

May 1, 1923.

1,453,503

T. J. HOLMES

GOLF CLUB

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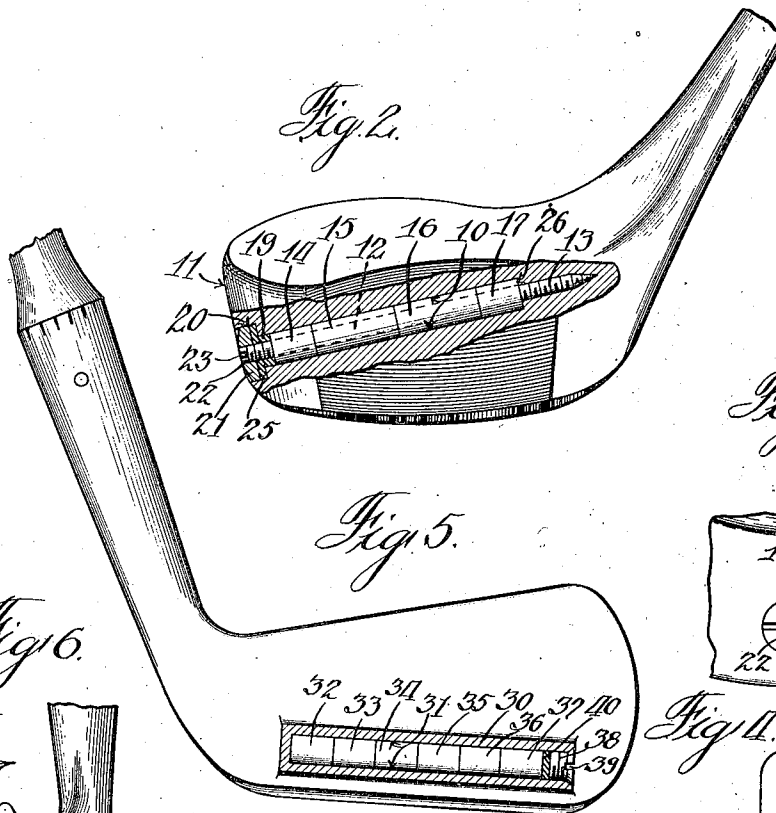
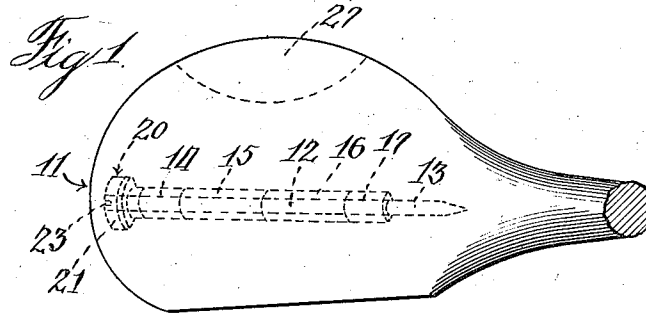


Fig. 3.

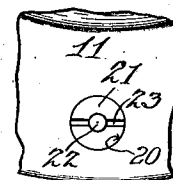
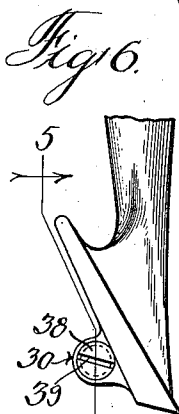


Fig. 4.



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UNITED STATES PATENT OFFICE.

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GOLF CLUB.

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To all whom it may concern:

Be it known that I, THOMAS J. HOLMES, a citizen of the United States, residing at Chicago, Cook County, Illinois, have invented certain new and useful Improvements Relating to Golf Clubs, of which the following is a specification.

Given a standard form of club head the club maker endeavors to produce a well-balanced and freely-swinging club largely through the shaping of the shaft by trimming it until what appear to be the best results for practice are attained in each individual construction. It may safely be said that no two of the ordinary clubs act in practice in exactly the same way even though produced by the same maker and from what was considered to be the same weight and kind of head. It is also true that a club which fully meets the requirements of one player will be unsuitable in the hands of another although theoretically correct for him as to its length and weight. Furthermore, since the club maker produces his work from his own views as to what the club should be, it is only by rare chance that any club substantially fully meets the individual needs of a particular player who may purchase it.

It is also pointed out that a player's club requirements as to weight, etc., vary from time to time as his skill increases or new appreciations are had of the action of his implements in use. The purchase of a new club to overcome such faults of the club or to overcome faults which have crept into the player's action is a purely speculative venture and is objectionable for many other reasons as well.

The chief objects of the present improvements are to provide a golf club which may be of the usual type and which may readily be made to conform accurately to a particular player's requirements as to weight of the club and also as to its balance, as the term is understood in golf, both initially by the club maker and subsequently from time to time by the player as occasion may arise, and to provide for such advantages by simple means which are in themselves unobjectionable from the standpoint of appearance or use of the club and which are secure against the effects of misdirected strokes and the weather.

Other objects and advantages will appear hereinafter.

In the accompanying drawings, which form a part of this specification, Figure 1 is a top view of the head of a golf club of the driver type with these improvements shown by dotted lines therein; Fig. 2 is a side view of the head of Fig. 1 with a part thereof broken away to show the present improvements chiefly in full lines, the outer end portions being in medial vertical section; Fig. 3 is a fragmentary front end view of the head of Figs. 1 and 2; Fig. 4 is a face view of a key or double-ended screw-driver adapted to be used with the nut of Figs. 1 to 3 inclusive; Fig. 5 is a rear view of an iron club of the mashie type showing these improvements in a somewhat modified form, the tubular housing for the weight or balancing members being shown in section, the view being on the line 5—5 of Fig. 6; and Fig. 6 is a fragmentary front end view of the club of Fig. 5.

