Jan. 25, 1949. T. P. DUNCAN, JR 2,459,996

GOLF CLUB GRIP

Filed July 30, 1946

FIG. 1.

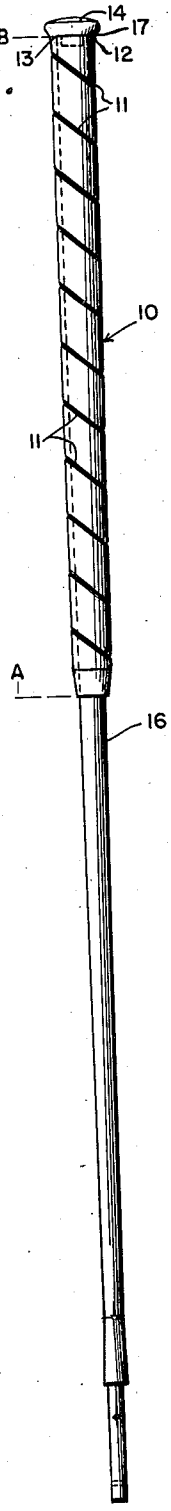


FIG. 2.

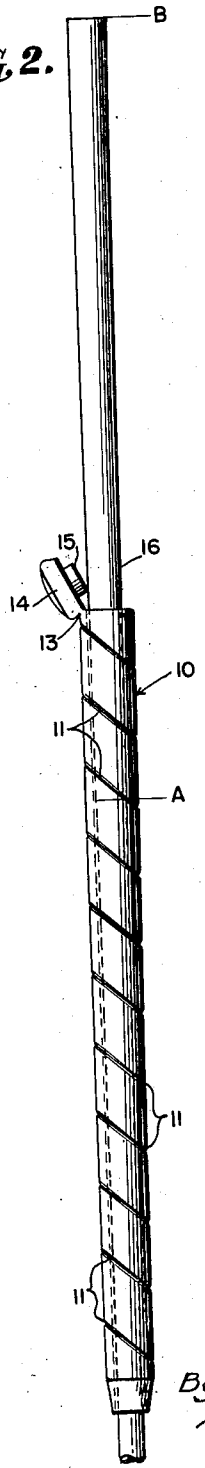


FIG. 3.

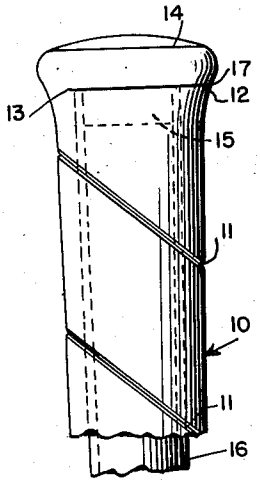
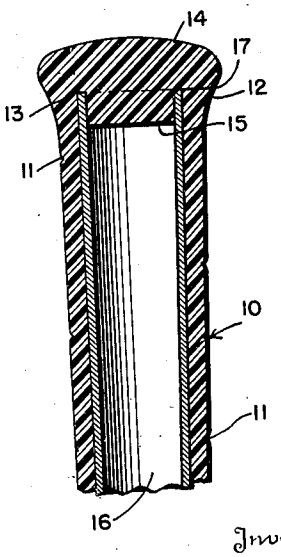


FIG. 4.



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GOLF CLUB GRIP

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3 Claims. (Cl. 273—81)

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The present invention relates to coverings for shafts of which those for golf clubs are a type and pertains particularly to coverings or hand grips which may form the original grip for the shaft or which may be applied as a replacement or repair grip.

A principal object of the invention is to provide a grip for a shaft of the character stated, which may be readily applied to the usual tubular steel shaft of a golf club and which when in applied position has an integral portion disposed in covering relation with the end of the shaft to form a butt which not only covers and protects the end of the shaft but also locks the covering or hand grip in place.

Another object of the invention is to provide a hand grip for a shaft of the character stated, which is cast or molded as a single tubular sleeve which carries at the outer end a butt cap which is designed to be turned in over and cover the end of the grip and also the end of the tubular shaft upon which the grip is placed, and sealed in position so as to maintain the grip firmly against shifting, or a tendency to shift, and to close and protect the outer end of the shaft.

Still another object of the invention is to provide a shaft grip of the character stated, molded of a suitable elastomer or elastic plastic such, for example, as that known as "vinyl chloride acetate" or any of the polyvinyl resins which with the addition of a suitable plasticizer will be flexible, resilient, soft, have natural gripping qualities, and is warm to the feel.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming a part of the specification with the understanding, however, that the invention is not confined to a strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Figure 1 is a view of a golf club shaft showing thereon a grip constructed in accordance with the present invention.

