May 8, 1934. L. J. COCKE 1,958,032

GOLF CLUB

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FIG. 2.

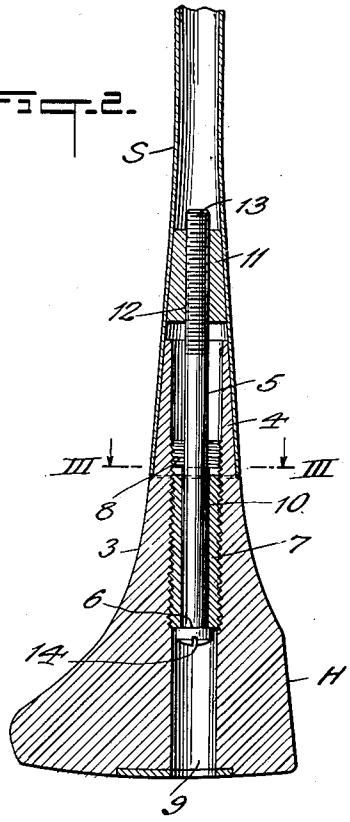


FIG. 1.

FIG. 3.

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GOLF CLUB

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2 Claims. (Cl. 273—80)

This invention relates to a golf club, particularly to means for attaching the shaft thereof to the head.

It is well known that any golf club shaft, whether made of wood or metal, is likely to become bowed or bent, either gradually, because of readjustment of the strains set up in the shaft when it is made, or by a sudden accident.

A bend or bow in a golf shaft, if it is in that vertical plane passing through the shaft and the body of the user, when the user is in that position usually assumed at the instant of contact between a ball to be driven and the club head, is not nearly so objectionable as is a bend in a plane at a right angle to that specified.

Heretofore, shafts have been attached to the heads by means of substantially a permanent nature, in that they were not readily adjustable in the hands of the ordinary user, so that, if the shaft of a golf club became bowed or bent it was either necessary to discard it altogether or have a person skilled in the making or repairing of golf clubs attend to it.

A principal object of the present invention is to provide a means, easily manipulated by the ordinary user, by which a shaft is attached to the head of a golf club.

A further object of the present invention is to provide means of the kind specified which will require, for assembly and disassembly, no tool more unusual than an ordinary screw driver.

A further object of the present invention is to provide means of the kind specified which will be of a type allowing the shaft of a golf club to be, at will, rotated on its longitudinal axis to a new position.

Other objects and advantages will appear as the description of the particular physical embodiments selected to illustrate the invention progresses, and the novel features of the invention will be particularly pointed out in the appended claims.

In describing the invention in detail, and the particular physical embodiment selected to illustrate the invention, reference will be had to the accompanying drawing and the several views thereon in which like characters of reference designate like parts throughout the several views, and in which:

Figure 1 is a side elevational view of a golf club embodying my invention, but with some parts broken away to more clearly show the construction; Fig. 2 is a sectional view of the device, as shown by Fig. 1, on the plane indicated by the line II—II, viewed in the direction of the arrows at the ends of the line; Fig. 3 is a sectional view on the plane indicated by the line III—III of Fig. 2, viewed in the direction of the arrows at the ends of the line.

In the drawing: H designates the head of a golf club; S designates the shaft; and L the handle.

The shaft S is preferably made of metal, such as stainless steel. It, preferably, has a uniform taper from the handle end to a waist portion about at the point 1. Preferably from the waist portion downwardly, it also tapers, but reversely, that is, it becomes larger from the waist portion to the end 2.

Of course, it is to be understood, that applicant's showing and description of a shaft S tapering from the handle end to the waist 1 is not meant to exclude any other form for such portion of the shaft, as it is not intended to exclude a shaft which does not have a uniform taper or even which does not taper at all, or which tapers merely in steps. The portion from the waist 1 to the end 2 should, preferably, however, be tapered, and tapered so that the end 2 is larger than at the waist 1.

