

[54] **GOLF CLUB FOR HAZARD SURFACES**
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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 167,348, July 29, 1971, abandoned.

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 [58] Field of Search 273/77 R, 163 R, 164, 273/167-175, 186 A, 193 R, 193 A, 194 R, 194 A

[57] **ABSTRACT**

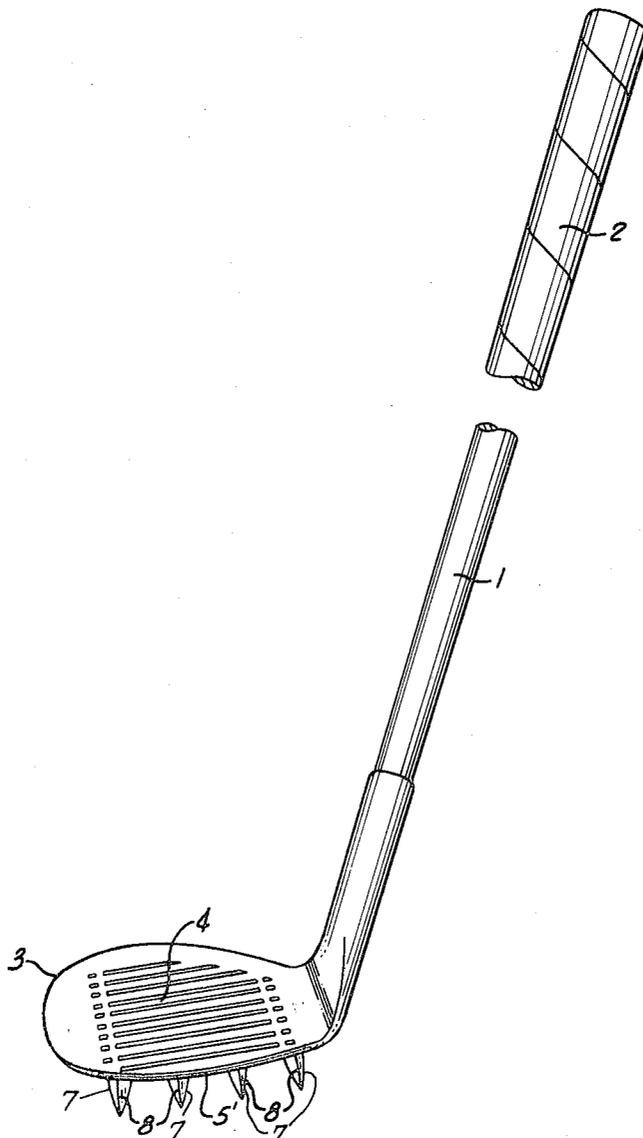
A golf club for use on hazard surfaces such as sand, in the rough, or shallow water wherein fins positioned transverse to the face of the club head are secured to the bottom of the club head for engagement with the hazard surface when the golf club is swung to assist in consistently stabilizing the forward guiding of the club head in the direction swung once it has engaged the hazard surface.

