May 10, 1966 R. C. MOSER 3,250,536

GOLF CLUB HEAD

Filed March 21, 1963

Fig. 1

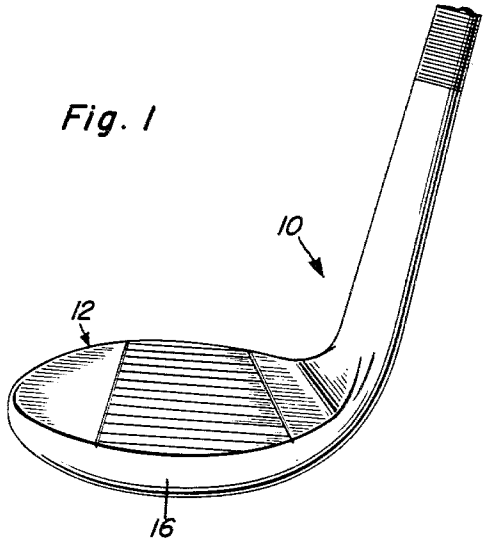


Fig. 2

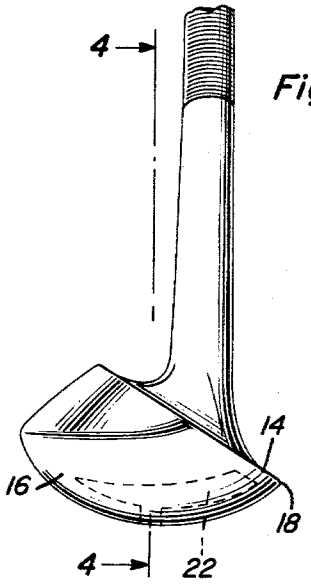


Fig. 3

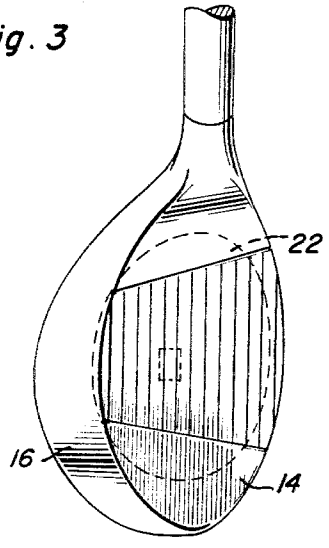
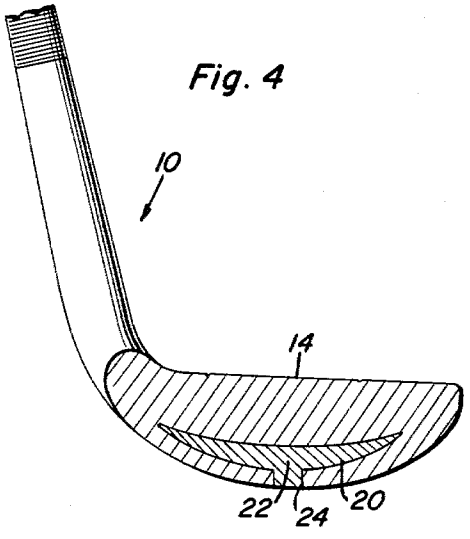


Fig. 4



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GOLF CLUB HEAD

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This invention primarily relates to a new type of golf club head, particularly a head to be used as a sand iron, and also relates to the method of forming said head and insuring proper balance thereof.

Accordingly, it is a primary object of this invention to provide a novel golf club head, the shape of which is so designed so as to prevent and render self-rectifying many mistakes one would commonly make in swinging a golf club to meet a golf ball.

Another object of this invention is to provide a golf club of the character indicated which is balanced by employing a novel process wherein a heavier metal is adapted to be inserted into the base club head metal to produce a low center of gravity. Alternatively, the desired club head weight may also be obtained by the blending or mixing of different metals having different specific weights in forming the club head.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a side view in elevation illustrating the principles of this invention as applied to a sand iron or wedge.

FIGURE 2 is a front view in elevation of the sand wedge illustrated in FIGURE 1.

FIGURE 3 is a plan view of the sand wedge shown in FIGURE 1 and further illustrating the curvature of the elements of the golf club head thereof.

FIGURE 4 is a partial sectional view taken substantially along line 4—4 of FIGURE 2 and illustrating the novel weight balancing principle utilized in the present invention.

