July 11, 1939. H. L. FLETCHER 2,166,044

GRIP FOR HANDLES

Filed Sept. 9, 1937

Fig. 1.

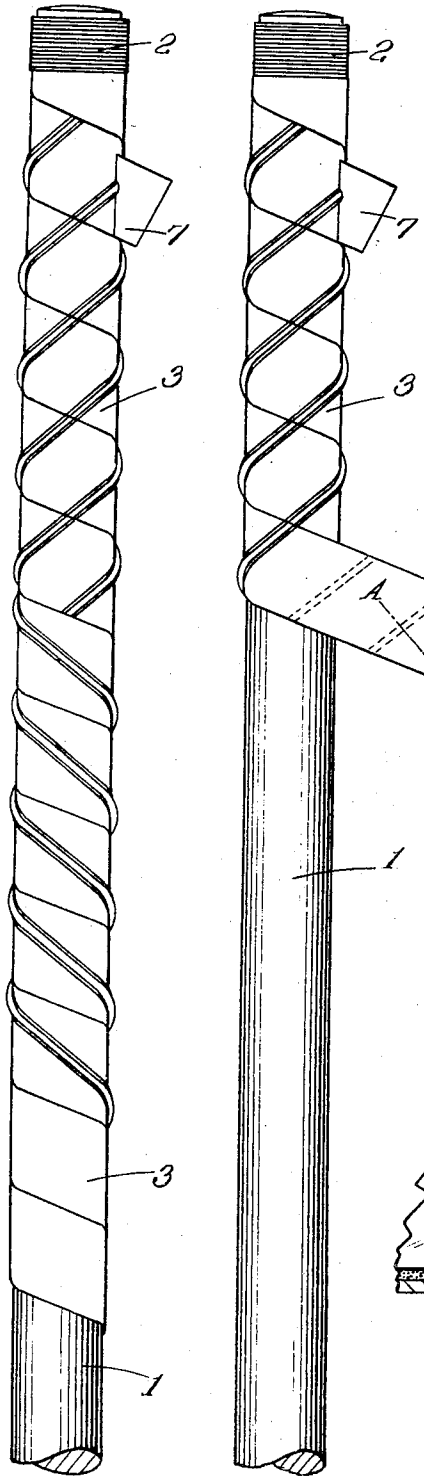


Fig. 2.

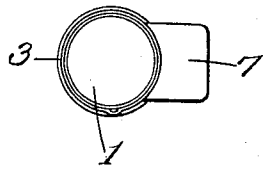


Fig. 3.