According to Figs. 1, 2 and 3 a relatively long hole 10 is bored from the front end 11 of the head well into its body, as illustrated. This hole may slant normally upward from front to rear to provide for natural drainage should the connections be allowed to become so loose as to admit water, and also to bring the line of the weights more in line with the shaft of the club and the avoidance thereby to some extent of counteracting influences incident to the swing of a club having some of its weight out of the line of the shaft. The hole 10 may well be about three-eighths of an inch in diameter, but it may be varied from that considerably.

Concentric with the hole 10 is the rod 12, suitably of brass, which is pointed and threaded at its inner end 13 and screwed tightly into the wood or other material of the head. Upon the rod 12 and within the hole 10 are mounted a plurality of weights, fillers, or balancing pieces 14, 15, 16 and 17, each thereof being bored so as to fit slidably upon the rod 12 and each having an outer diameter only slightly less than that of the hole 10 whereby the weight material mounted on the rod 12 will fit snugly within the hole 10 and yet be capable of removal by shaking the club or tapping it upon a hard surface.

Adjacent to the weight, filler or balancing piece 14 I provide a filler 19 of relatively soft material such as rubber or fibre adapted to be compressed to hold the filler pieces firmly in position. The hole 10 is enlarged

at 20 to provide for the nut 21 which is threaded upon the outer and threaded end 22 of the rod 12. The nut 21 has a slot 23 adapted to be engaged by the key shown in Fig. 4 whereby the nut may be tightened or removed. A gasket 25 is placed between the nut 21 and the wall of the recess at the hole 10 and the enlargement 20, the gasket 25 also impinging the filler 19, the gasket 25 being adapted to exclude moisture from the hole 10 while also, due to the relative softness of the material, acting as a lock for the nut.

The filler pieces 14, 15, 16 and 17 are shown as of various lengths. They may all be relatively short as in Fig. 5 and of such number as will make their total length extend from substantially the front end of the hole 10 to its rear end at 26.

While golf clubs of the wooden driver type are invariably weighted, as by a block of metal at 27, the amount of such weight and its position will in no case result in a perfectly balanced club except by purest chance. According to these improvements the weight at 27 may be somewhat reduced and additional weight may be applied by means of fillers as 14, 15, 16 and 17, which additional weight may be made exactly such as renders the club as a whole of the desired weight for the particular player for whom made.

According to usual experience, too, the player finds in time that his club is either too heavy or too light, and thereupon with a club having these improvements he may modify the weight by changing the character of some of the fillers as 14, 15, 16 and 17, as from brass to aluminum or vice versa. It is therefore within the easy operation of the player to modify the weight of his club to his individual needs with substantial exactness.

For obtaining the correct balance of the club the filler pieces as 14, 15, 16 and 17 are simply adjusted with respect to each other. It is contemplated that some of the fillers will be of relatively light metal or other material as wood, fibre, or preferably, aluminum, and that at least one of them will be of relatively heavy metal such as iron or brass (preferably a noncorrosive metal). Let us assume that the fillers 14 and 16 are of brass and that the fillers 15 and 17 are of aluminum, and that such an arrangement results in a substantially perfect balancing of the club. This matter of the balance is so delicate that if the relatively large weight 16 were interchanged with the smaller weight 14 the balance would be materially affected. In some cases it is necessary to place the greater weight near the inner end of the hole 10, and in others the greater weight is re-

quired near the middle or at the other end. In practice it will be found that clubs which are as nearly alike as the club maker's art practically permits require radically different arrangements of the balancing members to free the club of its objectionable tendencies when in use.

Turning now to Figs. 5 and 6 it is only necessary to point out that the club may be originally forged with a longitudinal projection 30 on its rear surface which is shown as extending parallel with the sole of the club. This rib 30 is then bored with a hole 31 and filler pieces 32, 33, 34, 35, 36 and 37 are shown as fitting snugly within the hole 31 and extending substantially from end to end thereof. The outer end of the hole 31 is tapped and a screw plug 38 having a screwdriver slot 39 closes the opening and holds the filler pieces in place. A soft filler 40 provides for a suitable holding pressure upon the other fillers. The filler pieces numbered 32 to 37 inclusive are similarly to be considered as of both relatively light and relatively heavy metal or other material, and for purposes of description we may assume that fillers 32 and 35 are of brass while the others are of aluminum. The club of Figs. 5 and 6 may be weighted or balanced as in the other instance described. Instead of forging the projection or housing part 30 as an integral part of the iron head it may consist of a metal tube brazed or otherwise secured to the head.

An important feature of this construction is that the weights are concealed and protectively housed and the presence of the improvement is not objectionable from the standpoints of appearance and use.

While I have thus illustrated and described simple, cheap and highly advantageous embodiments of these improvements as applied to clubs of different types, the invention is susceptible of modification in practice, and I contemplate as being within the cope of these improvements such changes as fall within the appended claim.

I claim:

A golf club head having a materially long boring therein, a rod secured to the head and positioned substantially coaxially in said boring, the free end of said rod terminating near the opening of said boring and being threaded to receive a nut, weight material having a hole therethrough adapting it to fit slidably on said rod and having an external diameter adapting it substantially to fit the boring in the head, said weight material substantially filling said hole from end to end and being mounted on said rod, and a nut on the outer end portion of said rod.

THOMAS J. HOLMES.