Figure 2 is a view on a slightly enlarged scale showing the manner of applying the grip to a shaft.

Figure 3 is a view on an enlarged scale of the butt end of the grip in secured position.

Figure 4 is a longitudinal section thru a portion of the butt end of the grip.

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In accordance with the present invention there is provided the relatively long sleeve 10, formed of a suitable plastic such as that hereinbefore referred to, that is, an elastomer and particularly, and preferably, the synthetic resin or plastic know as "vinyl chloride acetate."

The hand grip sleeve is suitably tapered internally and externally and in the molding of the sleeve it is provided with the spiral groove 11 whereby the sleeve is made to appear like a continuous strip of material wrapped around the club shaft.

At the outer or butt end, the sleeve is slightly increased in diameter as indicated at 12 and it has formed integrally therewith at the point 13, the butt cap or head piece 14. As shown, the portion 13 connecting the butt cap 14 with the sleeve, is entirely to one side of the tubular center of the sleeve and forms a hinge connection whereby the cap may be forced to swing outward as shown in Figure 2, to facilitate drawing the sleeve onto the club shaft.

The central portion of the inner face of the cap 14 is provided with the plug 15 which is of a diameter to fit snugly in the outer end of the tubular club shaft.

The club shaft is generally designated 16 and the inside taper of the hand grip sleeve 10 is made to substantially conform to the taper of the shaft 16 at the outer end thereof.

In applying the hand grip to the shaft 16, the latter is first shellacked between the points A and B. The small tapered end of the shaft is then slipped through the plastic hand grip from the larger or outer end, the butt cap 14 being forced outwardly to the position shown in Figure 2.

Suitable cement is applied to the side of the plug portion 15 and to the under or inner face of the cap where it contacts with the adjacent end of the sleeve 10. After the sleeve has been drawn fully into position on the shaft where the outer end of the sleeve is flush with the outer or butt end of the shaft, the cap is swung inwardly and the plug 15 is forced into the shaft, bringing the under face of the cap and the end face of the hand grip sleeve together. The cement material previously applied to the under face of the cap it will then secure the cap to the end face of the sleeve, firmly cementing these parts together at the joint 17.

In the formation of a hand grip of the character stated there is provided an original or repair grip which is of the proper elasticity to yield when gripped in the hand and also to stretch to the

proper size to fit shafts of different sizes. When in position it has the appearance of a wrapped hand grip and by reason of its formation from elastic, synthetic resin, it is water proof and is unaffected by the sun or other elements which normally have a bad effect upon rubber or leather. Also the synthetic resin material has good natural gripping qualities and a warm feel which makes it particularly desirable for use in the manner described.

As hereinbefore stated the selected synthetic resin is given the desired flexible, resilient and soft qualities by the addition of a suitable plasticizer. Such plasticizer may be selected from any one of a number of materials such, for example, as tricresyl phosphate, other aryl phosphates, butyl phthalate, dibutyl phthalate, phthalates of higher alcohols and other organic acid esters.

As one example, the vinyl chloride acetate is plasticized with one of the above plasticizers, such as dioctyl phthalate, using about 32% of the plasticizer. The vinyl chloride acetate and the dioctyl phthalate are first mixed mechanically and then plasticized by passage through a rolling mill. The plastic mass is injection molded at about 125° C., allowed to cool for about two minutes and then removed from the mold.

The grip thus produced is then ready for application to the shaft of the implement.

I claim:

1. In an athletic implement of the character stated having a handle shaft, a hand grip for the shaft comprising a sleeve enclosing the butt end of the shaft, and a cap of like material as the sleeve and hingedly joined by such material to the sleeve at one side thereof to facilitate the extension of the shaft through the sleeve, the cap being closed over the adjacent end of the sleeve and sealed thereto to close the end of the sleeve and cover the adjacent end of the shaft.

2. An athletic implement handle hand grip of the character stated in claim 1, in which the shaft is tubular and said cap has an integral central plug which extends into the end of the tubular shaft.

3. In an athletic implement having a handle shaft, a hand grip comprising a relatively thick sleeve of a synthetic elastomer enclosing the hand grip portion of the shaft and providing a resilient, yieldable gripping area, the sleeve having formed as an integral portion thereof a butt cap which is initially divided from the body of the sleeve through a major portion of the diameter of the sleeve whereby the undivided portion forms a hinge between the cap and the sleeve to facilitate placing the sleeve onto the handle shaft, said cap being disposed over and covering the end of the handle shaft and against the adjacent end of the sleeve and sealed to the latter.

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The following references are of record in the file of this patent:

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