

J. MILLAR.
GOLF CLUB.
APPLICATION FILED MAR. 28, 1913.

Patented Mar. 24, 1914.

1,091,231.

Fig. 1.

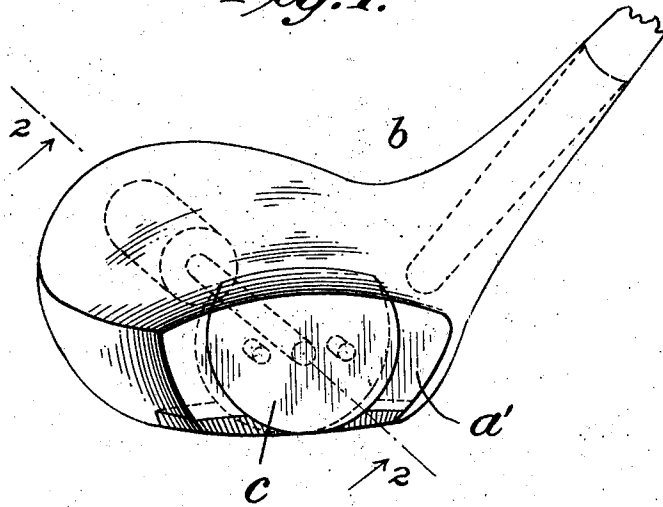


Fig. 2.

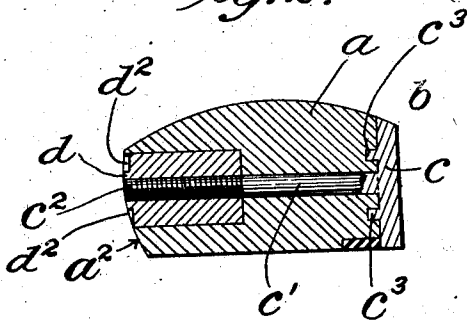
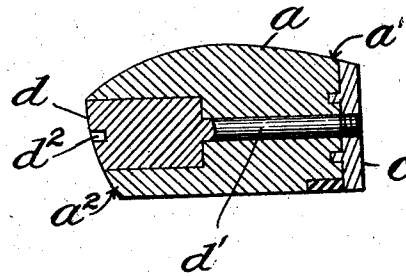


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES MILLAR, OF CHICOPEE, MASSACHUSETTS, ASSIGNOR TO A. G. SPALDING & BROS., OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

GOLF-CLUB.

1,091,231.

Specification of Letters Patent.

Patented Mar. 24, 1914.

Application filed March 28, 1913. Serial No. 757,304.

To all whom it may concern:

Be it known that I, JAMES MILLAR, a subject of the King of England, residing at Chicopee, in the county of Hampden, in the State of Massachusetts, have invented certain new and useful Improvements in Golf-Clubs, of which the following is a specification, reference being had to the accompanying drawing, forming a part hereof.

This invention relates to golf clubs and has for an object particularly to improve the general construction of the heads thereof whereby the effective propelling force is increased without unduly increasing the weight of the head and without disturbing the balance of the club.

A further object is to provide a head for golf clubs in which may be secured removable weights readily interchangeable to vary the effective weight of the head as desired under different conditions of use. In accordance with the invention a plurality of weights are removably secured in the head of the golf club and are so disposed that their weight is directly behind the point of impact of the head with the ball at the instant the latter is struck.

The invention will be more particularly described hereinafter, reference being had now to the accompanying drawings in which—

Figure 1 is a fragmentary view in perspective of the head of a golf club embodying the present invention. Fig. 2 is a view in vertical section taken on the line 2—2 of Fig. 1 and looking in the direction of the arrows and showing one arrangement for securing the weights in place. Fig. 3 is a view similar to Fig. 2 showing a modified construction for securing the weights in place.

