ABSTRACT

A disposable moisture-absorbent hand grip for a tennis racket handle. The grip includes a layer of tape spirally wound upwardly about the handle from the base of the handle, the outer side of the tape being covered with a pressure-sensitive glutinous composition. The upper end of the tape is adhesively secured to the handle. Spirally wound over the tape, and secured to the base of the handle by the same screw anchor as the tape, is a moisture-absorbent terrycloth strip having a relatively thin strip of material along the leading edge thereof. The successive spirals of the terrycloth overlap the thin strip of the previous spiral. The upper end of the terrycloth is secured against unwrapping by an elastic lanyard having hooks at each end which fit in an aperture at the end of the terrycloth strip. Edges of the terrycloth strip are tapered at each end thereof so the terrycloth spiral wrap terminates at each end with an edge perpendicular to the axis of the handle shaft.

3 Claims, 6 Drawing Figures
RACKET WITH DISPOSABLE HAND GRIP

This is a continuation application of Ser. No. 276,915 filed Aug. 1, 1972 and now abandoned.

BACKGROUND OF THE INVENTION

1. Field of the Invention:

This invention is concerned with hand grips for shaft-like handles. The invention is applicable to shaft-like handles in general, but is more particularly concerned with handles for athletic apparatus, such as the handles of golf clubs, bats, paddles, and especially to the handles of rackets such as tennis rackets. It is extremely important that the grip of the handle on athletic apparatus be designed so that when the apparatus is swung, it will not slip in or from the player's hand and that it not require undue strength on the part of the player to retain the apparatus comfortably under control. It is also highly desirable that this be accomplished without unduly interfering with the natural "hand" or "feel" of the player on the handle. Thus, the means that are utilized for obtaining a slip-free grip should not destroy the natural "hand" or "feel" that the player desires in the apparatus. It is highly desirable that the grip of the handle be as comfortable as possible in the hands of the player so that he is not distracted from his concentration on the operation of the apparatus or more particularly the playing of the game in the case of the sports apparatus.

Another desirable consideration is that the grip of the handle of the apparatus be designed in a way that gives flexibility of styling, especially in color, for the handle of the apparatus.

One of the most important factors tending to reduce the friction between the player's hand and the handle of the apparatus, especially in the case of golf clubs and tennis rackets which are utilized in relatively hot weather conditions, is the moisture and oil emanating from the palm of the hand of the player. Many of the various means previously employed to increase the friction between the hand of the user and the surface of the handle have employed substances which are, or in use become, tacky and therefore tend to accumulate grimy dirt on the handle. Even those grips that are relatively smooth and non-sticky, because of the sweat and oil exuding from the palm of the user, tend to build up dirt and grime over a period of use.

2. Prior Art

Many different attempts have been tried in the past to accomplish one or more of the desired ends previously mentioned with only varying degrees of success. In most cases, if one desired end is secured with a reasonable degree of success, it is done so without accomplishing other ends or at the sacrifice of other desirable properties in the handle grip.

In U.S. Pat. No. 3,368,811 Finney, there is disclosed a handle and glove combination which serves to very securely hold the handle of a golf club, for example, in the grasp of the user. The player wears a glove, the surface on the palm side of which is faced with a textile material having numerous hooked ends thereon, which is commonly sold under the trade-mark name "Velcro." This is utilized in combination with a grip on the handle which is also faced with a similar fabric. This combination provides a secure grip which is unaffected by moisture. This handle and glove combination, however, provides such a secure locking means that it requires a distinct effort and concentrated movement to adjust one's grip or disengage the grip.

U.S. Pat. No. 2,046,164 Heckner discloses a golf club, the end of the handle of which is wound with a rubber-leather composite strip which is adhesively secured to the handle.

