Sept. 27, 1966 A. RUSSO 3,274,616

GRIP LOCKING GLOVE ASSEMBLY

Filed Oct. 14, 1965 2 Sheets-Sheet 1

FIG. 1

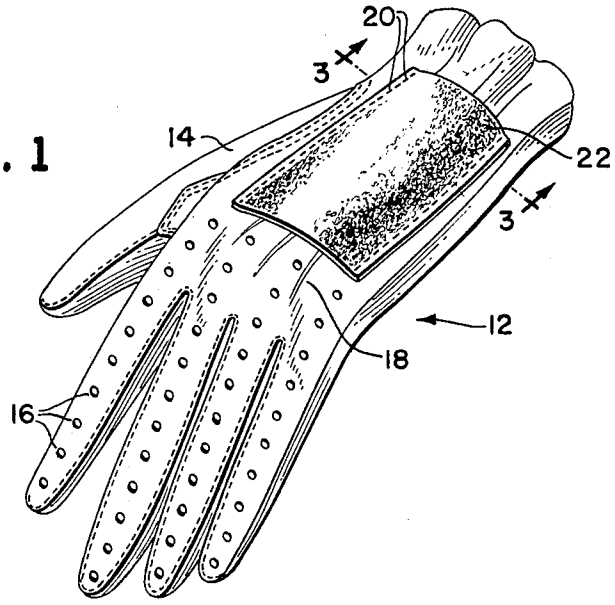


FIG. 2

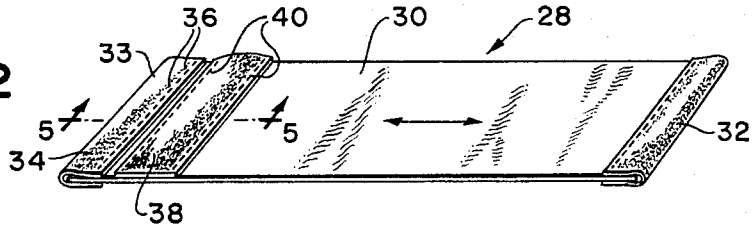


FIG. 3

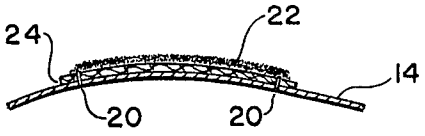


FIG. 4

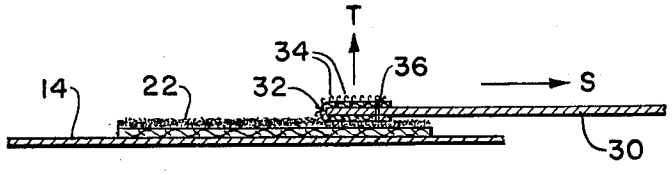
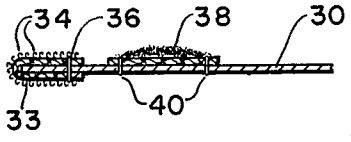


FIG. 5



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Sept. 27, 1966 A. RUSSO 3,274,616

