April 28, 1925. 1,535,270

R. G. TYLER

GOLF CLUB

Filed Nov. 1, 1924

Fig. 2.

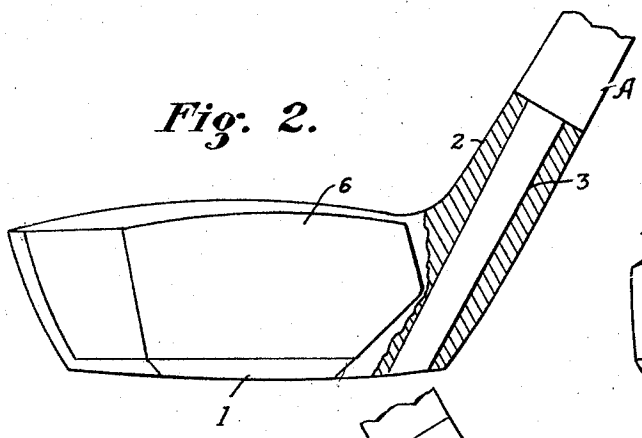


Fig. 1.

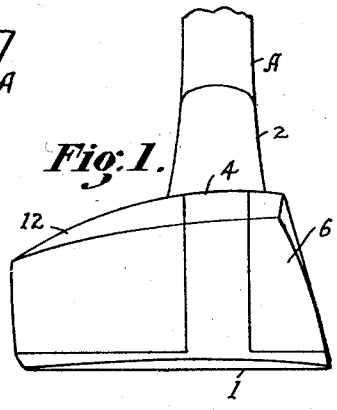


Fig. 4.

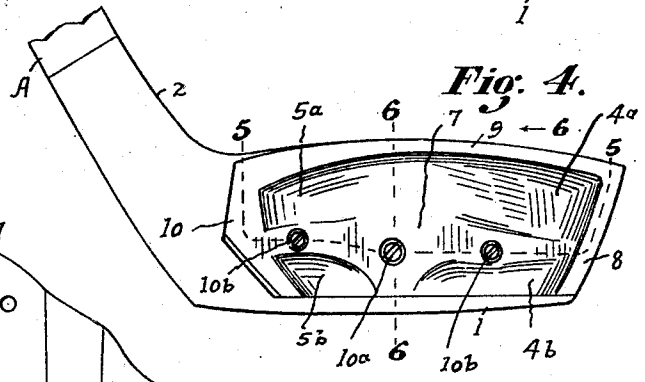


Fig. 3.

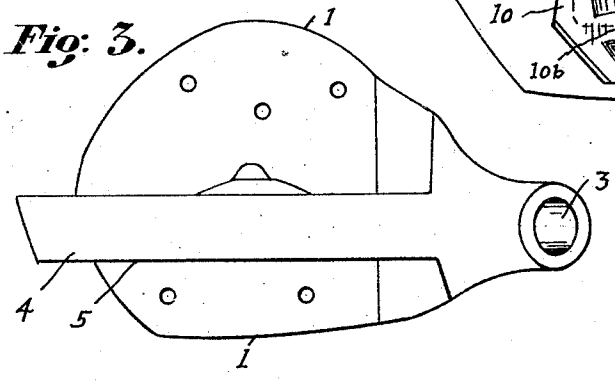


Fig. 5.

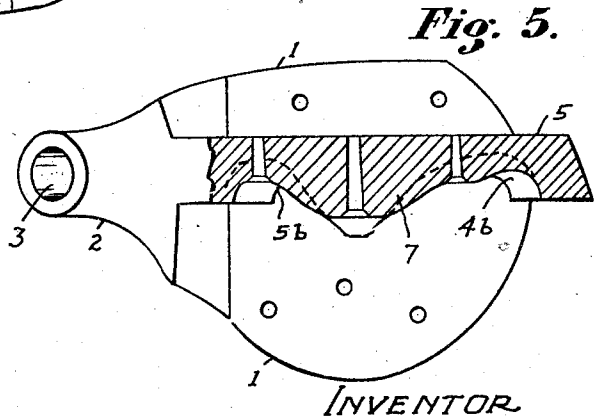
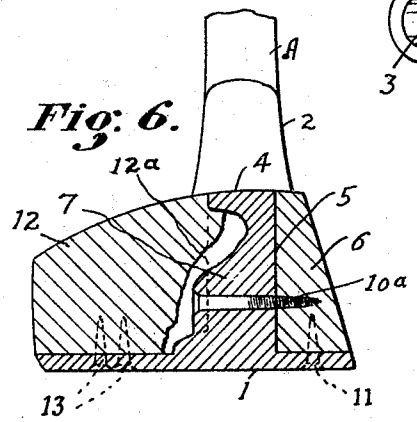


Fig. 6.



