

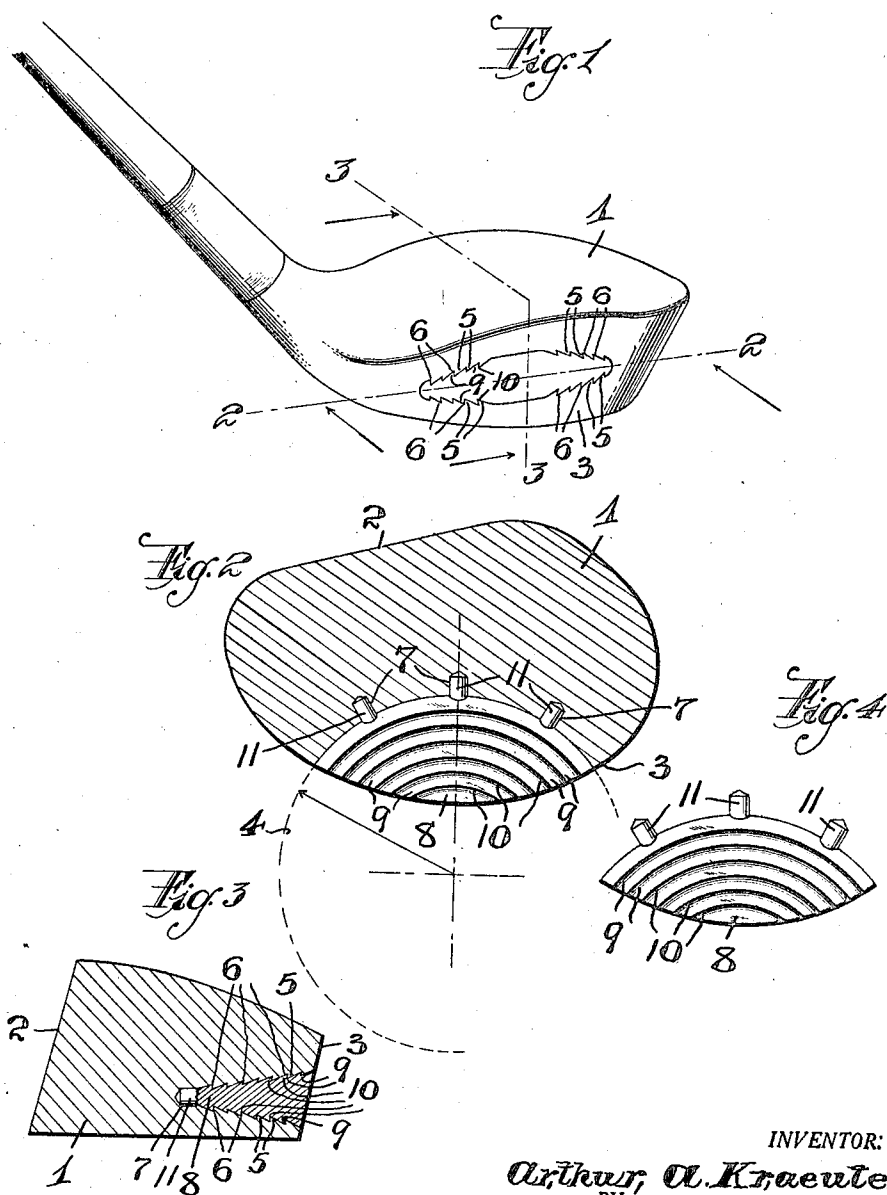
May 15, 1923.

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1,455,256

GOLF CLUB

Filed Jan. 19, 1922



INVENTOR:

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Patented May 15, 1923.

1,455,256

UNITED STATES PATENT OFFICE.

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GOLF CLUB.

Application filed January 19, 1922. Serial No. 530,283.

