April 25, 1933. H. G. BARRETT 1,905,406

GOLF CLUB

Filed Dec. 14, 1929

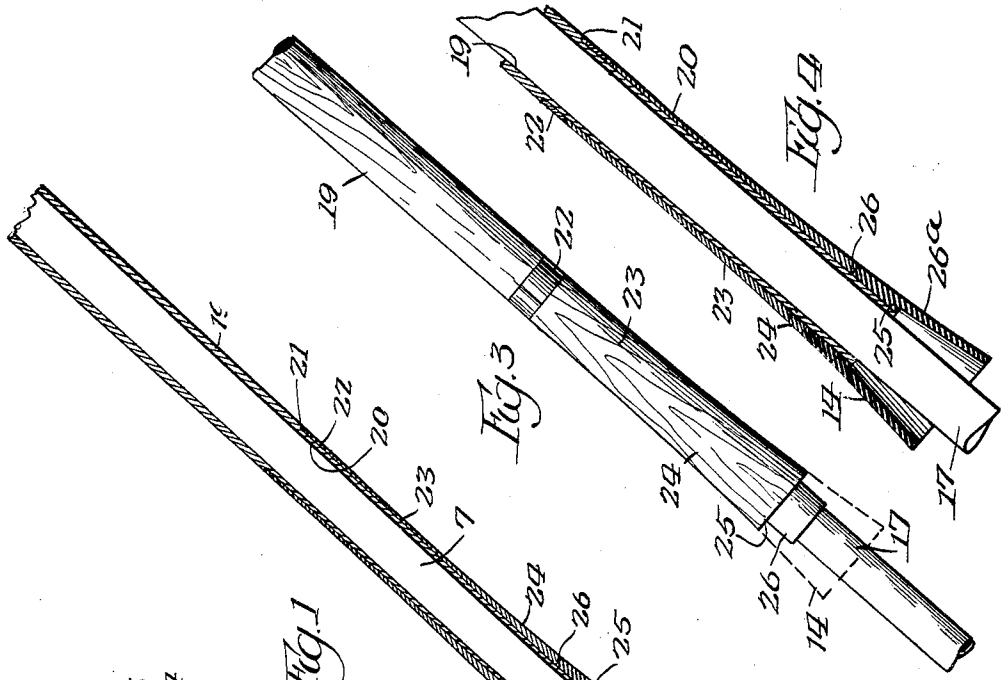

Fig. 4

Fig. 3

Fig. 1

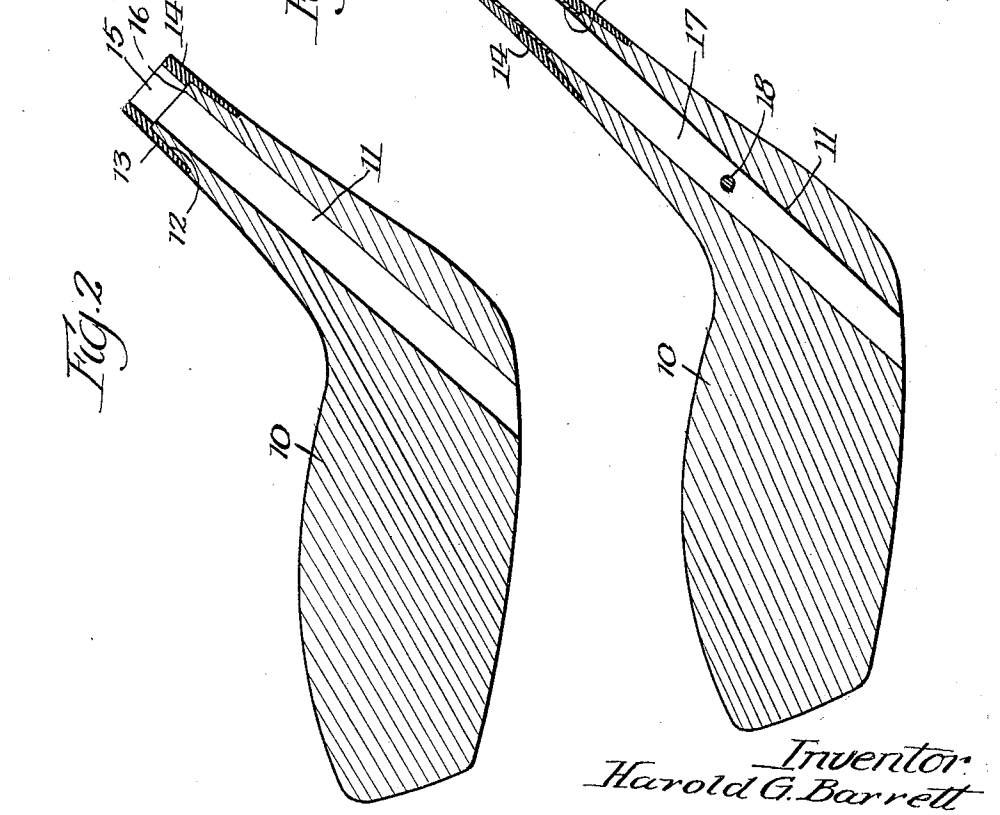

Fig. 2

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UNITED STATES PATENT OFFICE

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GOLF CLUB

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In the manufacture of golf clubs the head is usually provided with an opening or socket into which the end of the shaft is inserted. In some instances the shaft has been provided with a protecting sheath or casing and in other instances a ferrule has been formed or placed upon the shaft to abut the end of the socket in the club head. In all instances, however, it has been customary to protect the joint between the shaft and head by means of windings of a flexible member, such as thread, cord or the like. When such windings are employed it is not possible to provide a continuous smooth surface throughout the length of the shaft, and furthermore, such windings do not reinforce or strengthen the shaft or joint.

It is one of the objects of the present invention to overcome these difficulties and objections and to provide improved means for relieving the strain of the head with respect to the shaft or core of the shaft, and at the same time dispense with the necessity of such windings and to provide a structure in which the club head, shaft, sheath and connecting means will be substantially integral and in which the parts are reinforced at the joints.

A further object is to provide in a golf club structure an improved joint construction formed by means of a cap which encompasses the end of the club through which the socket opens and through which cap the shaft passes, the cap being formed as a part of the casing which encompasses the shaft, the end of the club projecting into the cap.

A further object is to provide an improved structure of this character which will present a smooth surface and which surface will be uninterrupted, and at the same time provide means whereby a multi-color or multi-tone finish may be produced, resulting in an extremely ornamental product, with the further result that the pin fastening means usually employed between the end of the shaft and the head of the club will be reinforced and protected and will be prevented from breaking, by relieving the strain upon such fastening pin.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing illustrating this invention, and in which

Figure 1 is a longitudinal sectional view of the club end of a golf club showing one form of structure of this character constructed in accordance with the principles of this invention.

Figure 2 is a detail sectional view of the head of the club with the shaft removed and showing another form of the invention.

