Feb. 23 , 1926. 1,574,213

R. G. TYLER

GOLF CLUB

Original Filed April 3, 1923

Fig. 1.

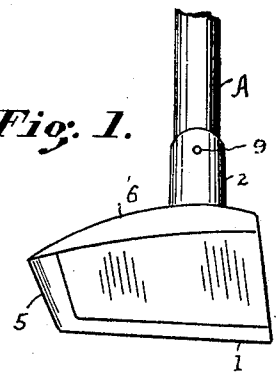


Fig. 2.

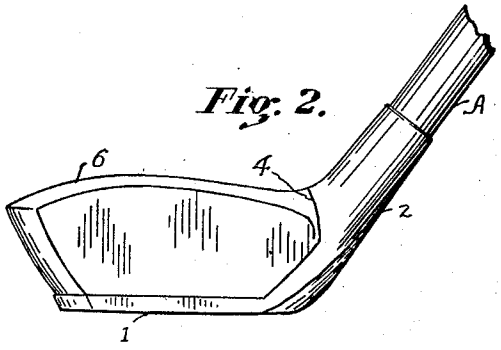


Fig. 4.

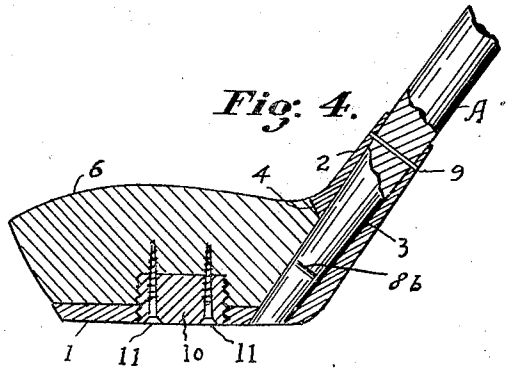


Fig. 5.

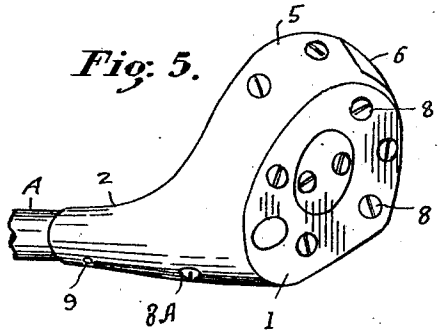
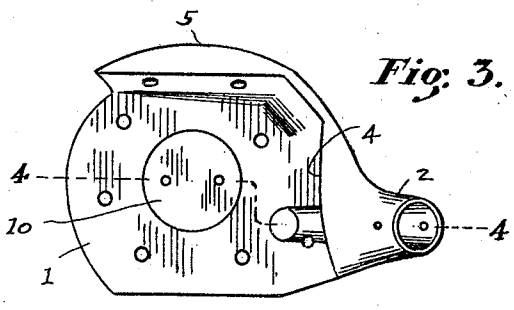


Fig. 3.



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UNITED STATES PATENT OFFICE.

RALPH G. TYLER, OF BRADFORD, PENNSYLVANIA.

GOLF CLUB.

Application filed April 3, 1923, Serial No. 629,596. Renewed December 2, 1925.

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 certain new and useful Improvements in Golf Clubs, of which the following is a specification.

This invention relates to improvements in golf clubs, and has reference especially to clubs of this character, known as the "driver" or "brassie", being applicable however to golf clubs of all types.

In the use of a club of this class, 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 amount of force exerted by the player may be varied, the manner of grasp and poise of the club is or should be normal. My object is to provide a club head of such construction that besides affording balance calculated to facilitate true poising by the player, there is no tendency of the head to twist or shudder at the moment of its striking or hitting contact with the ball.

In carrying out my present invention it is shown embodied in the type of golf club comprising a metal shell or frame with which is combined a body portion made of wood. The preferred form of embodiment is that shown in the drawings, and described in the following specification. The invention is defined in the appended claims.

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

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

Figure 2 is a front side view of Figure 1.

Figure 3 is a top plan view of Figure 2, the head block and shaft having been removed.

Figure 4 is a vertical longitudinal sectional view taken on the line 4—4 in Figure 3, the head block and shaft being shown in its secured position as shown in Figure 2.

Figure 5 is a perspective view of the golf club disposed at a position to disclose clearly the back, and the lower or bottom face of the sole.

The frame portion of my improved golf club is of metal, of light weight, aluminum being found most suitable, and is of one-piece cast construction of the peculiar form as shown in the drawing; and it comprises the sole 1, from which rises the neck 2 at the desired slant or angle shown. A tapered bore 3 machined in the neck and through the heel and sole, is provided for the shaft A. The shaft (a portion only of which is shown) is of stout wood, such as hickory, and is of the usual contour and dimension. The body portion of the neck 2 has an angular abutment face 4 whose function will be presently referred to.

Rising from the rear portion of the sole and at a slightly outwardly disposed angle is the back 5. This back 5 is of bulk area in cross section to afford strength and rigidity and is of the suitable curvature as shown.

The peculiar form and proportions of this frame structure have been so developed that when the body portion is combined with it, the golf club head as an entirety is of such balance, that when poised on a line longitudinally central of the sole, the said head is in balance. The head 6 is made of suitable hard wood and is of shape to fit snugly in the said frame, the rear side of the head lying snugly against the inner face of the back 5, and its heel side lying in a similar maner at close and snug contact with the abutment face 4, and the inner face of the heel of the frame.