U.S. Pat. No. 1,701,856 Kraeuter discloses a grip which is permanently affixed to a golf club handle and comprises first covering the handle with a felt material which is adhesively secured to the handle, covering this with a woven textile which in turn is covered with a number of layers of lucquer to such a thickness that it is completely waterproof and impermeable of moisture. It is designed to become tacky when used.

At present, there is no sport grip which provides a suitable degree of friction or gripping between the hand of the user and the handle of the apparatus, which is moisture absorbent, does not readily accumulate dirt, is disposable, and can readily be applied to and removed from handles with a minimum of effort.

SUMMARY OF THE INVENTION

The present invention comprises a disposable grip for shaft-like handles of apparatus particularly the handles of sports apparatus and especially tennis racket handles which is low cost and can readily be applied to and removed from most shaft-like handles. The disposable grip according to the present invention increases the frictional grip between the hand of the user and the handle of the apparatus, absorbs moisture, has little tendency to accumulate dirt, and gives a high degree of natural "hand" or "feel" to the user.

According to the present invention, there is provided a disposable hand grip which is readily applied to shaft-like handles particularly handles of athletic apparatus and is especially suitable for utilization with golf clubs and tennis rackets. The present invention aids in maintaining a firm grasp on the handle of the apparatus without requiring an extremely tenacious or death-like grip on the handle. Furthermore, the disposable grip of the present invention affords the user a secure hold on the handle which is not diminished in the course of play by the accumulation of moisture due to sweating of the palm of the user's hand. Because of the lack of accumulation of moisture on the surface of the grip, the grip is very comfortable for the user and facilitates his feel of the apparatus. Because the grip of the present invention is easily installed and removed and low in cost, it is for practical purposes disposable.

Additionally, because of its low cost, it serves as a means of changing the appearance of the handle by permitting the user to utilize grips of different colors and decorative designs.

The grip of the present invention in its more particular aspects comprises anchoring one end of an underlying glutinous tape strip to the side of the base of the handle. The anchor also serves to secure a moisture-absorbent textile strip at the base of the handle.

The pressure-sensitive glutinous strip which has adhesive only on the side which faces outwardly of the handle is spirally wound up the handle. The end of the spiral of the tape is secured at its upper terminal end to the handle by a small patch of adhesive tape. As indicated, a strip of moisture-absorbent textile material such as terry cloth is spirally wound over the glutinous tape winding. The end of the textile strip which is anchored to the base of the handle is provided with an ap-
3,845,954

verture in the end portion thereof for attachment of the strip to the handle by the anchor which ordinarily comprises a flat-headed screw. The opposite, upper end of the textile strip is provided with a similar aperture. The upper end of the textile strip is secured by an elastic lanyard which is wrapped around the handle several times, each end of which has a clip which hooks through the aperture in the upper end of the moisture-absorbent textile strip. This arrangement permits the upper end of the moisture-absorbent winding to be secured at varying positions on the handle due to differing diameters of the handle or the length of the strip employed.

The moisture-absorbent textile strip of the present invention is provided with a relatively thin strip of material on its leading edge, i.e., the edge which is the upper edge when wound on the handle. This thin strip on the leading edge is narrower than the moisture-absorbent strip itself. When the moisture-absorbent textile strip is wound on the handle, the lower edge of each successive winding is overlapped on the thin leading edge strip. This provides a continuous covering of the handle, a smooth transition from one winding to the next, and minimizes puckering and bulging of the winding. The outer edge at each end of the moisture-absorbent textile strip are tapered in order that the wrapped strip terminates at each end of the handle with the terminal edge perpendicular to the axis of the handle shaft.

BRIEF DESCRIPTION OF THE DRAWING

In the accompanying drawing which forms a part of the specification:

FIG. 1 is a side view of a tennis racket handle which is covered with a grip according to this invention.

FIG. 2 is a plan view of the moisture-absorbent textile strip of the grip of the present invention.

FIG. 3 is a sectional view along lines 3—3 of FIG. 2 showing the textile absorbent strip in cross section.