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UNITED STATES PATENT OFFICE.

RALPH G. TYLER, OF BRADFORD, PENNSYLVANIA.

GOLF CLUB.

Application filed November 1, 1924. Serial No. 747,216.

To all whom it may concern:

Be it known that I, RALPH G. TYLER, a citizen of the United States, residing at Bradford, in the county of McKean and State of Pennsylvania, have invented new and useful Improvements in Golf Clubs, and of which said invention the following is a specification.

This invention relates to improvements in golf clubs and is applicable to implements in this class, of all general types.

In the use of the golf club, the obtaining of distance and accuracy, in the driving of the ball, depends greatly upon the proper balance of the head of the club. The effect of the impact of the club head against the ball is manifested in several ways, such as driving the ball downwardly, when neither accuracy or distance are gained; or of "topping" the ball, in which case slight distance only is obtained. A further difficulty is that of "slicing" or "hooking" and which results in driving the ball in improper direction.

In the manipulation of the club by the player, it is swung with a force calculated to impart momentum to the ball to carry it greater or less distance as may be suggested by the turf. While the degree of force exerted by the player may be varied, the manner of grasp and poise of the club is or should be normal.

The object in the present invention is to provide a club head of such construction and so combined with the shaft, that besides affording balance calculated to facilitate true poising by the player, there is no tendency of the head to twist, or of the shaft to vibrate or shudder during the swinging of the club, nor at the moment of the contact of the head with the ball, and by which club a direct and effective hammer head force is applied to the ball.

The preferred form of embodiment of the invention is that shown in the drawings and described in the following specification; and the invention is defined in the appended claims.

In the drawings, the several parts of the invention are identified by suitable reference characters applied thereto, in the different views, in which—

Figure 1 is a front view of my improved golf club, the lower portion of the shaft being shown.

Figure 2 is a front face view of Figure 1.

Figure 3 is a top plan view of Figure 2, the wooden face and back blocks and shaft having been removed.

Figure 4 is a rear view of Figure 2 the back block having been removed.

Figure 5 is a sectional plan view taken on the line 5—5 in Figure 4.

Figure 6 is a vertical transverse sectional view taken on the line 6—6 and in direction of the arrow 6 in Figure 4.

The frame portion of my improved golf club is of metal of light weight,—aluminum being found most suitable,—and it is of one-piece cast construction of the peculiar formation shown. The web or weight piece is an integral part of the said frame and is adapted to become practically an integral part of the shaft and in axial alignment therewith. The importance and utility of these features will be readily apparent as the nature of my invention is understood in reading the specification and claims. The said frame portion comprises the sole 1 from which rises the neck 2 at the desired slant or angle. In a machined tapered bore 3 which extends through the said neck and the heel portion of the weight piece or sole, is seated the shank portion of the usual shaft A. The shaft may be made of stout wood, such as hickory, or it may be made of steel, and is of the usual dimensions.

Extending forwardly from and formed integrally with the said neck is a vertical web or weight piece 4. Its top surface is of suitable arch or curvature and defines the curvature of the crown line of the wooden face and back block presently to be referred to. The frontal side of the web is of straight formation and constitutes an abutment 5 for the said face block 6. The toe portion and the rear portion of the rear side of the said web are hollowed out, there being the recesses 4^a and 4^b and 5^a and 5^b, as plainly shown in Figures 4 and 5; thus there is constituted the weight portion 7 of such bulk and location, that the weight or heft of the head is concentrated at a point coincident with the line or plane through which the golf club head moves to its contact with the ball. Against the smooth marginal faces 8, 9, and 10 of the rear side of the said web, the corresponding edges of the wooden back block 12 are drawn and held in close contact by countersunk screws 13 that are in-

serted upwardly through the sole. Correct differentiation of weight of the back block with regard to the shaft axis, and to the shape and dimension of the sole, and to the weight of the face block is had by variation of the dimension of the cavity or recess 12^a in the said back block.

