Jan. 27, 1925. 1,524,322

W. A. STOLLEY

GOLF CLUB

Filed Dec. 26, 1923

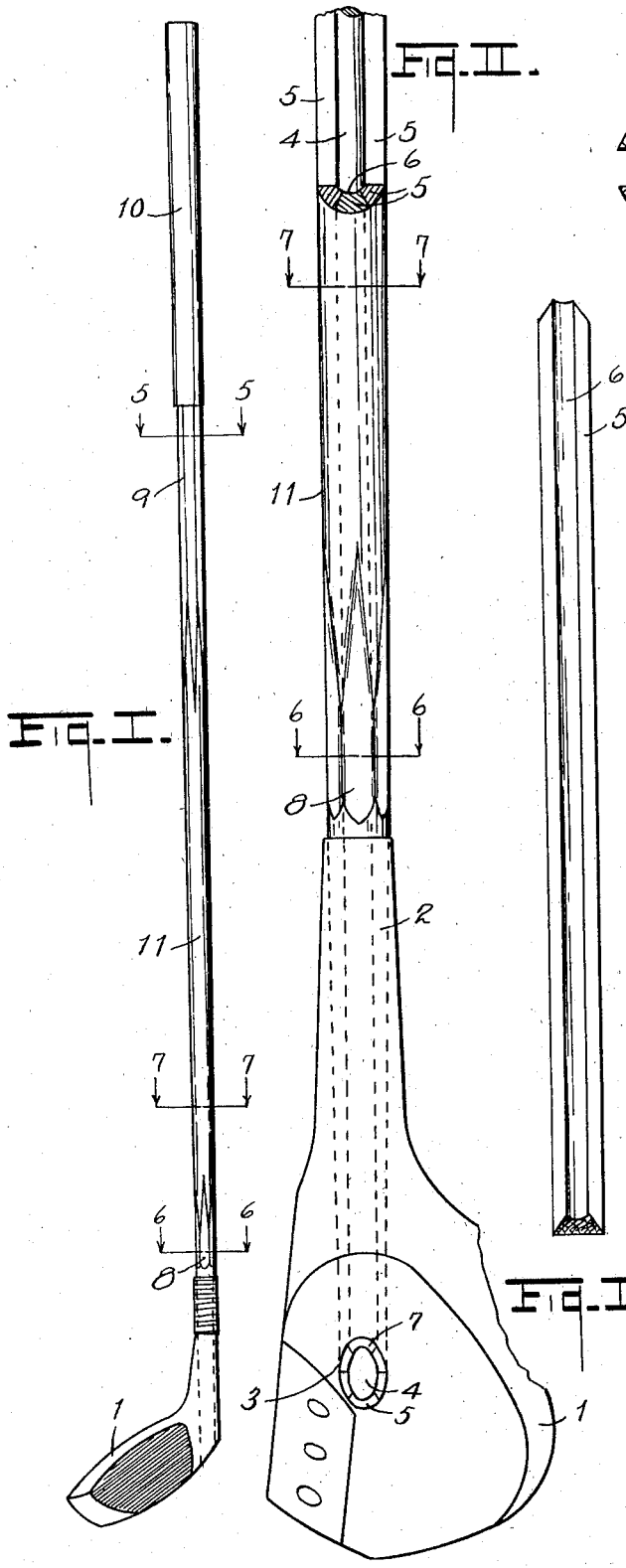


FIG. I.

FIG. II.

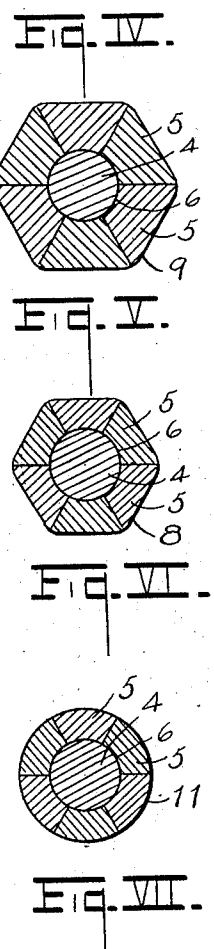


FIG. III.

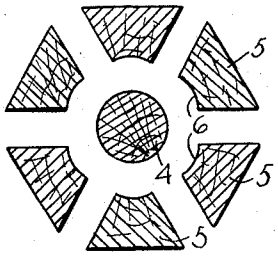


FIG. IV.

FIG. V.

FIG. VI.

FIG. VII.

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UNITED STATES PATENT OFFICE.

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GOLF CLUB.

Application filed December 26, 1923. Serial No. 682,631.

To all whom it may concern:

Be it known that I, WILLIAM A. STOLLEY, a citizen of the United States, residing at Dowagiac, county of Cass, State of Michigan, have invented certain new and useful Improvements in Golf Clubs, of which the following is a specification.

This invention relates to improvements in golf clubs.

In the manufacture of shafts for golf clubs, it is impossible to maintain a uniform or even an approximately uniform quality owing to the inherent variations in the material used, hickory being regarded as the most desirable material and it is not only impossible to secure this of uniform quality but at the present time, there is a scarcity of the material.

The main objects of this invention are:

First, to provide a shaft for golf clubs which possesses the desirable qualities of the highest grade solid wood shafts.

Second, to provide an improved golf club shaft which may be economically made in large quantities of uniform grade or quality.

Third, to provide an improved shaft for golf clubs which, while it possesses the desired flexibility or "whip," is well adapted to withstand torsional strains.