FIG. 4 is a view partly in section showing the order of assembly of the various parts of the grip of the invention.

FIG. 5 is a side view of the lower portion of a tennis racket handle showing the underlying glutinous tape spirally wound about the handle and the textile strip anchored at the base of the handle.

FIG. 6 is similar to FIG. 5 showing the handle after the textile strip has been spirally wound thereabout and secured by wrapping the lanyard at the upper end thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

A tennis racket 2 having a handle 4 with a disposable grip of the present invention in place thereon is shown generally in FIG. 1. The improved grip is applied at 6. A terry cloth textile strip 8 comprises the outer surface thereof. The terry cloth strip 8 is spirally wound about the handle from the base 34 of the handle 4 upwardly a sufficient distance to cover the portion of the handle normally gripped by the user. The spiral windings of the terry cloth strip are generally indicated at 10. The shape of the terry cloth moisture-absorbing strip is shown best in FIGS. 2 and 3. As shown in FIG. 3, the strip 8, both sides thereof, has a moisture absorbent terry cloth finish. What is termed a "leading edge," that is, the edge 14 of the strip 10 which faces upwardly on the handle, has a strip of thin textile material 24 of less than half the width of the terry cloth strip sewn thereto to provide a means for overlapping the spirals of terry cloth material so that the spiralling is firmly and smoothly wound on the handle without significantly increasing the bulkiness of the grip and serves to inhibit puckering of the wound terry cloth spirals.

The end portions of the textile strip are tapered as shown along the edge sections 16 and 18 as shown. The distances between the points indicated at 31 and 32 and 26 and 30 respectively are approximately equal to the circumference of the handle to be wrapped. These tapers also decrease the tendency of the terry cloth strip to bulk and/or pucker and allows each end of the grip to neatly terminate with the tapered portion perpendicular to the axis of the handle which enhances the appearance.

The respective ends 27 and 29 of the strip 24 are tapered as shown and terminate at points 26 and 28. Each end of the textile strip 8 has an aperture 20 and 22 respectively therein for cooperation with respective anchoring means used at each end of the strip. Preferably the apertures 20 and 22 are lined with small metal grommets to prevent tearing of the cloth. FIG. 4 illustrates the assembly of the grip of this invention. As shown in FIGS. 4 and 5, at the base of the handle just above the flared portion 34, there is a transverse channel 36 drilled through the handle. A pin 40 which has a length slightly less than the channel 36, and of a diameter such that it fits snugly in the channel 36 is inserted in the channel 36 as shown. The end 42 of the pin 40 is hollow and has internal threads which cooperate with the threads of the machine screw 44, having flat head 45. The strip of glutinous tape 46 which has pressuresensitive glutinous material on one side 47 thereof, the opposite side 48 being smooth, is turned over on itself at loop 49. The moistureabsorbent textile strip 8 is placed on top of the glutinous strip 46 as shown and the screw 44 passes through the aperture 20 in the textile strip 8 and punched through the doubled over end portion 50 of the adhesive strip 46.

The opposite end 54 of the glutinous strip is held in place at the upper portion of the handle 4 by a patch of similar tape 51 having the adhesive side 53 thereof inward and the smooth side 52 thereof outward. The portions of the tape patch 51 which overlie the end of the strip 46 in contact with the handle 4 are the only parts of the tape which would possibly leave any adhesive residue on the handle after use of the grip.

