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GOLF CLUB GRIP FOR SHAFTS WITH DIAMETRAL VARIATIONS

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Fig. 1

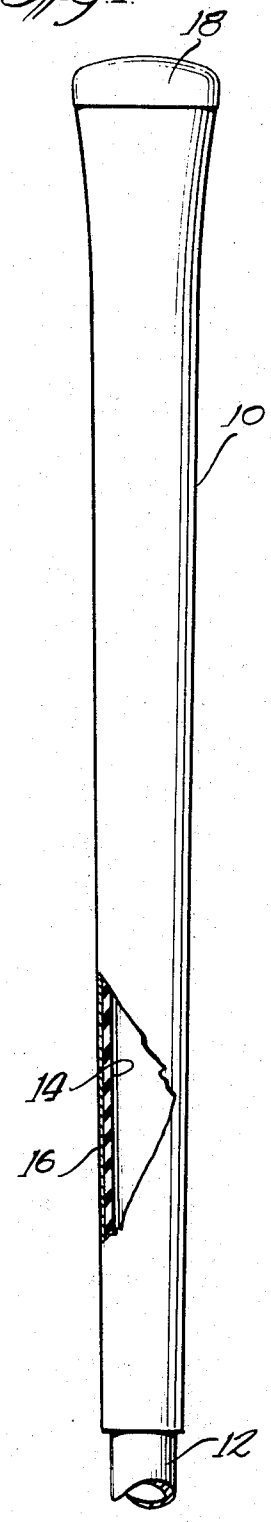


Fig. 2

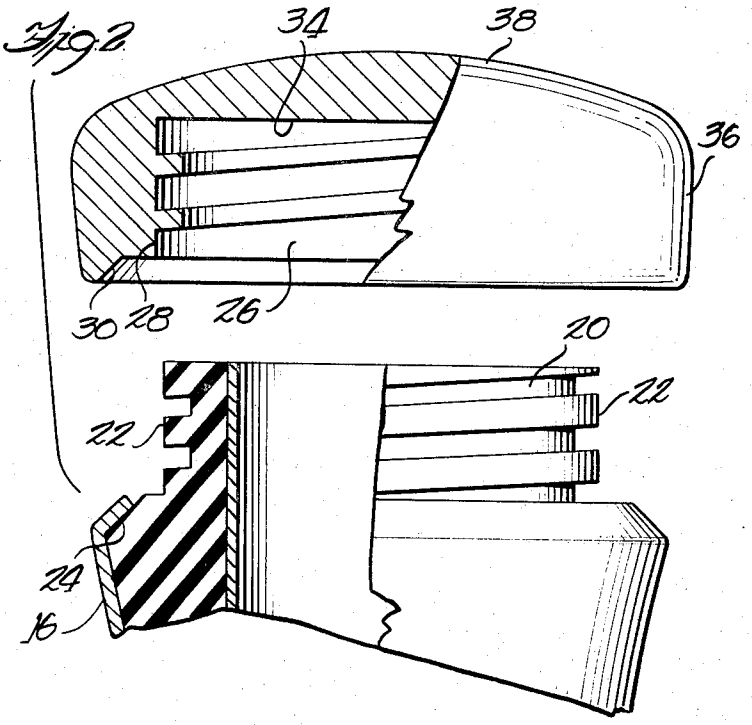
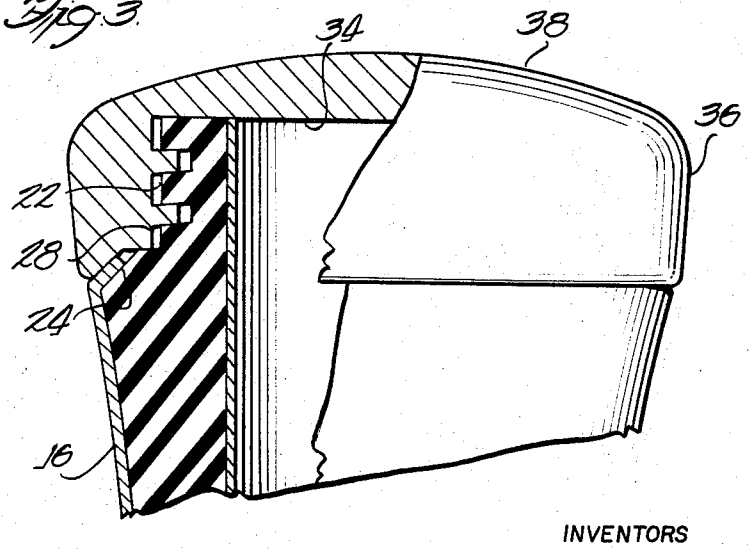