The face block 6 may have its hitting face of slant or contour to constitute a driver, brassie, putter or spoon. It is secured by the screws 10^a and 10^b that are passed through the weight piece 7, and by the screws 11 that are passed through the sole.

The peculiar form and proportions, and combination of parts constituting the said frame structure have been so developed, that when the wooden body portions are combined with said frame, the golf club head as an entirety is of such balance; and the shaft having its axis substantially coincident with the center of gravity of the weight piece, has such combination with the head as an entirety, that when the head (in the action of swinging the club) is brought to contact with the ball, the driving force is transmitted with hammer-like directness from the core of the head, to the ball. In my improved club the weighted portion extends from heel to toe, as distinguished from having weight in only a comparatively small part of the club, as in wooden club heads hitherto devised. In the present invention the weight, besides being of extent coextensive with the length of the head is of slightly increased bulk at the plane coincident with the line of contact with the ball. It is obvious that with the weight distributed as above described and with the shaft in longitudinal axial alignment with the said weight piece, there is producted a balance which is of such effect that in the hitting of the ball there is no vibratory or torsional tendency. A hammer-like blow is accomplished and a true and dependable impulse is imparted to the ball. With the absence of tendency of the shaft to chuck, tremble or shiver, the enjoyment and skill of the player in making his strokes are greatly increased.

The face piece 6 has its rear face to rest directly against the ample flat frontal surface of the web 4 and is drawn and secured to its position by the screws 10^a and 10^b and the screws 11. The back block 12 is secured by the screws 13. Dislodgement, or indeed even the slightest displacement or shifting of the face or back blocks, in the use of the club, is impossible. At the same time new blocks may be easily installed and at very small cost. The frame element comprising the sole, web and neck of one-piece metal construction is of strength and durability. A broken shaft may be easily replaced.

The above features are important for the reason that in golf clubs as hitherto constructed the tendency of the wooden parts is to become loose and to therefore render the implement totally ineffective; moreover the replacement of shafts of clubs in which the shaft is connected to the wooden part or parts of the club is impracticable.

To meet the various requirements involving the weight of the club head, or the shape and function specifically of the face block, there is simply the variation by the maker, of the angle and contour of the face block, and of the hollowing out of the rear portion of the web, and of the frontal portion of the back block.

By the use of a club in which my invention is embodied the player is enabled to derive the full effect and maximum results from the skill and strength exercised. The club is dependable and lends itself to correct control, the result being that "distance" is assured and a "long ball" and consistent run of playing is possible.

My invention may be constructed easily and economically by the use of ordinary tools and machine equipment, and is rugged and durable, neat in appearance, and not liable to impairment or derangement. Modifications of course may be made, within the scope of the invention as the same is defined by the appended claims, without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a golf club, a metal frame member having integrally formed neck with a forwardly extended upstanding web positioned between the front and rear of the sole, a weight element formed integral with the web at its rear side, a face block and a back block secured at the front and rear of said web, respectively.

2. A golf club comprising a one-piece frame member comprising the neck, heel, sole and longitudinal web, and a face block mounted on the sole and secured by means passed through the web, and a back block secured at the rear of said web.

3. A golf club head comprising a one-piece frame member comprising the neck, heel and sole, an integrally formed upstanding longitudinal web having its toe and heel portions hollowed out at the rear side of said web, a wooden back block having its frontal portion hollowed out and which block is secured to the sole and at contact with said web, and a face block secured to the front of the said web.

4. A golf club consisting of a one-piece metal frame member comprising the sole and heel and neck and an integrally formed longitudinal web in axial alignment with the neck, and a face block and back block secured at the front and rear respectively, of the said web.

5. A golf club head, comprising a one-piece

frame member embodying a neck and a longitudinal weight portion, a face block mounted on the sole and secured to the front of the weight portion, and a back block secured to the sole and at engagement with the back of the weight portion.

6. A golf club head comprising a metal frame member having an upstanding weight portion formed integral with the neck and sole of the frame and provided with a bore in which the shaft is secured, a wooden face block secured to the front of the weight portion and sole, and a wooden back block secured to the sole and back of the weight portion.

RALPH G. TYLER.