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T. L. FAWICK

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HANDLE GRIP

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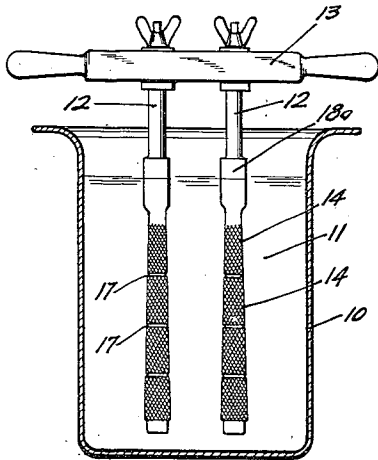


Fig. 1

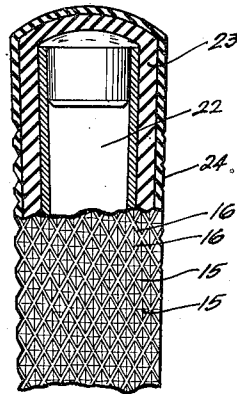


Fig. 3

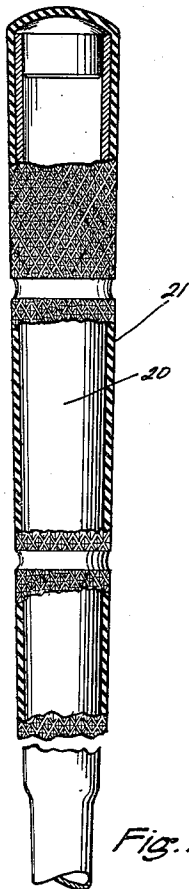


Fig. 2

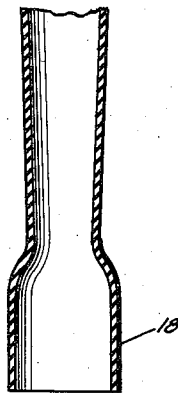


Fig. 4

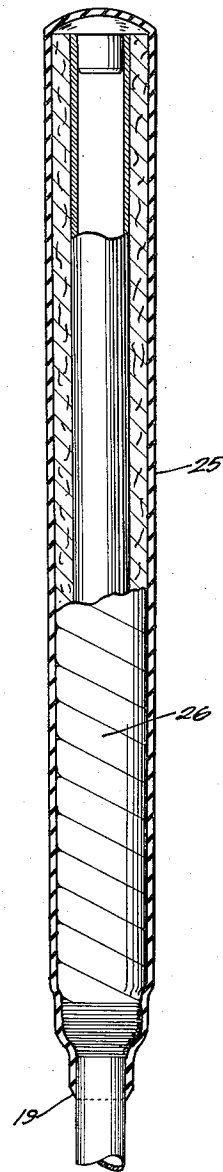


Fig. 5

INVENTOR
Thomas L. Fawick
By Willard B. Eakin
ATTORNEY

UNITED STATES PATENT OFFICE

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HANDLE GRIP

Thomas L. Fawick, Akron, Ohio

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1 Claim. (Cl. 273—81)

This invention relates to handle grips and is especially valuable in the provision of non-slipping gripping surfaces for golf clubs, although not wholly limited thereto.

Its chief objects are to provide a highly effective non-slipping surface for golf-club handles and the like; to provide the same economically; to provide neatness of appearance; to make unnecessary certain parts that heretofore have been commonly employed; to provide durability; and to provide a hand-grip that can be readily and securely applied to golf clubs or other tools that are already in service.

Further and more specific objects will be manifest of the following description.

Of the accompanying drawing:

Fig. 1 is a vertical section, with parts in elevation, of apparatus adapted for the practice of my invention in its preferred form.

Fig. 2 is a fragmentary elevation, with parts broken away and parts in section, of the handle portion of a golf-club shaft and a hand-grip thereon, embodying my invention in its preferred form.

Fig. 3 is a similar view of a modification.

Fig. 4 is a fragmentary section of a hand grip made in accordance with my invention and having a temporary extension of relatively large diameter for facilitating the mounting of it upon a handle.

Fig. 5 is a longitudinal section, with parts in elevation, illustrating my invention as applied to a finished golf club made in accordance with common prior practice and permissibly already in service.

Referring to the drawing, 10 is a container partly filled with a liquid containing in solution or in suspension a material adapted to be deposited as a layer upon a mandrel dipped into the liquid, to provide, with suitable treatment, a rubber or rubber-like layer adapted to be transferred to a golf club or the like as a handle-grip thereon.