GRIP LOCKING GLOVE ASSEMBLY

Filed Oct. 14, 1965 2 Sheets-Sheet 2

FIG. 6

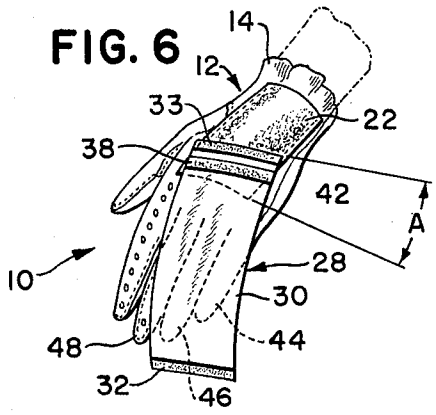


FIG. 9

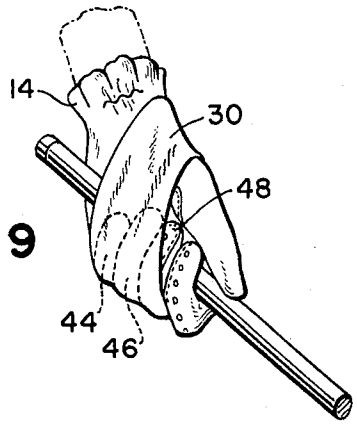


FIG. 7

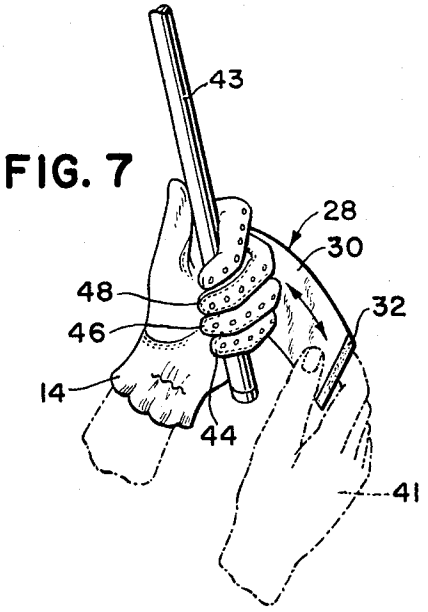


FIG. 10

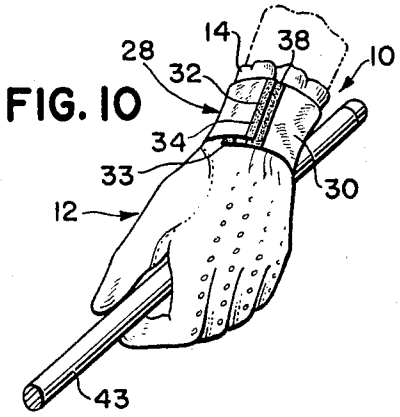


FIG. 11

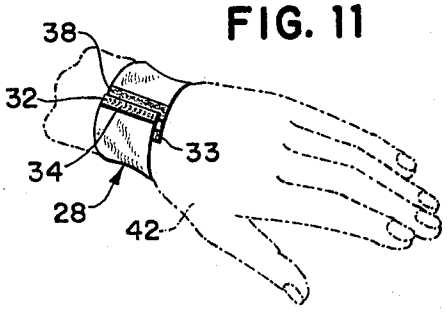
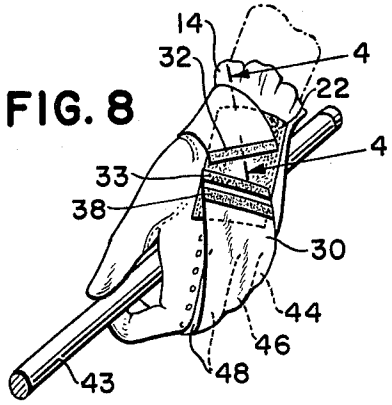


FIG. 8



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United States Patent Office 3,274,616 Patented Sept. 27, 1966

3,274,616

GRIP LOCKING GLOVE ASSEMBLY

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Filed Oct. 14, 1965, Ser. No. 495,830
3 Claims. (Cl. 2—161)

The present invention relates to gloves and more particularly to a grip locking type adapted to keep the fingers securely encircled about a shaft, handle, or any other object gripped by the fingers of the hand.

The invention is particularly useful in playing or teaching the game of golf, for example, where it is absolutely essential in a correct swing that the pinky and two fingers adjacent thereto maintain a tight and firm grip on the shaft of the golf club at all times from the beginning of the golf swing, to the completion thereof.

In other applications, for further example, if a messenger were carrying a briefcase containing valuable securities or the like, it would be difficult or nearly impossible to snatch the case from his hand when wearing the glove of this invention. In brief the novel grip locking glove assembly herein described may be advantageously used wherever it is required to grip an object firmly by encircling the fingers of the hand thereabout, and to firmly maintain said grip. The invention accomplishes this end in such a positive manner, that the wearer of the glove cannot relinquish his grip about the object without aid from his free hand, as will hereinafter appear.

In application to the game of golf a frequent defect in the golf swing of players in virtually every category below the professional level is that the last three fingers of the left hand tend to open, or loosen their firm grip on the shaft of the golf club at some point during the golf swing. A loose grip at any point is undesirable. It may prevent keeping the club "square" in meeting the ball, or it may cause the club to turn in the hands, thereby affecting the direction of travel of the ball, and at very least will detract power from the swing.

The invention is also useful as a prosthetic device, applicable in cases where a person cannot firmly clench the fist to grip an object because of inherent infirmity or malady or the like whereby the fingers of the hand are limp, or weak, or not fully functional. The novel grip locking glove assembly disclosed herein will enable such persons to acquire a positive grip on an object such as a suitcase handle, or the shaft of a golf club and manipulate the same satisfactorily.

As an additional application of the invention, the glove assembly may be applied in such a manner as to comprise in effect a reinforcing wrist band as hereinafter described.

Briefly stated, the invention contemplates providing a glove assembly having integrally attached on the back thereof a relatively wide swatch of a component of an instantly attachable and detachable material such as nylon tape fastener for example as manufactured by the VELCRO Corporation of New York.