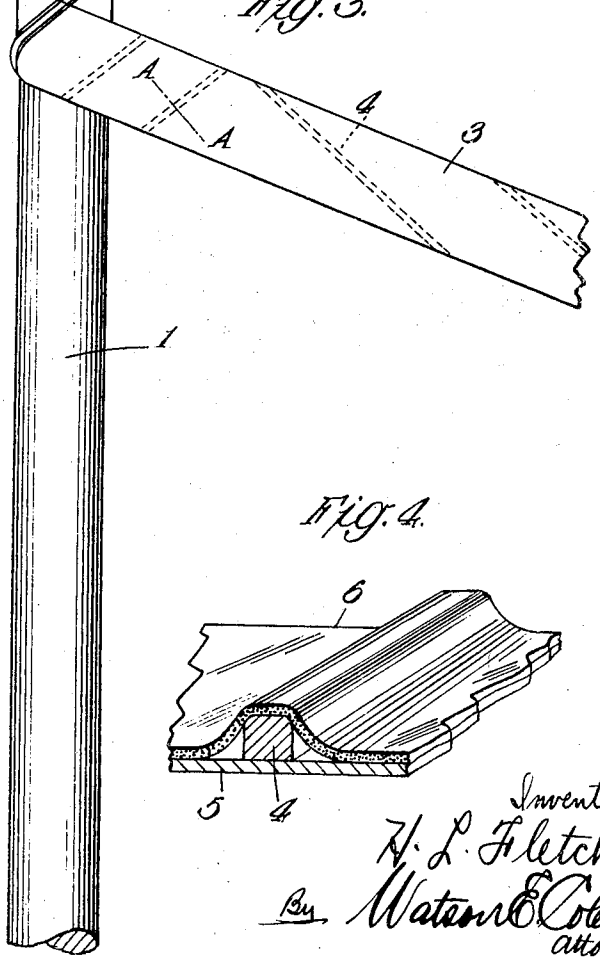


Fig. 4.

Inventor
H. L. Fletcher,
By Watson & Coleman
Attorneys

Patented July 11, 1939 2,166,044

UNITED STATES PATENT OFFICE

2,166,044

GRIP FOR HANDLES

Harold Lewthwaite Fletcher, Hazeldene, Forest Row, England

Application September 9, 1937, Serial No. 163,146
In Great Britain March 16, 1937

8 Claims. (Cl. 273—75)

The present invention relates to grips for handles of golf clubs, cricket bats, hockey sticks, tennis rackets or other shaft-like bodies, for example, the handles of certain types of tools, and generally for all devices intended to be encircled by the hand and fingers for the purpose of gripping, the grip being of the type provided with external helical projections between the convolutions of which it is intended that the fingers of the user shall lie. In such grips as hitherto proposed the helical projections or ribs have been made uniform as regards their direction, that is to say, in a given grip they have been made either all right-handed or all left-handed. However, in cases in which it is desired to employ the article to be grasped in either hand or, as in the case, for example, of a golf club, to apply both hands simultaneously, if all the projections or ribs are in the same direction, while they are somewhat appropriate for accommodating the fingers of one hand, they lie more or less crosswise to the normal direction of the fingers of the other hand.

An object of the present invention is to overcome this drawback, so that the fingers of both hands are equally well accommodated when the handle is gripped in its normal mode of use.

A further object of the invention is to provide a golf club or other handle of improved form whereby the firmness and comfort of grip by the hands are enhanced.

With these and other objects in view, the invention consists in a grip for a handle of shaft-like form, in particular a golf club, wherein a portion of the projections or ribs around one section of the shaft is made to a right-handed helix and a portion around another section of the shaft to a left-handed helix. These two portions are located on the article to be handled so that when it is grasped by the hands in the normal manner the right hand encircles that portion whereon the helical projections or ribs are appropriate for its fingers and similarly in respect of the left hand. For example, in the case of a golf club intended for use by a right-handed player, the portion of the grip near the upper end of the club would have projections or ribs of a right-handed helix appropriate to be grasped by the left hand, while in the portion lower down the club the helical projections or ribs would be left-handed appropriate to be grasped by the right hand. Obviously, in a club intended for use by a left-handed player, the above order would be reversed.

The invention is applicable to grips having projections or ribs of any appropriate shape, nor is it confined to the case in which the helix is single, but it may be applied in connection with helices having two or more starts. Likewise it is not necessary that, in a grip in accordance with the present invention, the helices shall be of uniform pitch throughout their length: such pitch may be varied in order to conform to the direction naturally assumed by the fingers of each hand in grasping the club or other article. Further, the ribs need not be continuous, but portions of any or all of them may be omitted so as to present one or more plain surfaces, for instance, for the accommodation of the palm of the hand.

