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2,087,685

GOLF CLUB

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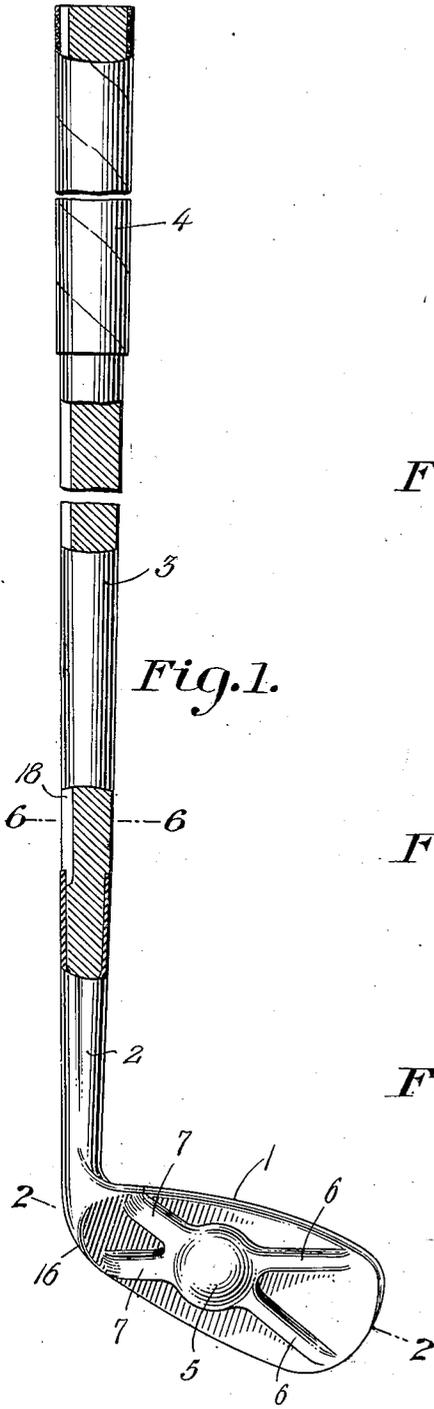


Fig. 1.

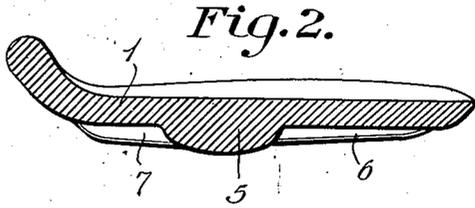


Fig. 2.

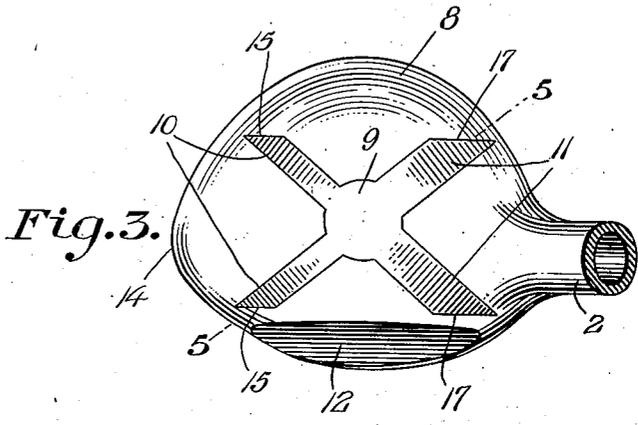


Fig. 3.

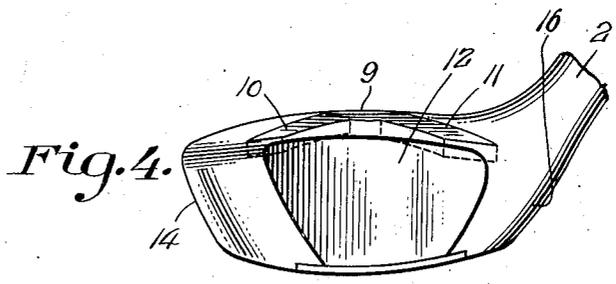


Fig. 4.

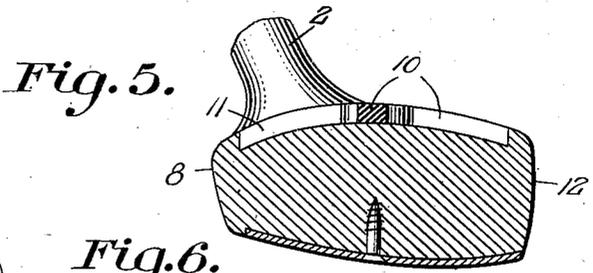


Fig. 5.

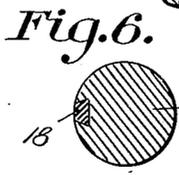


Fig. 6.

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GOLF CLUB

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2 Claims. (Cl. 273-77)

The invention relates to improvements in golf clubs including "irons" and "woods" used for distance and contemplates among other things, the distribution of weight in such a manner that perfect balance is provided not only during the stroke but also at the time of impact of the ball.