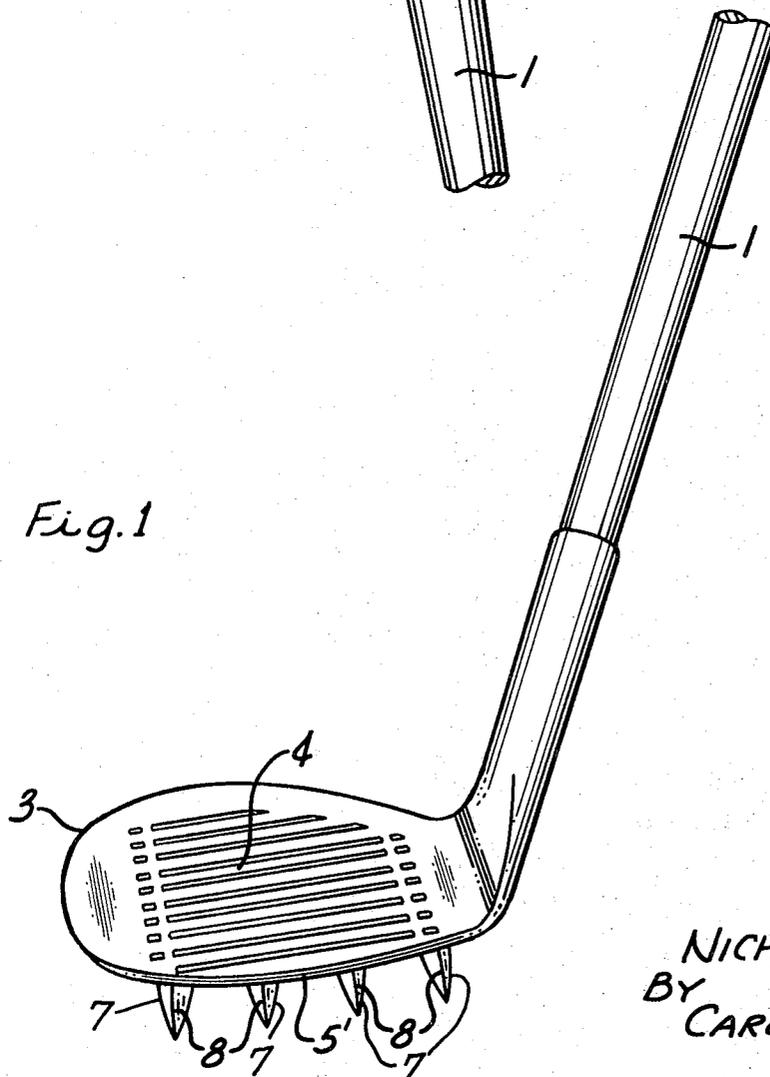
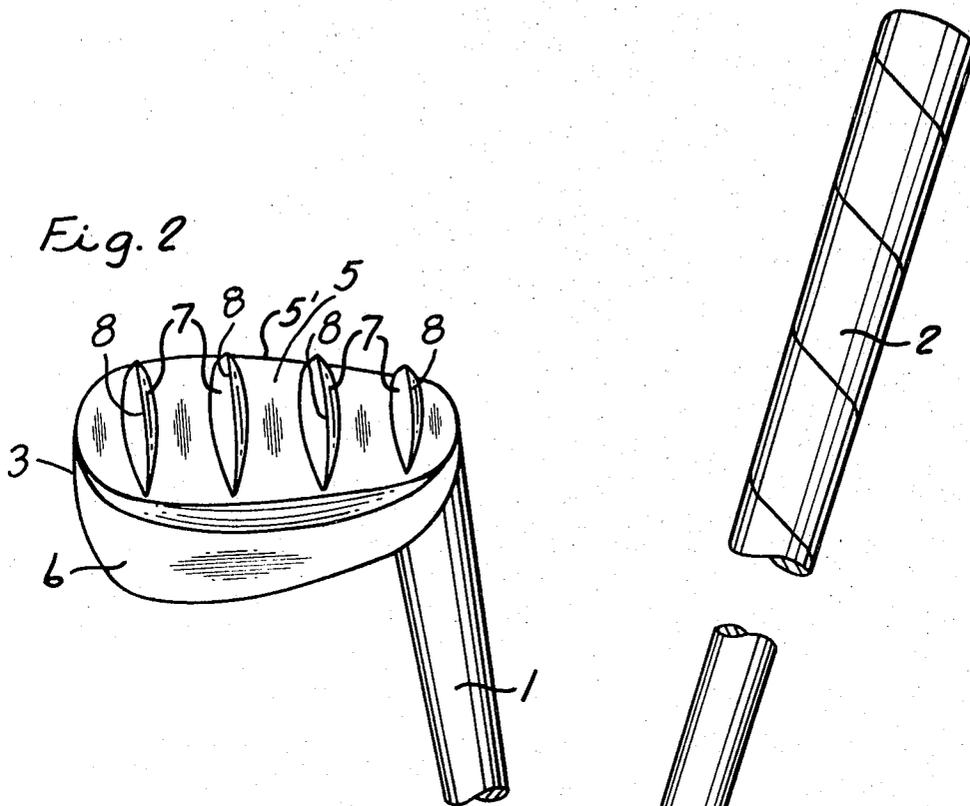
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3 Claims, 4 Drawing Figures