Fourth, to provide an improved shaft for golf clubs having these advantages which is economical to produce and well adapted to production in large quantities.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this application, in which:

Fig. I is a front elevation of a golf club embodying the features of my invention.

Fig. II is a fragmentary side elevation showing the structural details of the shaft and its relation to the head.

Fig. III is a side view of a portion of one of the outer segments.

Fig. IV is a transverse section through the parts of the shaft in disassembled relation.

Fig. V is a cross section on a line corresponding to line 5—5 of Fig. I.

Fig. VI is a cross section on a line corresponding to line 6—6 of Figs. I and II.

Fig. VII is a cross section on a line corresponding to line 7—7 of Figs. I and II.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawings, the head 1 is of a well known type provided with a shank 2 having a socket 3 therein extending to the bottom of the shaft.

My improved shaft comprises a core 4 of wood, preferably of such woods as hickory, lancewood, dagama or greenheart. This core is of cylindrical cross section and of uniform diameter from end to end, the core extending from end to end of the shaft.

Around this core I arrange a plurality of complementary segments 5 of bamboo, preferably split; the inner faces of these segments are of uniform width from end to end and have grooves 6 therein curved to fit the core, so that when the segments are arranged upon the core, the core is completely embraced thereby and the segments lie edge to edge. The segments are glued to the core throughout and also to each other.

The segments are externally conformed to provide a tapered portion 7 of cylindrical cross section fitting within the socket. Above, but adjacent to this socket engaging portion 7 is a section 8 of polygonal cross section, while at its upper end the shaft is provided with a section 9 of polygonal cross section, the grip, shown conventionally at 10, being mounted upon this polygonal section with the section extending below the grip.

Intermediate the sections 8 and 9 is a section 11 of cylindrical cross section, the whole being tapered to secure the desired hang and flexibility.

My improved golf club shaft may be readily produced in large quantities as the operations in preparing the parts and assembling the same are simple. Shafts embodying the features of my invention have the qualities which are desired or sought for, the shafts having the suitable resiliency, and effectively resist twisting or torsional stresses and the shaft does not become weak or develop an excess of flexibility as frequently occurs

with even the very highest grade of wood shafts.

Further, in the manufacture of shafts from wood, it is impossible for even the most expert to determine by an inspection of the wood the quality of the completed shafts, so that there is a very great variation beyond the control of the manufacturer. In shafts embodying the features of my improvements, this variation is very greatly reduced and the production of very uniform shafts is possible.

Further, it is not necessary that the core should be formed of the highest grade of wood, but with the parts thus formed and assembled the completed shaft is exceedingly strong and any weak part that may be present in one of the segments or in the core is counteracted by the other parts.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a golf club, the combination with a head provided with a shank having a tapered socket therein extending to the bottom of the head, a shaft comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments of bamboo extending from end to end of the shaft, and being glued thereto and to each other throughout, said shaft having a tapered portion of cylindrical cross section fitting said socket with its lower end flush with the bottom of the head and a portion adjacent the socket and a portion of its outer end extending below the grip of polygonal cross section, the intermediate portion being cylindrical.

2. In a golf club, the combination with a head provided with a shank having a tapered socket therein extending to the bottom of the head, a shaft comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments of bamboo extending from end to end of the shaft and being glued thereto and to each other throughout, said shaft having a tapered portion of cylindrical cross section fitting said socket with its lower end flush with the bottom of the head.

3. In a golf club, the combination with a head provided with a shaft socket, a shaft comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments extending from end to end of the shaft, the inner faces of the said segments being of uniform width from end to end and having curved grooves therein fitting said core and being glued thereto and to each other throughout, said shaft having a portion of cylindrical cross section fitting said socket, a portion above the socket and a portion at the outer end extending below the grip of polygonal cross section, the intermediate portion being cylindrical and tapered.

4. In a golf club, the combination with a head provided with a shaft socket, a shaft comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments extending from end to end of the shaft, the inner faces of said segments being of uniform width from end to end and having curved grooves therein fitting said core and being glued thereto and to each other throughout.

5. A shaft for golf clubs comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments of bamboo extending from end to end of the shaft and being glued thereto and to each other throughout, said shaft having a tapered socket engaging portion of cylindrical cross section and a portion above the socket engaging portion and a portion at the outer end extending below the grip of polygonal cross section, the intermediate portion being cylindrical.

6. A shaft for golf clubs comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments of bamboo extending from end to end of the shaft, the inner faces of said segments being of uniform width from end to end and having curved grooves therein fitting said core and being glued thereto and to each other throughout.

7. A shaft for golf clubs comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments disposed edge to edge and extending from end to end of the shaft and grooved on their inner sides to fit said core and glued thereto and to each other throughout, said shaft having a tapered socket engaging portion of cylindrical cross section and a portion above the socket engaging portion and a portion at the outer end extending below the grip of polygonal cross section, the intermediate portion being cylindrical and tapered.

8. A shaft for golf clubs comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments disposed edge to edge

and extending from end to end of the shaft and grooved on their inner sides to fit said core and glued thereto and to each other throughout.

9. A shaft for golf clubs comprising a core of wood extending from end to end of the shaft, said core being of cylindrical cross section and of uniform diameter from end to end, and a plurality of complementary segments of split bamboo disposed edge to edge and extending from end to end of the shaft and grooved on their inner sides to fit said core and glued thereto and to each other throughout.

In witness whereof, I have hereunto set my hand.

WILLIAM A. STOLLEY. [L. S.]