The head H is formed with an upwardly extending stem 3. This stem is formed to match the end of the shaft used, and preferably, with a tapered portion 4. It is preferred to have this taper such that the greatest frictional engagement exists between the shaft S and the portion 4 when the shaft is forced upon the tapered portion 4. This tapered portion 4 should be designed, having in mind the same basic principles underlying the well known Morse taper, keeping in mind the occasional difference in material of the head, and should probably approximate the well known Morse taper commonly used in machine tool parts, such, for instance, as drills formed with a tapered shank.

In order to keep the lower tapered end of the shaft S securely seated upon the tapered protuberance 4 of the head H, applicant prefers to utilize a shouldered screw 5. This shouldered screw should have a shoulder, such as 6, bearing against some abutment rigid with the head H, and make screw threaded engagement with a portion rigid with the shaft S.

As a shoulder rigid with the head H, applicant prefers a threaded sleeve 7, engaging threads 8 in a bore 9 made through the head H along the line substantially forming the axis of the tapered portion 4. This threaded sleeve 7 is provided with a bore 10 adapted to receive the shouldered screw 5 with the shoulder 6 thereof resting against

the lower end. This lower end forms an abutment, rigid with the head H.

Applicant desires to have it understood that the specific showing and description of a sleeve 7, forming an abutment is not meant to exclude a construction in which the abutment is integral with the head.

For making screw threaded engagement of the shouldered sleeve 5 with the shaft S, applicant prefers a plug 11 formed with a threaded bore 12 for engagement with the threads 13 of the shouldered screw 5. This plug 11 is preferably formed to substantially fit into the tapered lower portion of the shaft S, and to be maintained in position therein by any suitable means, such as soldering or welding which thereby rigidly unites the plug 11 and the shaft S.

When shaft S has its lower end positioned over the tapered portion 4 of the head H and the shouldered screw 5 is passed through the threaded sleeve 7 and screwed into the plug 11 so as to bring the shoulder 6 tightly against the lower end of the threaded sleeve 7, the internal taper of the lower end of the shaft S and the external taper of the portion 4 of the head H will be drawn so tightly together that there will be a total absence of rotative movement between the shaft S and the head H when a golf ball is struck by the head H.

If any accident happens to the shaft S, or the readjustment of strains therein results in a bowing or bending of the shaft S, the shouldered screw 5 may be efficiently loosened, by inserting a screw driver through the orifice in the bottom of the head H engaging with the slot 14 of the shouldered screw 5, so that the head H and the shaft S may be rotated, relatively, one to the other, on the axis of the shaft S so that any bow or bend in the shaft S may be brought into such position that it will lie in a vertical plane through the axis of the shaft S and the body of the user when standing in the usual position at the instant of striking the golf ball.

If for any reason the shaft S becomes so damaged as to be quite unuseable, then a new shaft S may be purchased and placed in position on the head H, so that a user is in position to salvage either the head or the shaft of a damaged club. If the shaft is damaged, the head may be salvaged; if the head is damaged, a new head may be purchased, and the shaft thereby salvaged.

Although I have particularly described one particular physical embodiment of my invention and explained the principle and mode of operation and construction thereof, nevertheless, I desire to have it understood that the form selected is merely illustrative, but does not exhaust the possible physical embodiments of the idea of means underlying my invention.

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

1. A golf club, including a head and a shaft, said shaft formed with a hollow lower end, and said head formed with an abutment and with a stem adapted to fit into the lower hollow end of the shaft; a plug formed with a threaded bore rigidly attached in the lower end of said shaft, and a shouldered screw engaging the threaded bore of said plug and having its shoulder resting against the abutment of said head.

2. In a golf club, in combination: a head formed with a stem, and a bore passing through the stem parallel to the axis thereof and opening at the bottom of the head and at the end of the stem and formed with an internal thread, said stem further formed tapered externally; an externally threaded sleeve, formed with a bore, positioned in screw threaded engagement with the thread in the bore of the head; a shaft, said shaft at its lower end being formed tapered and hollow and fitting tightly over the tapered stem of the head; a plug with an internally threaded bore positioned within the lower end of the shaft; and a shouldered screw passing through the sleeve and in threaded engagement with the plug with the shoulder thereof resting against the end of the threaded sleeve whereby the shaft and the head are drawn firmly together forcing the tapered stem into and in close engagement with the inside of the lower tapered end of the shaft.

LOUIS JUSTIN COCKE.