The head *a* of the club designated generally by the reference character *b*, has its front and rear faces *a'* and *a''* countersunk to receive weighty blocks *c* and *d* of any desired outline, but adapted to fit snugly within the corresponding recesses above referred to. The weight *c* which is disposed in the striking face *a'* of the head may be of relatively great area so as to constitute the striking surface of the club. The weight *d* which is disposed in the rear side of the head *a*, however, is preferably of relatively small cross sectional area so that its effective weight will be more nearly concentrated

along the studs *c'* or *d'* which serve to connect the weights *c* and *d* as will appear, and which are coaxially disposed with respect to said weights. In Fig. 2 it will be noted that the stud *c'* is formed integral with the front or striking weight *c* and is threaded at its rear end, as at *c''*, to receive thereon the correspondingly threaded weight *d*, the latter being provided with grooves *d''* in its rear face to receive a suitable tool to facilitate the screwing of the weight *d* on the stud *c'*. The striking weight *c* is preferably provided on its rear face with lugs *c'''* which rest in corresponding recesses formed in the head *a* so that movement of the weight *c* about its axis is prevented positively. This construction, it will be appreciated, is of importance when the weights are being secured in place.

In assembling the head *a* and its constituent parts, after the head *a* has been properly bored through to receive the stud *c'* and its front and rear faces countersunk to receive the weights *c* and *d* respectively, the weight *c* is placed in its recess with the lugs *c'''* in engagement with their corresponding recesses. At this time, the stud *c'* may project somewhat beyond the rear face of the head. The weight *d* may then be threaded on to the stud *c'* until its inner end abuts against the bottom of its recess. By proper machining the striking weight *c*, the rear face of the weight *d* and the stud *c'* may all be finished to lie flush with the contiguous faces of the head *a* so that the exposed surface of the latter shall be contiguous and symmetrical. The exposed face of the striking weight *c* may be finished in any approved form to provide a suitable frictional engagement between the surface thereof and the ball.

By the construction described, it will be seen that in using the club, the stud *c* travels along a line which, at the instant the ball is struck, is coincident with the initial line of flight of the ball, that is, the weight of the blocks is transmitted through the stud to a point directly behind the point of impact of the head with the ball. This insures a maximum propelling force behind the ball and so increases generally the efficiency of the club. By disposing one weight adjacent the striking face of the club and the other weight at the rear side thereof, the two are symmetrically disposed with respect to the

handle of the club, so that the balance of the latter is not disturbed. This is a point of much importance. Furthermore, by securing the segments together removably, other segments of varying weight may be substituted readily at the whim of the player. If in the use of the club, the dimensions of the weights or the head change due to shrinkage etc., then the weight *d* may be threaded farther onto the stud *c'* so as to take up any looseness in the parts.

The modified construction shown in Fig. 3 differs from the construction shown in Fig. 2 in that the stud *d'* by which the two weights are connected is formed integral with the rear weight *d* instead of with the striking weight *c*. Under different conditions of use one arrangement may be found more desirable than the other or it may be that the cost of manufacture will make it desirable to employ one construction rather than the other.

I claim as my invention:

1. In combination with a head, a face plate, a weight disposed in the rear face of said head, and traction means operably connecting said face plate and said weight.
2. In combination with a head, a face

plate, a weight disposed in the rear face of said head, and traction means comprising a shank rigidly fastened to the one, and held in threaded engagement with the other.

3. In combination with a head, a face plate, a weight disposed in the rear face of said head, and means connecting said weight with said face plate, so that a rotary movement imparted to said weight will draw said face plate toward said head.

4. In combination with a head, a face plate, a weight disposed in the rear face of said head, traction means operably connected to said face plate and said weight, and means on said face plate, to hold the same against rotary movement.

5. In combination with a head, a face plate, a weight disposed in the rear face of said head, traction means operably connected to said face plate and said weight, and a lug on the inner surface of said face plate to hold the same against rotary movement.

This specification signed and witnessed this 26th day of March, A. D. 1913.

JAMES MILLAR.

Signed in the presence of—

FREDERIC C. BREAKSPEAR,
ALEXANDER W. McCauley.