a first tapered portion extending along said grip on the inner side of the shaft corresponding to the face of the head and tapering from a minimum thickness in the bottom half of said grip to a maximum thickness in the upper half of said grip for locating the upper hand further away from the axis of the shaft;

a second thin portion of generally uniform thickness extending along said grip on the outer side of the shaft for locating the lower hand closer to the axis of the shaft;

said grip having a longitudinal axis which diverges from the axis of said bore and shaft on the inner side of the club; and

the outer surface of said thin portion being generally parallel to said shaft from bottom to top of said grip and said tapered portion increasing to maximum thickness at a position in said upper half of said grip and being of decreasing thickness from said position to the top of said grip.

* * * * *