Referring now to the drawings, and the embodiment of the invention depicted in FIGURES 1 to 4, the principles of this invention are shown applied to the club head of a sand wedge generally designated by the numeral **10**. The wedge **10** has a club head generally designated by the numeral **12** comprising a face **14** and a flange **16**. As known to golfers, a sand wedge is so designed so that when swung it will not contact the golf ball but instead will contact the sand in the sand trap immediately behind the ball whereby an explosion of sand is induced which will carry the ball out of the sand trap. The club head shown is so designed and shaped as to effect that purpose. More specifically, the curved leading edge **18** creates a gradual increase in resistance to digging in in fluffy sand while permitting a cutting entry into wet and packed sand. It should be noted in this respect that a conventional sand wedge has a straight face whereby it is difficult to use in wet packed sand. Also, the full flange **16** prevents the aforementioned digging in in soft sand and creates a floating action through said sand. It should also be noted that the face may be hooded, that is the front edge **18** of the club head may be angled so as to contact the sand by a forward press action on the part of the golfer making the club effective in wet packed sand or if so utilized in buried lies. The aforementioned increased resistance to digging in will insure that a proper amount of sand is exploded to carry the ball forward.

The club head of the instant invention is usually formed of aluminum and is cast in such a manner that

a slab of material or a shoe may be totally enclosed and cast inside of the club head. This material would be of a heavier specific weight, such as brass or the like and will be so cast so as to locate the center of gravity of the golf club in such a manner that if the club is used correctly the maximum effect of the club head will be obtained when the club head attacks the ball. That is, the club is so balanced so that the aforementioned advantages obtained by the shape of the club head can be given effect if the club is used correctly. To this end, the aluminum head is usually cast so that a void such as **20** is formed therein. The void in said casting is then filled with the suitable material to give the club head the requisite balanced effect. Such a shoe or insert is shown at **22** and is poured into the void **20** through an opening such as **24** left in the casting. As before noted, the void **20** is so engineered to assume the correct shape depending on the specific weight of the material used to effect the balancing process. It should be noted, that alternatively the head may be cast in one piece out of any suitable alloying of metals which would give the requisite balance to the particular configuration of the golf head used. Such alloys may include aluminum blended with beryllium, copper, zinc, or lead in the correct proportions. It should also be evident that the size of the shoe and material used in combination with the club material can be so ratioed so as to obtain any swing weight desired. The fabrication of the clubhead may still be made by another process. For example, the invention further contemplates that a brass casting of a predetermined weight and size with a stem formed thereon may be clamped into the aluminum mold. The aluminum then could be injected around the brass and thereafter the stem may be clipped off flush with the bottom of the aluminum casting to thereby obtain the resultant structure shown in the drawings.

It will thus be appreciated that a novel golf club head has been provided which removes many of the difficulties encountered with conventional golf clubs and which allows for more enjoyment for the golf player.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In a golfing iron, a club head made entirely of metal, said head including an elongated flat forward face, an enlarged solid body rearward of the face, said solid body defining a toe end and a heel end, said face having arcuate upper and lower edges meeting at the toe end and substantially meeting at the heel end so as to define an approximately oval shaped elongated face with the longer dimention substantially horizontal, a shaft receiving shank fixed to and projecting vertically at an angle from the heel end of the club head, said body having a bottom surface, said forward face, upon a positioning of the shank in a substantially vertical plane, having a lower edge portion thereof positioned laterally outward to one side of the vertical plane of the shank, and an upper edge portion positioned laterally outward to the other side of the vertical plane of the shank, the forward face of the head defining a sharp angle with the forward portion of the bottom surface at the arcuate lower edge of the face in the manner of a sand wedge, said bottom surface being downwardly convex from the plane of the lower edge of the face and following a continuously curving path from

the lower edge of the face laterally therefrom to a point rearward of the upper edge of the forward face, the lowest point of the convex bottom surface lying substantially below the point of intersection of the forward portion of the bottom surface with the lower edge of the face, and substantially to the rear thereof, and a top surface on said body extending rearwardly from the upper edge of the face to said bottom surface, said body surfaces both being transversely curved generally along the radius of curvature of the arcuate upper and lower edges of the face, said upper face edge, when viewing the club head from the face thereof and generally perpendicular to said vertical plane, defining the upper limit of the body.

2. The device of claim **1** including a weighted insert of metal heavier than the metal of the major portion of the head, said insert being completely embedded in the body substantially completely below the mid-height of the head.

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