To all whom it may concern:

Be it known that I, ARTHUR A. KRAEUTER, a citizen of the United States, residing at South Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Golf Clubs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention relates, generally, to improvements in golf-clubs; and, the present invention has reference, more particularly, to the production of a golf-club, in which the head or striking member, usually made of wood, is provided with a metal balancing weight imbedded in the wood in a novel manner, that the said metal member, owing to the shrinkage of the wood, or due to other causes, will not become loosened or displaced from within its imbedded relation with the head, while swinging the club or when striking the golf-ball.

The present invention has for its principal object to provide a golf-club in which the head or striking member is provided with a balancing weight imbedded in the head to all appearances in the manner as at present provided, but in which the weight-receiving chamber or socket of the striking head, and the balancing weight imbedded therein, are made in such a manner that the balancing weight will not become loosened or displaced from within its imbedded relation with the head or striking member of the golf-club, while swinging the club or when striking the golf-ball.

Other objects of the present invention not at this time more particularly enumerated will be clearly understood from the following detailed description of the present invention.

With the various objects of the present invention in view, the said invention consists, primarily, in the novel golf-club hereinafter more fully set forth; and the said invention consists, furthermore, in the novel arrangements and combinations of the several devices and parts, as well as in the details of the construction of the said parts, all of which will be more fully described in detail

in the following specification, and then finally embodied in the clauses of the claims which are appended to and which form an essential part of the said specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of the lower or striking portion of a golf-club, showing one embodiment of the principles of the present invention; Figure 2 is an enlarged horizontal sectional representation of the head or striking member of the golf-club, said section being taken on line 2—2 in said Figure 1, and said view showing in connection therewith, in plan view, a balancing weight imbedded in the head or striking member of the golf-club, and shown secured in its fixed relation to said head or striking member, against displacement therefrom; Figure 3 is a transverse vertical representation of the parts shown in said Figure 2, a portion of the balancing weight being represented in elevation, said section being taken on line 3—3 in said Figure 1; and Figure 4 is a plan view of the balancing weight.

Similar characters of reference are employed in all of the said above described views, to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference-character 1 indicates the striking-end or head of a golf-club, which may be any suitable shape or configuration, according to the style and class of golf-club, the said head, which is usually made of wood, having a flat striking surface 2, and being provided in its back 3 with a weight-receiving socket or chamber, for the reception and molding therein of a balancing weight made of metal, usually lead. In golf-clubs as heretofore provided with such metal balancing weights, owing to the shrinkage of the wooden head, or due to the face of impact in striking the golf-ball, it is a fact that the frictionally held metal balancing weight is sufficiently loosened, so as to become disconnected from the head, and often becoming lost, whereby the golf-club is rendered useless, until the lost balancing weight is replaced with a new weight.

In the present case, the head or striking end 1 of the golf-club is made with an arc-shaped receiving socket or chamber, preferably of much greater width at the back 3 of said head or striking-end, than at the

arc-portion of the socket or chamber extending from said back to within the body of the said head or striking-end.

In practice, this arc-shaped receiving socket or chamber is cut into the body of the said head or striking-end 1, by means of a circular milling tool 4, as indicated in dotted outline in Figure 2 of the drawings, the milling tool or cutter being made in such a manner that the surface portions of the receiving socket or chamber will be provided with a series of alternating arc-shaped grooved or depressed portions 5 and ribs 6. At the arc-portion of the socket or chamber there is provided by means of a drill, or in any other suitable manner, suitably disposed receiving depressions or sockets, as 7. This having been accomplished, the metal balancing weight is produced by pouring molten metal, as lead, into the main receiving socket or chamber of the head or striking-end 1, the metal solidifying therein, and providing a balancing weight 8, of the configuration shown in said Figure 4 of the drawings, said weight being formed with alternating arc-shaped ribs 9 and depressions or grooves 10, in retaining registration with the respective arc-shaped grooves or depressions 5 and with the ribs 6 within the head or striking-end 1, and being further provided with circumferentially extending lugs or projections, as 11, in retaining registration with the previously mentioned receiving depressions or sockets 7, all of which will be fully evident from an inspection of Figures 1, 2 and 3 of the drawings.