It is well recognized by those skilled in the game of golf that the "feel" of a club regulates to a large extent the stroke of the player and accordingly is directly responsible for the perfect impact between the club and the ball essential in securing long straight drives. The "feel" of the club is determined largely by the weight and balance which when properly combined and proportioned brings about the greatly desired freedom of motion which produces the stroke in which the club is brought fully through. In the present invention the distribution of weight and the provision of the desired balance is brought about by a novel construction and arrangement which includes a main weight mass positioned midway of the club or at a point approximating the point of contact, and radiating weighted arms extend from the main weight both towards the toe and the heel of the club. The radiating weighted arms which extend towards the heel of the club are approximately twice the weight of the radiating arms extending towards the toe of the club, this excessive weight provided between the approximate point of contact and the heel of the club tending to offset the inclination of the club toe to swing about an axis represented by the center of the club shaft, this swinging tendency of the toe of the club producing so-called "hooked" ball.

Another feature of the invention resides in the provision of a metal insert dovetailed into the rear of the handle or shaft for the purpose of preventing vibration, and reinforcing the handle, the insert being of such a construction and arrangement that the torsion and "whip" of the club is not retarded.

Other objects and features will appear by reference to the accompanying drawing and specification forming part of this application, and wherein like characters of reference designate corresponding parts throughout the several views, in which—

Fig. 1 is a rear elevation of an iron golf club.
Fig. 2 is a section on line 2—2 of Figure 1.

Fig. 3 is a top plan view of a wooden club involving the present development.

Fig. 4 is a front elevation of the disclosure of Figure 3.

Fig. 5 is a section on line 5—5 of Figure 3, and Fig. 6 is a section on line 6—6 of Figure 1.

In Figures 1, 2 and 6 an "iron" club is illustrated and includes the head 1, formed with the hosel 2 carrying the shaft 3, the latter being provided with the usual gripping wrapper 4. The rear face of the club head at a point approximately the center of the point of contact with a ball is provided with an extension 5 of any desired shape and of a size to provide a weight suitably proportioned to the weight of the club. Radiating arms 6 extend from the forward portion of the central weight 5 and taper at their extremities to merge with the rear of the club face. A corresponding pair of radiating weights 7 extend from the rear face of the weight 5 towards the heel of the club. These latter weight arms 7 are of a size to represent approximately twice the weight of the radiating arms 6 or a weight sufficient to offset the normal tendency of the club toe to swing about the shaft axis during the swinging movement present in a drive. The tendency of the toe to swing will of course, be determined by a number of factors independent of the grip of the player, these factors including the length of the club face, the shape of the club face and the weight of the same.

In Figure 6 there is a section on line 6—6 of Figure 1 which illustrates the position and shape of the weight provided in the shaft or handle. In the present illustration a dovetailed groove extends from beneath the hosel to the extremity of the shaft and in this groove a weight of suitable size is positioned and retained. It will be noted that this shaft weight is located in the shaft of the club at a point diagrammatically opposite the projecting head and this will tend to increase the centering of the weight towards the heel of the club. The size of the shaft weight is determined by such factors as the club length and weight, including the club head weights 5, 6 and 7 heretofore mentioned so that there is a relation between these parts to provide the necessary balance desired.

In Figures 3, 4 and 5 a wooden club is illustrated and includes a head 8 grooved in its upper face to provide a central rounded socket to receive a weight 9 having forward radiating arms 10 and rearwardly extending arms 11. The central weight 9 is located immediately above and in line with the point of contact on the face 12 of the club head while the forward radiating weights 10 project to opposite sides of the club nose 14 and are provided with flattened faces 15 which

extend substantially parallel to the contact face 12 of the club head. The rearwardly extending radiating weights 11 project to each side of the shaft connection 16 and are approximately twice the weight of the weighted arms 10 thus centering a greater portion of the weight between the heel of the club and the point of contact. The extremities 17 of the weighted arms 11 are substantially in alignment with the extremities of the weighted arms 10 and parallel to the club striking face 12 and thus reducing the tendency to split the club head in contact. In the disclosure of Figures 3, 4 and 5 the weight is not provided with any specific form of fastening means but may be retained in place by screws or the like.

It will be observed from the foregoing that this invention brings about a distribution of weight tending to off-set the undesirable characteristics of the conventional golf club. In designing the present structure the balancing of the club so that the essential weight is at the club heel is accomplished by enlargement of the weight extensions between the main weight located in line with the approximate point of contact and the heel of the club and this accumulation of weight at this area is in proportion to the other elements included in the club assembly. The location of the main weight as shown and described necessarily materially increases the driving distance and the relative arrangement of the auxil-

iary weights provide a balance which facilitates the wrist action thus eliminating the tendency to "hook" or "slice" and permitting a through stroke.

Where it is found practical the weight assembly may in the instance of the wood clubs be shifted to a position other than the top of the club provided this change in location of the weight does not alter the functioning of the parts.

What I claim is:

1. In a golf club including a head formed with a toe, heel and face portion, a weight fixed to said club rearward of the face portion including a body portion, and a plurality of radiating weight arms lighter than the main weight extending from the body portion, the arms between the body portion of the weight and the heel being of relatively greater size than the arms between the main portion of the weight and the toe of the club;

2. In a golf club including a head formed with a toe, heel and face portion, weight means fixed to the head rearwardly of the striking face, said weight means comprising a main weight located in line with the impact point, a set of radiating bar shaped weights lighter than the main weight located between the main weight and the heel of the club, and a second set of radiating bar shaped weights between the main weight and the toe of the club, said second set of weights being lighter in weight than the first set of bar shaped weights.

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