The center line of the shaft bore 3 is so located with reference to the center line of the sole, and of the body, that the sense imparted to the player, is that he "feels the bottom of the club."

By the construction just described, the head is so nested in the frame casting, that when fastened thereto, it effectively resists

any tendency toward displacement or shifting of the head by the force of striking or hitting against the ball.

Through suitably countersunk holes in the sole, and the back and the heel, the flat-head screws 8 are applied and by which the said head 6 is secured in place. The location of the screw 8^a that is passed through the heel is such that it partially occupies the side of the shank of the shaft A and which screw together with a transverse pin 9 that is passed through the neck 2 of the frame, constitutes a secure and rugged fastening for the said shaft.

To weight my improved golf club head there is provided a weight piece 10 adapted to form a part of the construction as an entirety, and it is made a part of the sole 1. This weight consists of a slug of steel or iron suitably threaded and screwed through a threaded bore therefor in the sole, and into close fitting secured connection with the recess of the head block 6. The slug after having been screwed to the secure position described, is locked at such position by the flat-head screws 11. It will be observed that the longitudinal center line of the sole is the line in which the said weight piece is centered; the areas of the several portions of the frame, and the center of the shaft neck are such that the center of balance is the center line of the said sole. The feature of the golf club provided with balance as above described is very important and is one of the essential advantages of my invention.

The varied requirements of players demand that the weight of the golf club may be furnished in various degrees. By the arrangement and combination above described it is entirely practicable to obtain this variation of weight, by simply varying the length of the weight piece.

By reason of the peculiar form of the neck and lower portion thereof merging into the back 5 and into the sole, and with the weight piece combined therewith as shown, the metal frame element becomes substantially an integral part of the shaft; by reason of the "heft" or bulk being so balanced and poised, as described, this golf club or implement is of remarkable effect and efficiency as a device or implement capable of positive power for the purposes for which it is intended. In other words; the back 5 springing, as it does, from the lower portion of the neck, constitutes substantially an integral portion of the shaft, and the abutment face of the said back being at a location a distance removed rearwardly from the center line of the shaft, the force of the shock which occurs at the moment the ball is hit or struck by the head 6, is so transmitted, that any possible tendency of said force to turn or torque the shaft is overcome.

It is apparent that a golf club made in accordance with my invention is capable of being constructed easily and economically by the use of ordinary tool or machine equipment, and that when completed it is rugged and durable. Moreover it is neat in appearance and is free from liability to derangement or impairment.

The golf club head, including its weight piece, as an entirety, constituting—as it were—an integral part of the shaft A, the effect, in the use of this improved golf club, upon striking or hitting the ball, is, that the impact is so transmitted to and received by the back 5, that the tendency of the shock to turn the shaft is practically eliminated, and the action is steady and consistent and dependable. These desirable results are due to the fact that with the impact force imposed at the back 5 the shock exerts practically no leverage tending to torque at the shaft. To clearly understand this important feature of minimizing the tendency of the impact to affect the shaft, reference is had to Figure 3. It is apparent that with the impact force imposed at the back 5, any possible tendency to cause impulse or twist at the shaft is much less than when imposed at the face of the club head, as is the case in the use of "driver" clubs as hitherto devised.

The result of such transmission of impact strain, and the consequent steadiness of action of the golf club head, is accuracy of direction, or "a straight ball."

The weight piece constituting part of the head, and combined with the hitting block or head, and the sole, and all in direct connection with the shaft, enables the player to feel or sense the bottom of the club. In coordination with the sweep of the player's stroke the centrifugal forces so act that the sole readily comes parallel to the ground at moment of impact. The result is the player is enabled to get the ball up more effectively and there is less topping.

Because of the weight of the club being evenly balanced, this improved driver hangs straight in the player's hands and is capable of being swung smoothly and rythmically. Having no one-sided or out of balance effect, this driver lends itself to correct control, the result being, that distance is assured, or in other words, "a longer ball" is possible.

The frame element of my improved driver comprising shank, heel, sole and back in one-piece casting is practically indestructible. In case the shaft might be broken, the head of the club would not necessarily be injured or impaired as would be the case in drivers of construction as hitherto devised. Broken shafts may be easily replaced by simply removing the damaged stem, and inserting and securing the stem of the new shaft. After long continued use if the hitting block or head 6 may become worn or

bruised, a new head may be installed at a very small cost. Another feature is the facility by which the weight of the head may be varied, simply by removal and replacement of the weight piece 10. The result of such features of enduring construction are long life of the driver, and economy to the player.

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

1. A golf club comprising a one-piece metal frame member having an upstanding back portion formed integral with the neck of the frame and a sole portion extending forwardly from the base of said back there being an opening in the sole located on a center line to the rear of the center line of the neck, a wooden head block secured to the sole and back and having a recess to register with the said opening, and a weight piece removably connected to the sole, and fastening means between the weight piece and the head block.

2. A golf club head consisting of a one-piece frame member having an upstanding back portion and a sole extending forwardly from said back portion there being an opening in the sole, a head block secured to the sole and back and having a recess to register with the said opening, and a weight piece removably connected to the sole, and fastening means between the weight piece and the head block.

In testimony whereof I affix my signature.

RALPH G. TYLER