Fig. 3



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GOLF CLUB GRIP FOR SHAFTS WITH DIAMETRAL VARIATIONS

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ABSTRACT OF THE DISCLOSURE

An end cap which is threaded onto an underlisting which is affixed about a shaft, for closing the opening in the butt end of the shaft.

This invention relates to golf club grips and more particularly it relates to a cap for closing the opening in the butt end of a golf club grip.

The present invention is particularly applicable for use with golf club grips of the type constructed of a molded rubber underlisting, or sleeve, which is covered by a leather gripping surface. In the past, underlistings have been fabricated with a closed end so that once assembled on the shaft of a golf club no further steps need be taken to close the open end of shaft. Such an arrangement has several apparent advantages, but it also has the disadvantage of being difficult to place on a shaft. It is found that the relative inextensibility of the leather gripping surface which covers the underlisting tends to force the rubber underlisting against the sharp edge of the end of the golf club shaft, thereby making it extremely difficult to slide the grip over the end of the shaft.

In view of the difficulties experienced with underlisting with closed ends, it has generally been the practice to use an underlisting with open ends. A starter in the form of an expander of some type may then be used to provide a gradually increasing diameter for the underlisting and to cover the sharp edge of the end of the shaft. The opening in the end of the underlisting allows the removal of the starter once the grip is in place.

Since the grip end of the shaft is open when this grip construction is used, a cap or the like is generally used to close the end of the shaft. In the past, these caps have assumed various configurations, and numerous methods have been employed to secure the cap to the end of the shaft. Each has, however, been generally unsatisfactory, for one reason or another, and considerable efforts have been made to provide a satisfactory cap, as well as a method for securing the cap to the end of the shaft. For example, to mention only a few of the undesirable features of these caps, in the past the caps have been formed in the shape of a mushroom, having an enlarged head and a smaller tail portion. The tail portion corresponded in size with the shaft and, in some cases, it was force fitted into the end of the shaft and, in other cases, it was merely adhesively sealed therein. In still other cases, the tail portion was threadably received in the shaft by means of threads on the interior of the shaft and on the exterior of the tail portion. In the former cases, the cap usually becomes dislodged after a short period of use and is therefor unsatisfactory. In the latter case, the cost of threading the interior of the shaft so as to receive the threaded tail portion is prohibitive. In still another case, a wooden plug was forced into the end of the shaft and a cap was then secured to the wooden plug by means of a wood screw which was threaded into the wooden plug. This arrangement, like the arrangement first mentioned above, is unsatisfactory since the wooden plug would also become dislodged eventually and hence the overlying cap would fall off the end of the shaft.

In addition to the above mentioned unsatisfactory characteristics of the prior caps and the prior methods for securing them to the end of the shaft, none of them provided an effective means for terminating the gripping surface nor are they adaptable to accommodate the normal variations in shaft sizes or to the expedients which may be used to provide an over-size grip.

It is therefore an object of this invention to provide an improved golf club grip.

It is a further object of this invention to provide a golf club grip having improved means for terminating the grip end of the golf club shaft.

It is a still further object of this invention to provide an improved method for securing a cap to the end of a golf club grip.

It is a still further object of this invention to provide an improved golf club grip having a cap which is adapted to accommodate the normal variations in shaft size. In this respect, it is further contemplated that the cap will accommodate the normal expedients which may be used to provide an over-size grip.

It is a still further object of this invention to provide an improved golf club grip having a cap which may be fabricated of any suitable material, for durability and/or decoration.