Figure 3 is a detail view of the end of the shaft which is inserted into the club head, showing the cap in dotted lines.

Figure 4 is an enlarged sectional view of the end of the shaft structure.

Referring more particularly to the drawing the numeral 10 designates generally the head of a club having the usual socket 11 into which the end of the golf club shaft is inserted.

The end 12 of the head is preferably reduced as at 13 and a cap 14 constructed of any suitable material, preferably a hard non-metallic material is sleeved over the reduced portion 13 of the head 10 and secured in position in any suitable manner. Passing through the cap 14 is an opening 15 which registers with the opening 11 in the head, and a portion of the cap overlaps the end of the club head as at 16 and against which portion the cap abuts.

In Figure 2 is shown one form of the invention in which the cap 14 is secured to the end of the club head before the shaft is attached thereto. However, in Figures 1 and 4 the preferred form of the invention is shown.

The shaft of the club may be formed in any suitable manner preferably by means of a core 17, the end of which is adapted to telescope into the opening 11 in the head 10, the usual fastening pin 18 being provided to secure these two parts together.

Encompassing the core 17 is a sheath or casing 19 constructed of any suitable and preferably hard non-metallic material, and which casing closely fits the core. The end of the casing is reduced as at 20 to form a shoulder 21 and encompassing the core and abutting the shoulder 21 is a collar 22, the outer surface of which collar is flush with the outer periphery of the casing 19. Telescoped also upon the reduced portion 20 of the casing 19 is a sleeve 23 which is preferably flared at its lower end as at 24, the extremity 25 of which terminates short of the adjacent end of the reduced portion 20 of the casing 19 as at 26. One end of the sleeve 23 abuts the adjacent edge of the collar 22 and the extremity 25 abuts the outer surface of the cap 14, while the extremity 20 of the casing 19 telescopes into the opening 15 of the cap to substantially fill such opening and terminates flush with an internal shoulder 26^a and to which telescoping portion of the casing 19 the cap is secured. The parts are so shaped that the periphery of the casing 19 upon the shaft 17, the periphery of the collar 22 and the periphery of the adjacent portion of the sleeve 23 will be flush, and likewise the periphery of the flared portion 24 of the sleeve will be flush with the periphery of the cap 14.

The parts may be secured together in any desired or suitable manner, and the end of the shaft or core 17 projects through and beyond the end of the cap 14.