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Fig. 3

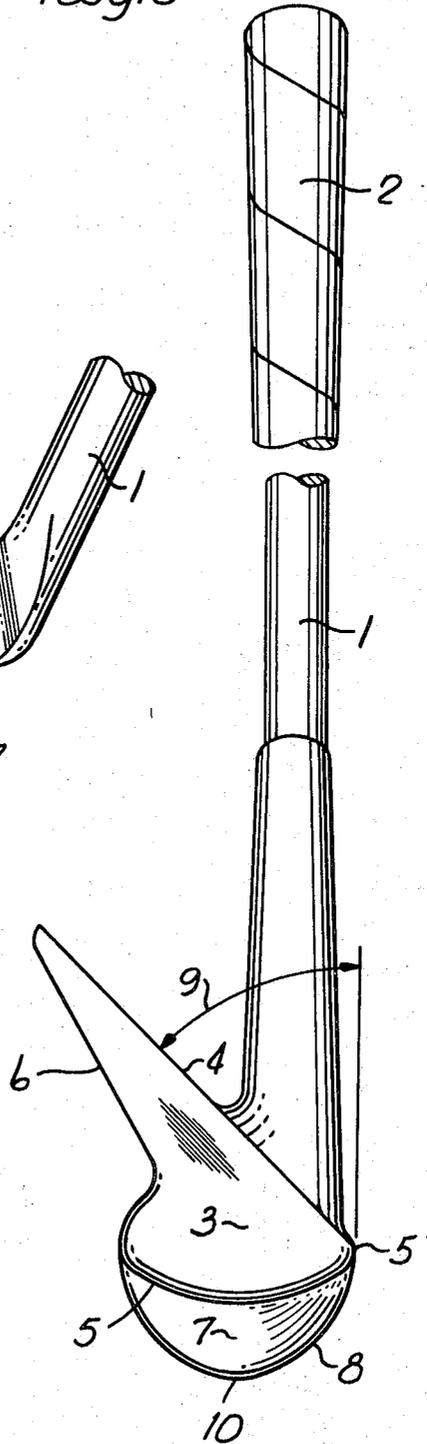
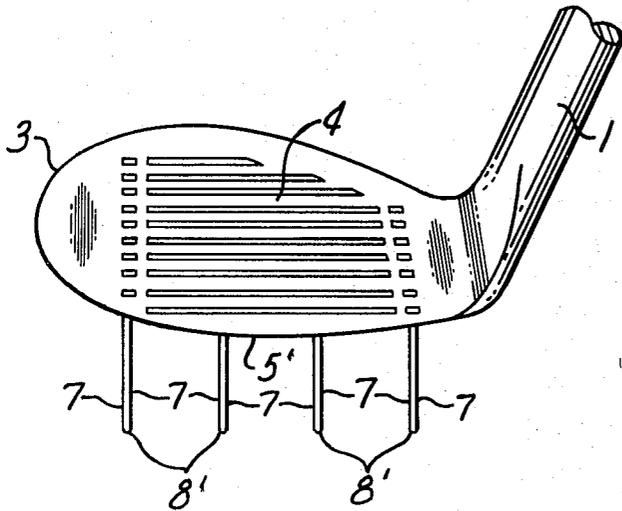


Fig. 4



GOLF CLUB FOR HAZARD SURFACES

CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of application Ser. No. 167,348 filed July 29, 1971, now abandoned.

BACKGROUND OF THE INVENTION

1. Field of Invention

This invention relates generally to golf clubs and more particularly to golf club irons for use on hazard surfaces such as found in sand traps or in shallow water.

2. Description of the Prior Art

In the game of golf, one commonly uses a sand wedge or a pitching wedge in order to dislodge the ball from hazard playing surfaces such as sand, shallow water, or any loose soil condition. Under such conditions, the player must get the bottom leading edge of the face of the golf club head down into the hazard surface before engaging the ball in order to lift the same upward and pitch it out of the hazard area with a "blasting" technique. A common problem or fault occurs when doing so in that when the golf club head engages the hazard surface, it does not always do so uniformly across the golf club head. The result is that the club head is deflected such that the face of the club is no longer transverse to the swing path of the club head when it engages the ball. Accordingly, the ball is deflected either to the right or to the left of the intended path of movement. Also, the club head is commonly deflected either up or down upon engagement with the hazard surface in addition to the undesirable lateral deflection. When this occurs, the ball will accordingly be undesirably deflected up or down.

The conventional sand wedge requires the use of difficult "blasting" techniques, and accordingly, there is a large present need for a golf club which will permit the use of simpler "pitching" or "chipping" techniques to remove a golf ball from a hazard surface such as a sand trap with resultant greater control and accuracy. The golf club of the present invention solves this problem and provides such a hazard surface club not heretofore available anywhere on the market.

SUMMARY OF THE INVENTION

The principle object of the present invention is to provide means to assist in overcoming the tendency of the club head to deflect at an angle upon engagement with the hazard surface and means to allow the club face to engage the ball itself easily and without the necessity of a strong stroke.

The golf club of the present invention comprises a shaft having a hand grip at the top and a golf club head secured at the bottom of the shaft and is characterized by a guide means secured to the bottom of the club for penetration of hazard surface when the club is swung to assist in consistently guiding the club head in intended direction without deflection.

The guide means may comprise at least one stabilizing fin projecting downwardly from the bottom of the club head such that the fin is positioned in a plane which is substantially transverse to the plane of the club face which is intended to engage the ball.