It is a still further object of this invention to provide an improved golf club grip of the type having an open ended rubber underlisting covered with a gripping surface of appropriate material and a cap; the cap being effective to terminate the gripping surface, as well as the end of the shaft.

It is a still further object of this invention to provide an improved golf club grip of the type having an open-end underlisting covered with a gripping surface of appropriate material which grip is easily manufactured at a relatively small cost. In this respect, it is further contemplated that the underlisting and the cap may be both molded of the same or different materials.

The invention accordingly comprises the several steps and the relation of one or more of such steps with respect to each of the others and the apparatus embodying features of construction, combination of elements and arrangement of parts which are adapted to effect such steps, all as exemplified in the following detailed disclosure, and the scope of the invention will be indicated in the claims.

The above outline objectives are accomplished with the golf club grip of the present invention which may be generally described as comprising an underlisting having a reduced diameter section at the top end thereof which has external threads formed thereon. A suitable gripping surface material covers the underlisting. A cap which may be of the same material as the underlisting has internal threads which are adapted to threadably receive the threaded reduced diameter section. The threads on the cap are formed with considerable diametral clearance so as to accommodate the normal variation of shaft size and also oversize grips. The underside of the cap is also undercut so as to provide a conical periphery which gathers and holds the upper edge of the gripping surface material. This conical periphery also functions to center the cap on the underlisting.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

FIGURE 1 is a side plan view of a golf club grip, partially sectioned to show its interior construction, which is exemplary of the present invention;

FIGURE 2 is an exploded, partially sectioned view

of the golf club grip of FIG. 1, illustrating the construction of the cap and the underlisting; and

FIGURE 3 is a partially sectioned view illustrating how the cap is removably secured to the golf club.

Referring now to FIG. 1, a golf club grip **10** exemplary of the present invention is shown in assembled fashion on the grip end of a golf club shaft **12** (only partially shown). The grip **10** includes an underlisting **14**, in the form of a tapered, open-ended tube or sleeve. The underlisting **14** may be fabricated of any moldable material, however, it is preferably of soft rubber material. A gripping surface material **16** covers the underlisting **14** and, in the embodiment described, is fabricated of leather. Other materials may, however, be used if desired. The grip **10** is terminated at the butt end of the club by means of a cap **18**.

The gripping surface material **16** may be applied to the underlisting **14**, and both assembled on the shaft, in any suitable manner. For example, as indicated above, the grip **10** may be slipped onto the shaft **12** by means of a starter in the form of an expander inserted within the underlisting **14**, to provide a gradually increasing diameter for the underlisting and to cover the sharp edge of the end of the shaft **12**. The starter is removed after the grip is in place, through the opening in the end of the underlisting.

In FIGS. 2 and 3, it may be noted that the underlisting **14** has a reduced diameter portion **20** having external threads **22** formed thereon, and that the cap **18** has a threaded cavity **26** formed therein, the threads **28** of which are adapted for engagement with the threads **22** formed on the reduced diameter section **20** on the underlisting **14**.

The threads **28**, as may be best seen in FIG. 3, have a substantial depth and are formed so as to have a diametral clearance of approximately 20 thousandths of an inch from the threads **22**. The depth of the threads **28** and the diametral clearance between the threads **22** and **28** accommodates the normal variations in shaft sizes, since there is sufficient overlap on the threads **22** and **28** to still retain a firm threaded engagement in the case of a smaller shaft and there is sufficient diametral clearance to allow the underlisting **14**, and hence threads **22**, to be stretched transversely in the case of a larger shaft. The cap **18** can therefore be of a standard size, and still be usable on shafts of both the standard size and those having normal variations in size, without having to modify it. It will therefore be appreciated that considerable savings may be realized, since only caps of a standard size need be provided.

A still further advantage provided by the diametral clearance between the threads **22** and **28** is that the expedients normally used to provide an oversize grip can be accommodated, without having to provide a specially modified cap. For example, one such expedient is to wrap one or more layers of adhesive tape or the like about the shaft **12** to, in effect, transversely stretch the underlisting **14**. As indicated above, the threads **22** and **28** automatically compensate for this difference in size, hence the same cap can be used. In this respect, additional savings can be realized.

