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1,459,810

C. M. WILLS

GOLF CLUB

Filed Oct. 19, 1921

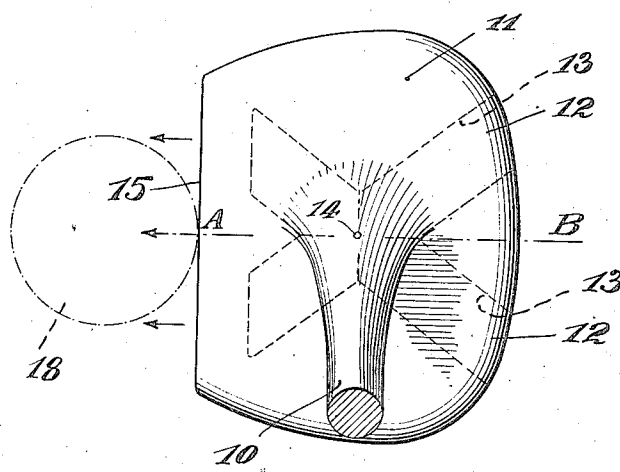


Fig. 1.

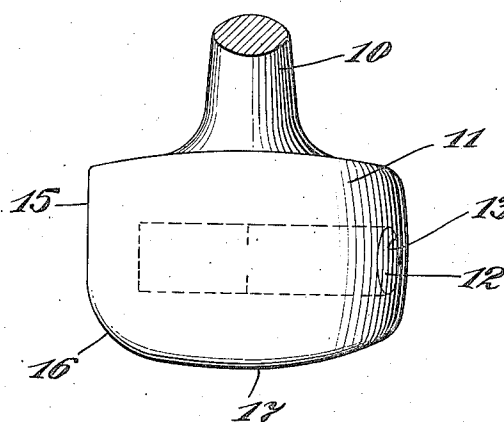


Fig. 2.

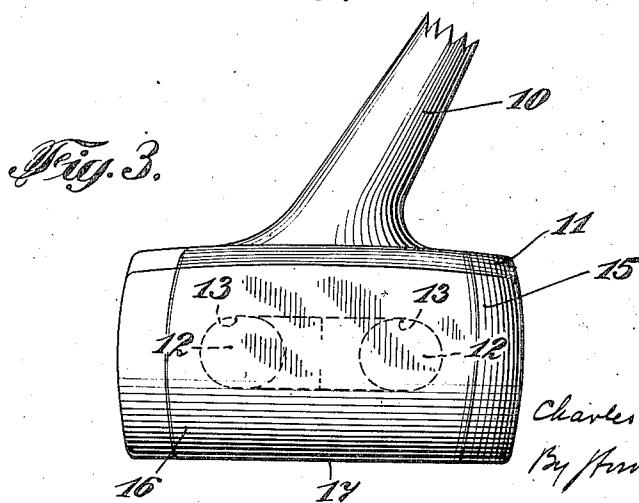


Fig. 3.

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UNITED STATES PATENT OFFICE.

CHARLES M. WILLS, OF ATLANTIC CITY, NEW JERSEY.

GOLF CLUB.

Application filed October 19, 1921. Serial No. 508,752.

To all whom it may concern:

Be it known that I, CHARLES M. WILLS, a citizen of the United States, residing at Atlantic City, in the county of Atlantic and State of New Jersey, have invented new and useful Improvements in Golf Clubs, of which the following is a full, clear, and exact specification.

My invention relates to golf devices and refers particularly to golf sticks or golf clubs.

In imparting impetus to a golf ball, it is essential that the impact force of the golf club be in a direct line with the direction in which the ball is to travel.

The arc of the club swing is not perpendicular to this line of ball movement but, on account of the position of the player and the arm swing, the club passes through a plane which is angularly positioned to the perpendicular plane of the ball movement.

As a result thereof, when the club comes into contact with the ball, it has an angular swing with respect to the direction in which the ball is to be driven, thus having a tendency to move the club face along the surface of the ball causing a slicing thereof, or of giving an impact force in a direction at variance with the direction in which the ball is to be driven, thus directing it in an undesirable course.

Both of these objections are overcome in part by the proper positioning of the player and by a rigid observance of the proper arc of the arm swing.

I have found, however, that these objectionable effects are largely producible by improper balancing of the club head, and that a club head can be so balanced that the driving force of its entire face will be in the direction of the desired ball movement, thus preventing slicing and divergent ball movement, even if the ball is not impelled by the exact center of the face of the head.

My invention, therefore, presents a means whereby the driving force of practically the entire hitting face of the club is in the direction of the desired ball movement.

In considering the action of a golf club during its swing, it must be remembered that the shaft is more or less flexible, and hence, an unbalanced head will have a tendency to move from its normal position with

regard to the shaft because of the unequal centrifugal force during the swing, due to the difference in weight of the various portions of the club head.

I have found that a club head can be so balanced, with respect to the point of juncture of the head and the shaft, that there will be no unequal centrifugal movement of the head during the club swing and that there will result a practically uniform direction of force movement across the entire face of the head in the direction of the desired flight of the ball and my invention relates thereto.

In the particular form of the golf club, or stick, shown in the accompanying drawings as an example of my invention, similar parts are designated by similar numerals.

Figure 1 is a top plan view of one form of my device.

Figure 2 is a side view of Figure 1.

Figure 3 is a front view of Figure 1.

The particular form of the device of my invention, shown in the accompanying drawings, comprises a golf club, or stick, having the shaft, or handle, 10 and the head 11.

Lead 12 is poured, or molded, in to an X-shaped hole, or recess, 13. The lead is so arranged in quantity and position that the weight of the head 11 is equally divided by the line A—B, which is drawn through the center point 14 of the intersection of shaft 10 and the head 11 perpendicularly to the face 15 of the head 11.

The intersecting edge 16 between the face 15 and the bottom 17 of the head is curved as shown.

In Figure 1, the head 11 is shown in abutment upon the golf ball 18 at the moment of contact therewith, the arrows illustrating the equal distribution of driving force across the entire face of the head due to the equal distribution of weight of the head.

It is evident that the amount, position, shape and material of the weighting element may be varied and that the inclination of the shaft to the head and its point of juncture thereto may be varied, as may also the size, shape and material of the head itself without departing from the essence of my invention.

What I claim is:—

1. In a golf club, in combination, a head, a shaft fixedly attached to the head and an

X-shaped weighting material within the head, so positioned that the center of its arm intersection will coincide with the center of the shaft and head juncture.

- 5 2. In a golf club, in combination, a head, a shaft fixedly attached to the head and an X-shaped weighting material within the head

extending from the rear face of the head forwardly of the shaft and head juncture.
Signed at Atlantic City in the county of 10
Atlantic and State of New Jersey this 17th
day of October, 1921.

CHARLES M. WILLS.