In the preferred embodiment, the guide means consist of a plurality of fins positioned along the bottom of the club head at predetermined intervals.

These fins preferably have a single leading edge adjacent the bottom of the club face, which is sufficiently thin or sharp so that it will readily slice into the hazard surface. The fins are also sufficiently thin so that they will pass through the hazard surface with minimum resistance. Generally, when the fins are very thin, a larger number of stabilizing fins may be employed. When the fins are provided with some thickness, one generally uses fewer fins, such as, three or four, for example, and the sides are contoured to reduce surface drag or friction of the fins when passing through the hazard surface to a minimum.

It is also preferable that the single fin edges have a rounded perimetral contour extending downwardly and rearwardly from the bottom edge of the club face and in a direction transverse thereto so that it can readily slice the hazard surface which it engages.

The existing sand clubs or wedges today by necessity must have considerable weight in order to be effective to remove a ball from a sand trap by "blasting" techniques. The weight is necessary to move the sand, as well as the ball. However, the golf club of the present invention permits the golfer to use "pitching" or "chipping" techniques to hit the ball from the sand trap thereby permitting a much lighter golf club head with a resultant savings in the cost of manufacture. These savings thereby can then be passed on to the consumer in the purchase of a lighter less expensive hazard golf club.

Being able to employ "chipping" or "pitching" techniques in the sand trap, the golfer may now impart roll or back-spin to the ball as desired, which was heretofore not possible with conventional sand wedges.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects and advantages appear in the following description and claims.

The accompanying drawings show, for the purpose of exemplification without limiting the invention or the claims thereto, certain practical embodiments illustrating the principles of this invention wherein:

FIG. 1 is a view in front elevation of the golf club of the present invention.

FIG. 2 is an inverted perspective view of the golf club illustrated in FIG. 1 which shows the club upside down and exposes the bottom and rear side of the golf club.

FIG. 3 is a view in side elevation of the golf club illustrated in FIG. 1.

FIG. 4 is a view in front elevation of a modified embodiment of the golf club illustrated in FIG. 1.

Detailed Description of the Preferred Embodiment

Referring first to FIGS. 1, 2 and 3, the golf club of the present invention comprises the golf club shaft 1 having the hand grip 2 at the top thereof and the golf club head 3 secured to the bottom of the shaft. The golf club head 3 is provided with face 4 for engagement with a golf ball, a sole 5, a bottom leading edge 5, and back 6.

As will be noted in FIG. 2, the lower portion of the golf club head 3 is weighted in the typical fashion for such irons in playing golf.

The sole 5 is slightly contoured with an arcuate surface in a direction transverse to the face 4.

Rigidly secured to the golf club head 3 and integrally cast therewith or otherwise secured thereto are the stabilizing fins 7. The preferred embodiment illustrated is provided with four fins, however, any number of fins may be provided. In fact, a single fin will effect the principles of the present invention by slicing into the hazard surface. The single fin embedded and moving through the hazard surface will have a tendency to move in a straight line due to the resistance of its lateral faces against the loose surface in which it is embedded.

The fins illustrated are each provided with side surfaces having bottom portions converging to form a single sharp leading knife-like edge 8 which will readily slice the hazard surface. Fins 7 are also provided with convex sharp perimetral edges at least from the leading edge 5' to the midway point 10 of maximum downward extension, which is approximately in the middle of the club head 3 as viewed from the side as indicated best in FIG. 3, to provide good slicing action thereof into the hazard surface.

Fins 7 may either be welded to the head 3 or integrally cast therewith and as previously noted, they may also be very thin, or thick as shown, thereby permitting regulation of the friction or resistance of the fins while slicing through the loose surface. This also accordingly permits regulation of the type of stabilization desired for each particular different type hazard surface to be played. The fins illustrated also have contoured sides to minimize surface resistance when the fins are slicing through a hazard surface.

In the claims and specification, the term "golf club iron" is used to denote an iron as opposed to a wood, and the term is not used to designate any particular material of which the club head is to be constructed.

From the figures, it can be seen that each of the guide fins 7 project downwardly from the bottom of the club head 3 below the bottom leading edge 5 of the face 4 and they are further positioned in a plane which is substantially transverse to the plane of said face 4.

Each fin has a single forwardly exposed and sharply defined edge 8. The forward exposure thereof may be most readily seen in FIG. 1. These sharply defined edges 8 are centered with respect to the fins 7 and define a perimetral bottom edge for each fin which runs simultaneously downward and backward from the sole 5 of said face 4 as is best seen in FIG. 3, thereby forming a crescent-shaped fin.