The underlisting **14** has a beveled edge **24** and the underside of the cap **18** is undercut so as to provide a conical peripheral surface **30** which is adapted to matingly engage the beveled edge **24**. As may be best seen in FIGS. 2 and 3, the gripping surface material **16** is arranged at its upper end to overlap the beveled edge **24** so that the end is gathered, pressed and securely retained between the beveled edge **24** and the conical peripheral surface **30**, when the cap **18** is threaded onto the underlisting **14**. The cap **18** co-acting with the underlisting **14** therefore provides an effective means for terminating, or securing, the end of the gripping surface material **16**, and hence it is unnecessary to secure the end, by means of an adhesive or the like, as in the past.

The beveled edge **24** and the conical peripheral surface **30** mate with one another and therefore also cooperate, or coact, to center the cap **18** on the end of the shaft **12**. Without this arrangement, the cap **18** could shift transversely to the shaft **12** because of the diametral clearance between the threads **22** and **28**, leaving a rough ridge on one side of the grip **10**. The fact that the cap **18** could shift transversely to the shaft **12** also gives a flexible, rather than a firm, feel to the grip **10** and this likewise, is an undesirable feature. With the above described arrangement, the cap **18** is held in a fixed position, thus giving the desired firm feel to the grip **10**.

The cap **18** may be fabricated of any suitable material, for durability and decoration, and is preferably proportioned so that the top surface **34** of the threaded cavity **26** firmly engages the end of the shaft **12** when the cap **18** is threaded onto the threaded reduced diameter portion **20** of the underlisting **14**. This construction assists in providing the firm feel of the grip **10**, since the cap **18** is, in addition, firmly supported longitudinally by the shaft **12**. The side wall **36** of the cap **18** is slightly tapered and its diameter substantially corresponds to the overall diameter of the shaft **12**, the underlisting **14** and the gripping surface material **16**, so that a smooth substantially flush joint is effected about the periphery of the grip **10**, as illustrated. The cap **18** has a convex-shaped top **38** which joins the side wall **36** so as to provide smooth curved surface.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and, since certain changes may be made in the above construction without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween.

Now that the invention has been described, what is claimed as new and desired to be secured by Letters Patent is:

1. A grip for golf club shafts having normal diametral variations comprising, in combination: an elongated open-ended tube of an elastically expandable material adapted to be force-fitted on said shafts' ends and having a reduced diameter portion at its one end which has threads formed thereon; a gripping surface material formed about said tube; and a cap having a cavity formed therein which substantially corresponds in size with said reduced diameter portion and which is correspondingly threaded, the threads having sufficient depth and the diametral clearance between the threads on the cap and the tube being sufficient to accommodate shaft diametral variations. said cap being threaded onto said reduced diameter portion of said open-ended tube to close the open end thereof and to close the end of said golf club shaft.

2. The grip of claim **1** further including a beveled edge formed about the periphery of said tube; and a corresponding conical peripheral surface formed in the underside of said cap, said beveled edge and said conical peripheral surface cooperating to align said cap on the end of said shaft.

3. The grip of claim **2**, wherein said gripping surface material is overlapped on said bevel edge and said cap fixedly secures said overlapped end through the cooperative action of said beveled edge and said conical peripheral surface.

4. The grip of claim **3**, wherein the outside diameter of said cap substantially corresponds to the overall diameter of the combination of said shaft, said tube and said surface, so that a smooth, substantially flush joint or surface is provided on said grip.

5. The grip of claim 1, wherein a diametral clearance of approximately 20 thousandths of an inch is provided between said threads.

References Cited

UNITED STATES PATENTS

1,522,635	1/1925	Kraeuter	273—81.5
1,528,648	3/1925	Armstrong	273—81
1,665,602	4/1928	Netherland	215—43
1,931,425	10/1933	Barrett	273—81
2,084,568	6/1937	White	220—39 X
2,103,889	12/1937	Brisick	273—81.5

FOREIGN PATENTS

22,528	4/1936	Australia.

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