Such material is well known in the art and consists essentially of two pieces of all nylon tape. One piece is covered with a myriad of finely woven filaments formed into permanent hooks. The other piece is covered with soft nylon loops. When pressed together the two tapes engage and fasten tightly to form a firm shear resistant bond. However the tapes separate readily by simply peeling them apart.

One such material for example is disclosed and described in United States Patent Numbers 2,717,437, 3,083,737, 3,009,235 and 3,154,837 among others. In such pressure attachable material the component containing the hooks is called the hook part, and the component containing the loops, which is rather felt-like in appearance and to the touch, is called the pile part. Hence, the hook part is pressed into the pile part and in so doing the hook part is said to be mated with the pile part. The hooks engage the loops, and the bond so formed has the characteristic of being extremely resistant to a shear force. In tension however, the bond is less strong and the components may readily be peeled apart.

A grip lock band embodying elastic properties and containing a strip of the hook component on each end thereof is attached to the pile strip on the glove in the proximity of the knuckles. The band is then wrapped about the last three fingers of the hand gripping an object such as a golf club shaft, and the opposite end is attached to the pile in the proximity of the wrist. Any attempt to open the hand so enveloped causes a downward shearing force to be applied to the bond between the pile and the hook components of the tape fastener and since the bond is very difficult to overcome in shear, the hand is kept locked about the object gripped.

It is therefore one of the objects of the present invention to provide a novel grip locking glove assembly of the above indicated nature and to do so in a positive and effective manner.

Another object of the invention is to provide a grip locking glove assembly which will compel the wearer to retain a tight grip about an object gripped by the hand such as a golf club shaft or the like.

Still another object of the invention is to provide a grip locking glove assembly adapted for use as a prosthetic device for those having limp, weak, infirm, or partly operative fingers in the gripping action.

Still another object of the invention is to provide a grip locking glove assembly adapted to provide the proper grip on a golf club in playing or teaching the game of golf.

Further objects and advantages and features will appear more fully hereinafter from a consideration of the detailed description which follows, taken together with the accompanying drawings wherein one embodiment of the invention is illustrated by way of example. It is to be expressly understood however that the drawings are for the purpose of illustration only, and are not to be construed as defining the limits of the invention, reference being had for this purpose to the appended claims.

In the drawings, wherein like reference characters indicate like parts:

FIG. 1 is a perspective view of a sub assembly of the novel grip locking glove assembly.

FIG. 2 is a perspective view of a band sub assembly for the grip locking glove assembly.

FIG. 3 is a section view taken along the line 3—3 of FIG. 1 looking in the direction of the arrows.

FIG. 4 is a section view taken along the line 4—4 of FIG. 8 looking in the direction of the arrows.

FIG. 5 is a section view taken along the line 5—5 of FIG. 2 looking in the direction of the arrows.

FIG. 6 is a perspective view of the complete grip locking glove assembly showing the same on the hand of a wearer.

FIG. 7 is a perspective view showing a step in the installation of the grip locking glove assembly onto a hand gripping a shaft looking towards the palm of the gloved hand.

FIG. 8 is a view showing the grip locking glove assembly installed in place about a hand gripping the shaft of a club looking towards the back of the hand.

FIG. 8 is a view showing the underside of the view of FIG. 8.

FIG. 10 is a perspective view showing an alternate installation of the grip locking glove assembly of FIG. 6.

FIG. 11 is a view showing the band sub assembly of FIG. 2, in use as a wrist band.

Referring now to the drawings and more particularly to FIG. 6 there is shown a complete grip locking glove as-

sembly generally designated by the numeral **10**. The glove assembly **10** comprises a pile carrying glove sub assembly **12** (FIG. 1) in turn comprising a usual and standard glove **14** having a number of ventilating holes **16** along a backhand surface **18**. Upon said backhand surface **18**, there is firmly attached in a prescribed manner, such as by stitching **20**, at least one swatch of a component of nylon tape fastening material **22** herein called the pile, or the pile part. The pile **22** rests upon a backing **24** which in turn is secured to the glove **14**, such as by the stitching **20** (FIG. 3).

Referring now to FIG. 2 there is shown a band assembly generally designated as numeral **28**, comprising a band of resilient elastic like material **30** having secured at both ends thereof in overlapping fashion (FIGS. 2 and 5) strips **32** and **33** of hook material **34**.

The hook material **34**, as above stated is especially designed and adapted to hook into and make a firm bond with the pile material **22** by simply pressing the hook material into the pile material. The pile material **22** in turn is especially designed and adapted to be engaged by the hook material **34** to form said bond. The bond so formed by simple pressure between the two materials has the characteristic that it is difficult to sever by application of a shear force as shown by the direction of the arrow S (FIG. 4), but fairly yielding to a tension force as shown by the arrow T (FIG. 4). The reason being that the hook material **34** literally comprises a multitude of tiny hook-like protuberances which engage the loops in the soft pile. A shearing force, especially if slightly downward tends to further imbed the hooks into the pile while a tension force applied to the bond, such as in a peeling motion, tends to pull the hooks free of the pile.