In attaching the head and shaft the latter is telescoped into the socket 11 and the cap 14 will be sleeved over the end 12 of the head, the reduced portion 13 entering the cap until the shoulder 26^a and the end 25 of the reduced portion 20 of the casing 19 abuts the end of the club head.

With this construction it will be manifest that the winding at the junction of the shaft with the end of the head will be dispensed with, and if desired, the cap 14 may be of a different color from that of the sleeve 23, and likewise, the color of the collar 22 may also be different from the adjacent portion of the shaft or of the sleeve 23, thereby rendering it possible to produce a shaft of a multi-color or multi-tone effect. Furthermore, with this improved construction the sleeve 23, casing 19 and cap 14 will all be substantially integral, thereby imparting rigidity to the structure and relieving the strain on the head 10 with respect to the core of the shaft.

While the preferred forms of the invention have been herein shown and described, it is to be understood that various changes may be made in the details of construction and in the combination and arrangement of the several parts, within the scope of the claims, without departing from the spirit of this invention.

What is claimed as new is:—

1. A shaft for golf clubs and the like embodying a core, a casing sleeved upon the core, one end of the casing being reduced, the end of the casing terminating a considerable distance from the end of the core, a sleeve telescoped upon the said reduced portion of the casing and terminating short of the end of the said reduced portion, a cap telescoped upon the end of said casing and abutting the end of the sleeve, said cap having an internal shoulder flush with the end of said casing, the lower portion of the cap being spaced from the core and flaring from said shoulder toward the lower end thereof and said core extending beyond the lower end of the cap.

2. A shaft for golf clubs and the like, embodying a core, a casing sleeved upon the core, one end of the casing being reduced, the end of the casing terminating a considerable distance from the end of the core, a sleeve telescoped upon the said reduced portion of the casing and terminating short of the end of the said reduced portion, a cap telescoped upon the end of said casing and abutting the end of the sleeve, said cap having an internal shoulder flush with the end of said casing, the body of the cap being spaced from the core, and said core extending beyond the end of the cap, in combination with a club head having a socket into which the end of said core telescopes, the cap telescoping over said end of the club head and the end of the casing and the said shoulder on the cap abutting the end of said head.

3. A golf club embodying a head having a tapered end through which a shaft socket opens, the outer extremity of the socket being of a substantial area, a cap sleeved upon said end, a portion of the cap abutting the said outer extremity of the socket, there being an opening in said cap registering with the said socket, a shaft telescoped into said socket and passing through the said opening in said cap, and a sleeve on the shaft, the end of said sleeve abutting the upper face of said cap and the extremity of said casing abutting the extremity of said head within the said cap, the said shaft extending beyond the casing and collar and projecting into the said socket.

4. A golf club embodying a head having a socket opening through one end thereof, a shaft embodying a core, a casing sleeved upon the core, one end of the casing being reduced to form a circumferential shoulder, a sleeve telescoped upon the said reduced portion of the casing, said core projecting beyond the end of the casing and also projecting beyond the end of said sleeve, a cap shouldered upon the end of the said head and extending over and abutting the extremity of said head, there being an opening in said cap registering with the said socket, the extremity of the reduced end of said casing abutting the end of the socket within the cap, and the end of

said sleeve abutting the end of the cap, the peripheries of said sleeve and said cap being flush.

5. A golf club embodying a head having a socket opening through one end thereof, a cap sleeved over said end and having a portion thereof abutting the extremity of the socket, said cap having an opening registering with said socket but of a diameter greater than the adjacent portion of the socket, a shaft passing into the socket through the cap, a casing upon the shaft, said casing passing into the opening in the cap and abutting the outer extremity of the socket and substantially filling the opening in the end wall of the cap beyond the extremity of the said socket, and a sleeve also upon the shaft, the end of the sleeve abutting the end of the cap.

6. A golf club embodying a head having a socket opening through one end thereof, a cap sleeved over said end and having a portion thereof abutting the extremity of the socket, said cap having an opening registering with said socket but of a diameter greater than the adjacent portion of the socket, a shaft passing into the socket through the cap, a casing upon the shaft, the end of the casing being reduced to form a circumferential shoulder, the reduced portion of the casing passing into and substantially filling the opening in said cap, the said shoulder in the casing being spaced from the said cap, and a sleeve disposed upon the said reduced portion of the casing and abutting the shoulder on the casing and also the said cap, the periphery of the sleeve being flush with the adjacent portions of the periphery of the head and casing.

In testimony whereof I have signed my name to this specification, on this 11th day of December, A. D. 1929.

HAROLD G. BARRETT.