The fins are sufficiently thin and of sufficient depth below the bottom of the club head 3 and face 4 to pass through a golf course hazard surface with minimal resistance. Note the fins 7 disclosed are contoured or of a boat-shape or tapered configuration and that the bottom perimetral edges of the fins are sufficiently sharp to permit slicing penetration of the fins into the sand or hazard surface as a knife blade might.

The fins 7 may, as an alternative, be constructed of thin but strong metal, which may be integrally molded from the club head or attached to the club head as shown in FIG. 4.

When thin metal fins are used in substitution of those disclosed, they are provided with the same general side configuration as noted in Fig. 3. However, when the metal fins are viewed from the front, they, of course, will not appear to be as wide as the fins 7 illustrated in FIG. 1. When viewed from the front as in FIG. 1, only the thin, forwardly exposed edges 8' will be seen ex-

tending downwardly from the bottom leading edge 5' of the club head 3.

When thin metal fins are employed, the bottom perimetral leading exposed edge 8' of the metal fin itself is sufficiently thin to render it sharp enough to permit knife-like slicing penetration into the hazard surface.

At least the forwardly exposed portion of edge 8' must be sufficiently thin to permit it to cut and penetrate into the hazard surface with a knife-like cutting action when the club is swung to engage the forwardly exposed edge with the hazard surface. The thin edges 8' illustrated in FIG. 4 are sufficiently thin to accomplish this.

The golf club iron of the present invention generally has a loft angle 9 as indicated in FIG. 3 which is greater than 20°, as the golf ball is generally "pitched" out of the hazard area close to the green, as opposed to being "driven." However, a loft angle of less than 20° obviously may be employed facilitating the driving of the golf ball out of a hazard area which is at a considerable distance from the green, such as from fairway traps.

The average amateur golfer can readily "pitch" and "chip" the golf ball with an iron. However, the normal amateur is not skilled at "blasting" a golf ball from a hazard surface such as a sand trap. The "blasting" technique takes many months of experience for development, and it is thus not a reliable method for the amateur golfer for removing a ball from a sand trap. However, the structure of the present invention provides the average golfer with a method that is even more certain than blasting and requires much less experience and learning time.

The golf club of the present invention permits the bottom of the golf club head 3 to skim over the top or the hazard surface while the fins 7 slice therethrough, no matter whether the hazard surface is even or uneven, and fins 7 maintain the face 4 of the golf club head at the desired angle throughout the entire swing, regardless of the irregularities of the hazard surface.

The golf club illustrated permits the golfer to "chip" or "pitch" his shot to the green from the sand trap without digging the leading bottom leading edge 5' into the sand or "blasting" prior to engagement with the ball, thereby permitting the golfer to use an easy "chipping" stroke with more resultant control as opposed to a hard "blasting" stroke, which causes some relinquishment of control.

An additional advantage provided by the golf club of the present invention is the fact that it greatly assists the golfer in the prevention of "topping" the ball when swinging the club to remove the ball from the hazard surface. With conventional weighted sand wedges, the amateur golfer commonly tops the ball, as the heavy weighted bottom of the club head bounces off the hazard surface just prior to engaging the ball. This bounce causes the club head to top the ball instead of having the bottom edge of the face digging in under the ball.

The club head of the present invention permits the club face 4 to get down to and engage the ball as the fins 7 readily penetrate the hazard surface without bouncing.

The guiding effect of the fins 7 is also effective in assisting the golfer in obtaining a proper follow-through in his stroke which is fundamentally necessary for an accurate trajectory of the ball. The conventional sand wedge resists a proper follow-through due to uneven

deflection of the club face when passing through the sand.

1. A golf club for use on hazard surfaces such as sand comprising, a shaft having hand grip means adjacent the top, a golf club head secured to the bottom of said shaft, said head having a front face for engagement with a golf ball and a sole surface, said front face and said sole surface meeting to define a bottom leading edge, at least one guide fin projecting downwardly from said sole surface and from said leading edge and positioned in a plane substantially transverse to the plane of said face, said fin having side surfaces with at least

bottom portions thereof converging to form a single sharply defined forwardly exposed and centered peripheral bottom knife-like edge running simultaneously downwardly and rearwardly from said leading edge to a midway point of maximum extension of said fin below said sole surface thereby forming a sharp convex shaped bottom edge as viewed from a side view.

2. The golf club of claim 1 characterized by a spaced plurality of said fin.

3. The golf club of claim 1 wherein said fin is crescent shaped as viewed from a side view.

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