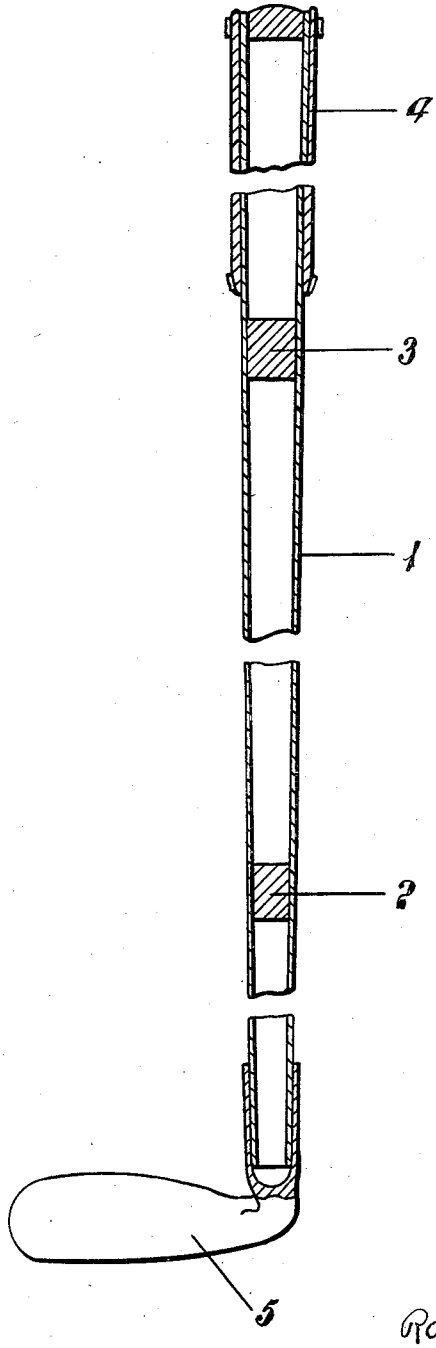
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STEEL SHAFT FOR GOLF CLUBS

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STEEL SHAFT FOR GOLF CLUBS

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2 Claims. (Cl. 273—80)

This invention relates to improvements in golf clubs of the kind which is fitted with a steel shaft.

Certain steel-shaft golf clubs are found to sting the hands if the ball is not hit fairly in the centre of the face of the club; if the blow is not correctly timed or if the club head strikes the ground heavily or the club meets an obstruction which causes a jar or sudden impact. It is believed the stinging sensation is due to a very rapid elastic vibration of the club, and that if the vibration could be damped or broken up in some way the ill effects of the jar or impact would be largely eliminated.

The applicant has observed that the vibrations of a hollow steel golf club shaft are modified if one or more plugs of a suitable material, otherwise than the plug which is frequently employed for wedging the handle to the head, preferably a resilient material, are firmly wedged inside the hollow of the shaft, and it is believed that such plugs also operate to damp or modify the vibrations in the club so as to reduce the stinging sensation felt in the hands when the club meets an obstruction.

The invention thus comprises a manner of checking or modifying the vibrations in the shaft of a hollow steel-shafted golf club, which consists in placing inside the hollow of the shaft plugs of suitable resilient material.

It also includes a manner of checking or modifying the vibrations in a steel-shafted golf club and/or the stinging propensities of the club when it strikes the ground or an obstruction, which consists in making the shaft hollow and tapering, and in firmly wedging inside the hollow of the shaft one or more plugs of resilient material, such for example as rubber, cork or even tubular steel thimbles or ferrules or the like.

The invention also includes a hollow steel shaft for a golf club having one or more plugs of rubber, cork or other resilient material inside the hollow of the tube firmly wedged in the tube.

It has been found when a taper hollow steel shaft is used that if a plug of rubber is forced down the inside until it wedges tight the period of vibration of the club, as observed by the musical pitch of the audible sound emitted, is very distinctly altered.

The best positions for the plug will depend upon the weight and the balance of the club. It is probable that the most effective positions of the plugs may depend upon the nodes about which the club when held in the hands by the handle is likely to vibrate.

It is believed that the club is likely to have a nodal point or points about which it will vibrate, the positions of which will depend upon the weight of the club, the weight of the head and its balance and also upon the grip in the hands of the golfer. The best position for the plugs may be at or on either side of the nodal point and possible also slightly below the leather handle grip on the top end of the shaft.

Considerable damping or modification in the vibration of a steel shaft has been observed by fixing one rubber plug at or about the lower quarter point and another at or about the upper quarter point and therefore these positions are regarded as a fundamental part of this invention.

In order that my invention may be clearly understood and readily carried into effect, I have appended hereto a drawing illustrating one embodiment thereof in sectional side elevation and in which 1 is the shaft of a steel or metal shafted golf club which is tapered from the handle end 4 down to the head 5. Plugs of rubber, cork or any other resilient material which will have a damping effect on the vibrations of the shaft when it is subjected to shock or impact are shown at 2 and 3.

These plugs are driven down inside the hollow shaft from the larger end until they take a firm seating each in the hollow shaft, the lower being approximately midway between the head and the centre of the shaft, and the other being approximately midway between the centre and top of the shaft.

Further, it is not necessary to restrict the plugs to two in number as I may use any number of plugs as widely or as closely spaced as desired.

What I claim is:—

1. In a hollow tapered steel shaft golf club the provision of means to check vibration of the shaft when the club strikes an obstruction, said means consisting of a pair of relatively short plugs spaced apart and wedged downwards within the tapered shaft, the lower plug being located approximately midway between the head and the centre of the shaft, and the upper one being located approximately midway between the top and the centre of the shaft, said two plugs being composed of a cushioning material.

2. A method of checking or modifying the vibrations in a steel-shafted golf club or the stinging propensities of the club when it strikes the ground or an obstruction, which consists in making the shaft hollow and tapering and in firmly wedging inside the hollow of the shaft above the head a pair of relatively short plugs of cushioning material, said plugs being spaced apart, one being approximately midway between the centre of the shaft and the head and the other approximately midway between the centre of the shaft and the top of the handle.

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