The grips may be of rubber, leather or any other appropriate material and may be applied in any suitable manner, the initial form being of corresponding shape accordingly. Thus, for example, especially in the case of grips for golf clubs, a strip of material is used by winding it helically around the handle in the usual manner. The strip is, however, formed with two series of ridges, those in each series being respectively inclined and spaced so that, when the strip is wound continuously around the handle, the ridges in one series lie in alinement with each other so as to form one or more ribs to a right-handed helix and similarly the ridges in the other series fall into alinement to form one or more ribs to a left-handed helix. In an alternative form, especially applicable to cricket bats or hockey sticks, the two series of ribs are formed on a tube of rubber or other suitable material adapted to be slipped over and to grip the handle. Obviously, other ways of forming and applying a grip for a handle bearing the two series of right- and left-handed helical ribs, essential according to the present invention, might be devised; for example, in respect of each series of helices use may be made of rubber as a flat sheet on one surface of which there is formed a series of helically arranged projections, ribs or serrations of any desired pitch and appropriate depth. This material may be adapted for grips either in strip or tubular form. Alternatively, material in sheet form might be prepared bearing projections, ribs or serrations arranged in "herringbone" fashion so that, when applied to the handle or the like there result both right- and left-handed helices.

In order that the invention may be clearly understood and readily carried into effect, it will now be described more fully with reference to the accompanying drawing, which illustrates, by way of example, a grip suitable for a golf club and

made and applied in the manner first set forth in the immediately preceding paragraph, and wherein:

Figure 1 is a view of a golf club handle with the grip in position,

Figure 2 is an end view of Figure 1,

Figure 3 shows the strip constituting the grip in process of being wound on the handle, and

Figure 4 depicts to an enlarged scale a section on the line A—A showing one way of forming the strip and the ridges thereon which, when the strip is wound on the handle, constitute the helical ribs.

Referring to Figure 1, to the upper end of the golf club handle 1 there is secured, by such means as a few turns of thread 2, one end of a strip 3 of flexible material which is then wound helically around the handle 1, the other end being secured in a similar or in any other appropriate manner. On the strip 3 there are formed ridges so located that when the strip is wound on the handle they constitute the two series of ribs required in accordance with the present invention. As will be seen from Figure 3, the ridges extending across that part of the strip wound around the upper portion of the handle are so inclined and spaced that when the strip is wound they come into alinement to form ribs of a right-handed helix appropriate to accommodate the fingers of the left hand, it being assumed that the club is for a right-handed user. On the other hand, on that portion of the strip 3 which is to be wound on lower down the handle 1, the inclination and spacing of the ribs or such as to produce ribs to a left-handed helix suitable for accommodating the fingers of the right hand. It will be noted that, where the two series of ribs meet, a V-shaped plain area results which serves to accommodate the left thumb and thereby ensure that the hands always occupy the correct position.

In the present instance, in each case a two-start helix is employed and this provides the inclination and spacing of ribs suitable for accommodating the fingers of a normal person: any other number of starts desired may, however, be employed. The strip may be made of leather, rubber, canvas or any other suitable flexible material or combination of such materials, but, in order to obviate undue stretching of the strip, the materials comprising it should include canvas or other substantially non-extensible fabric.

The ridges to constitute the ribs may be formed in any appropriate manner, such, for example, as by moulding them on the strip when, for instance, rubber is incorporated in it. Certain of the ridges may be omitted or shortened so that the ribs are correspondingly interrupted to provide one or more plain surfaces as above referred to.

In the method of forming the ridges illustrated in Figure 4, a length of rubberised cord 4, which may be of square section, as shown, or of circular or any other desired section, is attached to a strip of canvas 5 by any suitable adhesive. A layer 6 of crepe rubber of a width corresponding to the strip is then laid on the canvas and over the rubberised cords 4, as shown, being fastened down with rubber solution or the like. The composite strip thus built up is wound around the handle 1 with the rubber surface in contact with the latter so that the ridges are on the inside: on account, however, of the flexble nature of the strip and of the fact that it is wound around the handle with a certain amount of tension, it is pressed outwardly by the ridges so that external ribs are formed in the manner indicated in Figures 1 and 3. It will be appreciated that, the cord 4 and the inner strip 6 being of rubber or like resilient material, there is a degree of resiliency both in the ribs as formed and also in the intermediate portions of the grip lying between them. If desired, this effect may be enhanced by applying to the outside of the canvas strip 5 a further strip of crepe rubber.