The hook material **34** is attached to the band **30** in any approved manner such as by stitching **36**. The band assembly **28** also comprises on at least one side thereof and on at least one end a pile strip **38** (FIGS. 2 and 5) secured thereto as by stitching **40** for the purpose of forming a bond with the strip **32** in an alternate application of the grip locking glove assembly **10** as hereinafter explained.

Turning now to FIGURES 6, 7, 8, and 9 there is shown in sequence a preferred application of the grip locking glove assembly onto a left hand **42** gripping a club shaft **43**.

Although the illustrations of FIGURES 6, 7, 8 and 9 show the application of the invention to a left hand, it is understood that the invention will apply to and may be constructed for a right hand as well.

In FIGURE 6, the glove assembly **12** is snugly slipped onto the hand **42** and the elastic band assembly **28** is positioned in the vicinity of and preferably slightly above the knuckles of the hand and preferably at a slight angle A (FIG. 6), so that upon extending the band assembly **28**, the band **30** will pass over and substantially cover the last three fingers, herein designated as **44**, **46** and **48**, of the left hand **42**. The band assembly **28** is then drawn over the last 3 fingers of the left hand which is now grasping the shaft **43** and completely around the hand **42** and the strip **33** of hook material is firmly pressed into the pile **24** (FIG. 8). It will now be evident that the elastic band **30** passes over and firmly holds the last 3 fingers **44**, **46**, and **48** of the left hand locked in tight gripping engagement about the club **43**.

Referring now to FIGURES 2 and 8, it will be evident that an attempt to open the left hand and drop the club **43** will cause a shearing force to be set up between the pile material **22** and the hook material strip **32** (FIG. 4) along the direction substantially of the arrow S. Since the bond between the pile and hook materials is strongest in shear it will not be possible to open the hand **42**. This

bond can be readily overcome with the free right hand **41** however (FIG. 7) by simply peeling the hook strip **32** upwards along the direction of the arrow T since the bond aforementioned will readily yield to a tension force.

Referring now to FIGURE 10, the glove assembly **10** is shown with the band assembly **28** worn about the wrist over the glove **12**, in the manner of a reinforcing wrist band. In this application the hook strip **32** is pressed and fastened into the pile strip **38** to form a positive bond which can only be overcome by means of a peeling force thereon applied by the free hand. This application serves to secure the glove assembly **12** firmly in place and prevent slippage thereof while at the same time providing a reinforcement for the wrist. FIG. 11 shows the band assembly **28** utilized per se as a reinforcing wrist band. It is a dual function of the band assembly **28** that it may be advantageously employed as a wrist band in addition to its more usual function in conjunction with the glove assembly **12** as heretofore explained.

Hence it will be seen that there are provided means whereby the several objects of this invention are achieved in a positive and effective manner.

Although only one embodiment and one application of the invention has been illustrated and described, it will readily be apparent to those skilled in the art that changes in form and modifications may be made in the relative arrangement of the parts without departing from the spirit and scope of the invention.

What is claimed is:

1. A grip locking glove assembly adapted to compel the wearer to retain a firm grip upon the shaft of a golf club when the hands are gripping the club shaft, comprising a glove assembly positioned on a hand of the wearer, said glove assembly including a glove and a swatch of fastening material attached to the back thereof, a resilient band assembly including a band having a mating attachment on one end detachably secured to the swatch of fastening material, said band being wrapped completely around the glove and hand, a second mating attachment on the opposite end of said band detachably fastening into the swatch to hold the gloved hand firmly about the shaft of the golf club.

2. A glove assembly adapted for use as a prosthetic device in aiding persons unable to retain a firm grip upon a shaft-like object due to inherent infirmity in the fingers, comprising in combination a glove having finger stalls for wearing upon the infirm hand, a swatch of pile material secured to the back of said glove, a band assembly comprising a resilient band having attaching means overlapping each end of the band, said means being strips of hook material instantly attached and detached to the pile material, said band assembly being attached onto the swatch in the proximity of the knuckles of the glove at one end, and wrapped around the finger stalls of the glove attached onto the swatch in the proximity of the wrist of the glove at the opposite end so as to hold the infirm fingers of the hand firmly about the object gripped by means of the resiliency of the band assembly.

3. The grip locking glove assembly of claim **2**, said band assembly having a strip of pile material adjacent to at least one of the strips of hook material.

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