From the foregoing description of the present invention it will be clearly seen that I have produced a novel and simple means for permanently securing a metal balancing weight within the weight-receiving socket or chamber in the body of the head or striking-end of a golf-club, the engaging ribs and depressions or grooves of the respective members preventing any direct outward displacement of the balancing weight from within the head or striking-end 1, and the lugs or projections in engagement with the receiving depressions or sockets 7 preventing any rotary displacement from within the main receiving chamber or socket of the head or striking-end 1, whereby the balancing weight is doubly locked in its fixed position within the head or striking-end of the golf-club, as will be clearly evident.

Of course I am aware that some changes may be made in the general arrangements and combinations of the several devices and parts, as well as in the details of the construction of the said parts, without departing from the scope of the present invention as set forth in the foregoing specification, and as defined in the clauses of the claims which are appended thereto. Hence, I do not limit my present invention to the exact

arrangements and combinations of the several devices and parts as described in the said specification, nor do I confine myself to the exact details of the construction of the said parts, as illustrated in the accompanying drawings.

I claim:—

1. A golf-club comprising a striking-head provided with a receiving chamber, a balancing weight fitted in said chamber, means connected with the side-surfaces of said balancing weight and cooperating with the walls of said chamber to prevent the withdrawal of said weight directly from said head, and means extending from a marginal portion of said weight and in engagement with other portions of said head to prevent rotary movement of said weight within the chamber of said head.

2. A golf-club comprising a striking-head provided with a receiving chamber and receiving sockets, a balancing weight fitted in said chamber, means connected with the side-surfaces of said balancing weight and cooperating with the walls of said chamber to prevent the withdrawal of said weight directly from said head, and retaining lugs extending from a marginal portion of said weight in engagement with the receiving sockets of said head to prevent rotary movement of said weight within the chamber of said head.

3. A golf-club comprising a striking-head provided with a receiving chamber, the walls of said chamber being formed with alternating channels and ribs, a balancing weight within said chamber, the side-surfaces of said weight being formed with alternating ribs and channels in retaining registration with the alternating channels and the ribs of the walls of the chamber in said striking head.

4. A golf-club comprising a striking-head provided with an arc-shaped receiving chamber, the walls of said chamber being provided with alternating arc-shaped channels and ribs, and a balancing weight within said chamber, the side-surfaces of said weight being formed with alternating arc-shaped ribs and channels in retaining registration with the alternating channels and ribs of the walls of the chamber in said striking-head.

5. A golf-club comprising a striking-head provided with an arc-shaped receiving chamber, the walls of said chamber being provided with alternating arc-shaped channels and ribs, a balancing weight within said chamber, the side-surfaces of said weight being formed with alternating arc-shaped ribs and channels in retaining registration with the alternating channels and ribs of the walls of the chamber in said striking-head, and means extending from the marginal edge of said

weight and in engagement with other portions of said head to prevent rotary movement of said weight within the chamber of said head.

5 6. A golf-club comprising a striking-head provided with an arc-shaped receiving chamber and receiving sockets, the walls of said chamber being formed with alternating arc-shaped channels and ribs, a balancing weight
10 within said chamber, the side-surfaces of said weight being formed with alternating arc-shaped ribs and channels in retaining registration with the alternating channels and ribs of the walls of the chamber in said
15 head, and retaining lugs extending from a marginal portion of said weight to prevent rotary movement of said weight within the chamber of said head.

7. A golf-club comprising a striking-head provided with a receiving chamber and receiving sockets, a balancing-weight within
20 said chamber, retaining lugs extending from said weight and into retaining engagement with said receiving sockets, and retaining means connected with the side-surfaces of
25 said balancing weight, said retaining means being in retaining engagement with the walls of said chamber.

In testimony, that I claim the invention set forth above I have hereunto set my hand
30 this 17th day of January, 1922.

ARTHUR A. KRAEUTER.

Witnesses:

LOUISE SZAUCH,
C. W. HILLS.