For the purpose of augmenting the gripping effect of the little finger of the left hand, there is provided a protuberance 7 formed as a block of rubber, or any other desired material, and adapted to be attached to the strp 3 after it has been wound around the club. Thus the location of this protuberance may be varied to suit individual users.

While the grip forming the subject matter of this invention has been evolved especially for use in golf clubs, it is to be understood that it is susceptible of application to a large variety of articles, some of which are mentioned above, and that the claims which follow are intended to be read as covering such general applicability.

What I claim and desire to secure by Letters Patent of the United States is:

1. The combination with a handle of a continuous strip wound helically around the handle continuously in the same direction and formed to provide solely as a result of such continuous winding in the same direction, at least one projecting rib which throughout its entire length is of a right-handed helical form and at least one successive projecting rib which throughout its entire length is of left-handed helical form, the ribs forming grooves of sufficient depth and width to accommodate the fingers.

2. A handle having thereon along one portion of its length a continuous rib which throughout its entire length is in the form of a right-handed helix and on another portion of its length has a continuous rib which throughout its entire length has the form of a left-handed helix, the area between the convolutions of the helices being of a depth and width sufficient to partially receive the fingers when the handle is gripped in the hands.

3. A grip for a handle, comprising a strip of flexible material wound helically around said handle in one direction only, the strip having a series of ridges on one portion and a second series of ridges on another portion, all of said ridges making an angle with the edge of said strip, the ridges being so disposed and arranged that the first series of ridges will register with each other to form at least one continuous right-handed helical rib and the other series of ridges will register with each other to form a con-register with each other to form at least one continuous left-handed helical rib.

4. As an article of manufacture, a strip designed to be wrapped helically around a handle, one portion of the strip having projecting parallel ridges extending across the strip all at an inclination to the edges thereof in a given direction and another portion of the strip having projecting ridges extending across the strip all inclined in a different direction from the first ridges whereby when the strip is wound helically and continuously in the same direction upon the handle the first-named ridges will extend helically all in register and in the same direction and the second-named ridges will all extend helically in register and in an opposite direction.

5. A grip for a handle, comprising a strip of

flexible material wound helically around said handle in one direction, the strip having two series of ridges thereon, the ridges being so disposed and arranged that the first series of ridges will register with each other to form a continuous right-handed helical rib and the other series of ridges will start at the end of the first series and will register with each other to form a continuous left-handed helical rib, the said strip comprising a substantially inextensible base material and the said ridges being constituted by lengths of rubberized cord attached to one face of said base material.

6. A grip for a handle, comprising a strip of flexible material wound helically around said handle in one direction, the strip having two series of ridges thereon, the ridges being so disposed and arranged that the first series of ridges will register with each other to form a continuous right-handed helical rib and the other series of ridges will start at the end of the first series and will register with each other to form a continuous left-handed helical rib, the said strip and ridges comprising in combination a base of substantially inextensible material, lengths of rubberized cord disposed on one face of said base, and rubber laid over said lengths and attached to said base.

7. A grip for a handle, comprising a strip of flexible material wound helically around said handle in one direction, the strip having two series of ridges thereon, the ridges being so disposed and arranged that the first series of ridges will register with each other to form a continuous right-handed helical rib and the other series of ridges will start at the end of the first series and will register with each other to form a continuous left-handed helical rib, the said strip comprising substantially inextensible base material and said ridges being constituted by lengths of rubberized cord attached to one face of said base material, the strip being so disposed on the handle that the ridges extend inward toward the handle with the inextensible material facing away from the handle.

8. As an article of manufacture, a flexible strip designed to form a grip for a handle, comprising in combination a sheet of flexible base material, a series of lengths of cord attached to said base material, and a further sheet of flexible material laid over said lengths of cord and attached to said base material.

HAROLD LEWTHWAITE FLETCHER.