The manner of assembly of the grip according to the present invention is shown best in FIGS. 4, 5 and 6. The lower end of the tape 46 having the folded over portion 50 and the end of the textile strip 8 with the aperture 20 therein are placed on the shaft of the screw 44, the screw 44 passing first through the aperture 20 of the strip 8 and then being punched through the glutinous tape. The screw 44 is then loosely threaded into the pin 38. The glutinous tape strip 46 which preferably is ordinary masking tape is then spirally wound up the handle as shown in FIG. 5 with the glutinous side 47 facing out and the smooth side 48 next to the surface of the handle 4. The tape 46 is wound tautly about the handle 4. In FIG. 5, the tape 46 is shown with intervening spaces between spirals, however, it can be wound with no spacing if desired. Generally a spiralling tape with a spacing approximately equal to the width of the tape
has been found satisfactory. As mentioned, the end 54 of the tape is secured to the upper portion of the handle by the piece of tape 51 which is applied with the adhesive surface 53 thereof in contact with the glutinous surface 47 of the strip 46 and overlying the adjacent surface of the handle 4. The textile strip 8 is then swung into place so that the edge 18 thereof is perpendicular to the axis of the handle as shown in FIG. 6. The screw 44 is then tightened into the end 42 of the pin 38 by insertion of a screwdriver or thin coin into the slot in the head 45 of the screw 44. The textile strip 8 is then wound spirally upwardly about the handle in windings 10 as shown in FIG. 6 so that the edges 14 and 12 respectively meet each other. The edge 12 thus overlies the thin strip 24. At the upper part of the handle, the spiralling of the strip 8 is terminated with the edge 16 perpendicular to the axis of the handle 4 to form a very neatly finished grip. The end of the strip 8 is secured by elastic lanyard 56 having hooks 58 and 60 at each end thereof. Metal hook 58 at one end of the lanyard is inserted in the aperture 12 of the textile strip 8 and the lanyard then is wrapped around the handle 4 several times under tension as indicated at 62. The metal hook 60 at the other end of the lanyard 56 is inserted in the aperture 22.

Because of the nature of the material that is employed, the grip may be manufactured very economically and considered as a disposable item. Because of this, the grip may be disposed of after one or several uses and a fresh one employed which may be of differing color and/or design. Thus the player may have a different colored racket handle each session utilizing the disposable grip of the present invention. The player's grasp of the handle is secure, comfortable, and the feel of the racket is excellent. The terrycloth absorbs any moisture which accumulates on the palm of the hand of the user due to perspiration. Since the glutinous tape is wound with the smooth side adjacent the regular handle, there is no accumulation of adhesive residue over the surface of the handle except near the small strip securing the upper end of the spiralled glutinous strip. The utilization of the lanyard wrap to secure the upper end of the spiralled textile strip allows the securing of the upper end spiralled wrap at any point on the handle of the racket.

While the invention has been explained by a detailed description of certain specific embodiments, it is understood that various modifications and substitutions can be made in any of them within the scope of the appended claims which are intended also to include equivalents of such embodiments.

What is claimed is:

1. A sporting racket comprising a generally cylindrically shaped handle shaft and in combination with said racket a disposable hand grip assembly comprising a strip of tape one end of which is anchored by anchoring means to the base of said handle, said tape having one side only thereof covered with a pressure-sensitive glutinous composition, said tape being spirally wound about said shaft upwardly from said base, the other end of said tape being adhesively secured to said handle at the end of said spiral winding of said tape, a first textile strip anchored to said shaft base with the same anchoring means as said tape, said first strip spirally wound about said handle upwardly from said base on top of said spirally wound tape, said first textile strip comprising a relatively bulky moisture-absorbent textile material, said first strip having apertures at each end thereof with the anchoring means connected in one of said apertures at the shaft base, the upper longitudinal edge only of said spiralled first strip having a second strip comprised of relatively thin material of a width less than said first strip and of relatively lesser bulk than said moisture-absorbent textile material attached to and parallel to said edge of said first strip, and forming a leading edge thereof, a portion of each succeeding spiral of said first strip overlapping the leading edge of the preceding spiral, the upper end of said first strip being secured against unwinding by an elastic lanyard having hooks at each end thereof, a first of said hooks secured in the aperture at the upper end of said spiralled first strip and the lanyard wound about the handle over the last spiral of said first strip, and the second of said hooks of said lanyard placed in said upper aperture to thereby secure the first strip against unwinding.

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