The liquid 11 can be a natural or an artificial dispersion, preferably an aqueous dispersion, of rubber, or a dispersion of a rubber-like substance, examples being the substances now extensively sold under the designations Koroseal, Duprene and Thiokol.

A plurality of suitable mandrels are shown at 12, 12, mounted upon a common support 13, here shown as a hand-manipulated bar.

Each mandrel is formed with the negative of a non-slip surface that is to be assumed by a layer of the substance that is to be deposited

upon it from the liquid 11, and in the present embodiment this negative is formed by several series of helical cuts 14, 14 of such form as to provide fields of diamond-shaped figures, in relief, upon the surface of the mandrel. This type of design involves only simple cutting of the mandrel and also provides, in the non-slip surface that is formed against it in the dipping operation, corresponding fields of diamond-shaped recesses 15, 15, Fig. 3, defined by helical ribs 16, 16, which gives a vacuum cup effect and a pleasing appearance when the covering is stripped from the mandrel, turned inside out, and mounted upon the golf-club handle.

In order that the cuts in the mandrel may be alike in cross-section, so that they can be made with the same cutting tool, and that the size and spacing of the recesses 15 and the ribs 16 may be substantially alike in different parts of the gripping surface in spite of the tapered form of the handle, the helical cuts in the mandrel preferably do not extend the full length of the gripping zone but only through such short sections of it, separated by uncut circumferential zones 17, 17, Fig. 1, that the like cuts can all be continuous for the length of the section without running into a narrowing of the lands between cuts by reason of the taper.

To provide a temporary bell-shaped extension 18, Fig. 4, to make it easy to mount the hand-grip upon a handle, the mandrel is formed with a complementary portion 18^a, Fig. 1, of relatively large diameter.

After a sufficiently thick deposit of the substance upon the mandrel has been obtained, by repeated dips or by the use of a coagulant upon the mandrel, or by any of the usual practices, and after the substance has been caused to become set, as by drying and vulcanizing in the case of an aqueous dispersion of rubber, or by the use of a pre-vulcanized latex, the layer is stripped from the mandrel, turned inside out, slipped onto the handle that is to be covered, preferably with the aid of a suitable cement adapted to serve as a lubricant during the mounting operation and then, upon drying, as an adhesive for holding the cover or hand-grip in place upon the handle.

In case the temporary bell-shaped extension 18, Fig. 4, is employed, which is desirable in the case of inexperienced persons applying the cover, it is subsequently trimmed off, by a circumferential cut 19, Fig. 5.

In Fig. 2 the shaft 20 of the golf club is of such specially-provided large diameter in its handle

portion that the cover, 21, can be applied directly to it, with no intervening filler or padding member.

In Fig. 3, for building up the handle portion of a shaft 22 to a suitable diameter, so that the shaft can be uniformly tapered from end to end, a filler member 23 is employed, and it can be made of a substance similar to, but permissibly less expensive than, that of the cover, 24, and can be applied to the shaft in the same way.

In Fig. 5 a cover, 25, is shown mounted upon a club already provided with the usual leather winding 26 and its terminal thread wrapping 27, both of which can be eliminated in a handle initially made by the use of my invention.

Also, my invention, providing a cover having an integral, seamless, closed end, makes unnecessary the use of the crimped cap which is extensively employed for the outer extremity of a leather-wrapped handle.

It is highly useful also for covering club-handles already provided with leather wrappings, end caps, and thread windings, as it not only secures them in place but also provides a much superior gripping surface.

For snugness of fit and secure anchorage in place, it is desirable that the cover either be

initially made of a little less diameter than that of the handle on which it is to be used, or of a little less length than it is to have in use, or that it be smaller in both of those dimensions than the receiving portion of the handle, so that when it is in place it will be under tension circumferentially and also, preferably, lengthwise.

An advantage of making the cover somewhat shorter than the space that it is to occupy upon the handle is that stretching it lengthwise on the handle causes it to grip the handle more tightly.

To permit the escape of entrapped air and thus facilitate the mounting of the grip upon the handle a small hole can be punched or otherwise formed in the end-wall of the grip.

Modifications are possible within the scope of my invention as defined in the appended claim.

I claim:

A seamless tubular handle-grip member composed at least chiefly of a substance having substantially the resilient deformability of fully vulcanized soft rubber and having its wall flared outward toward an open end thereof for facility of application of the member to a handle.

THOMAS L. FAWICK.