

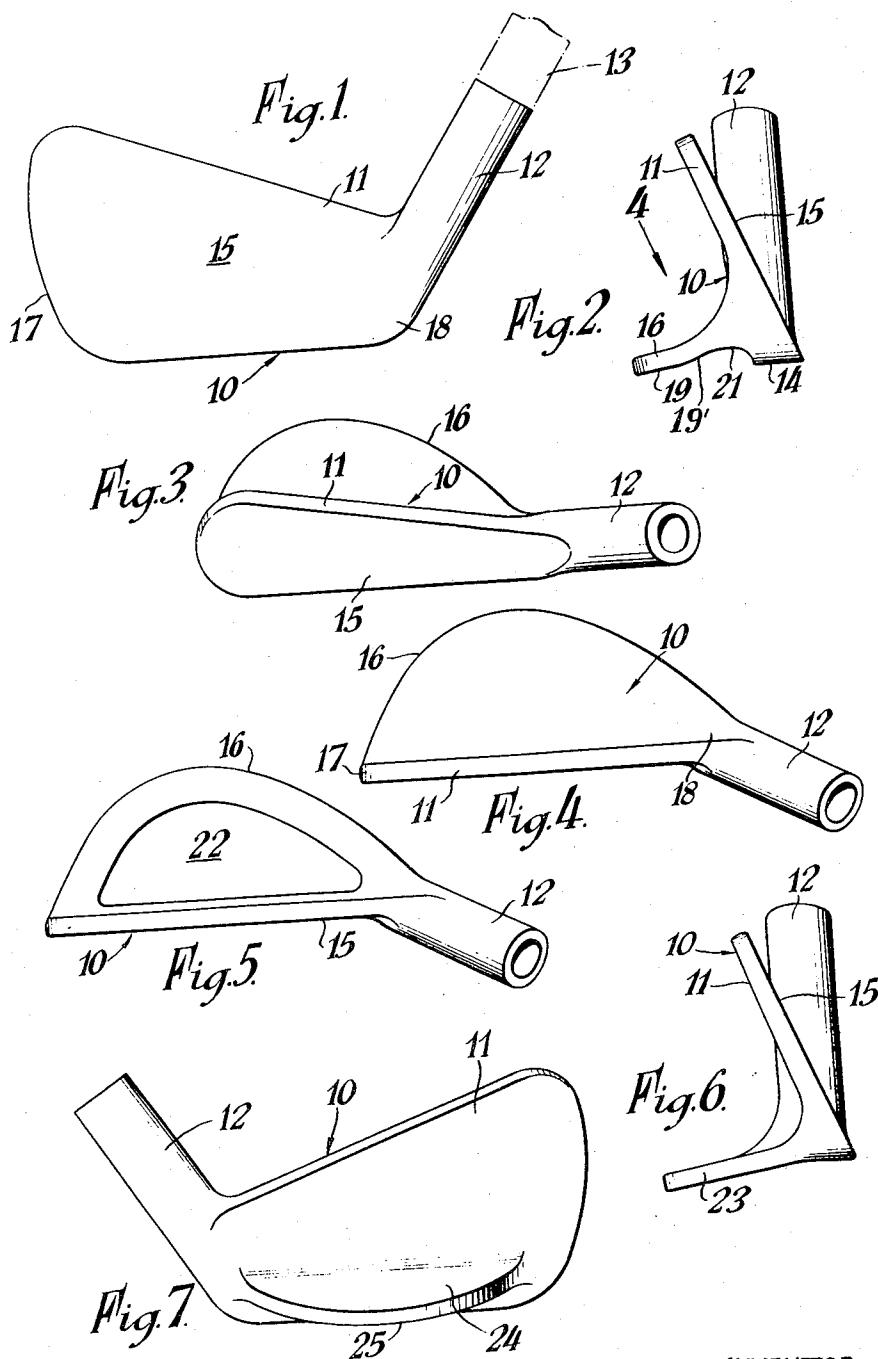
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DIVOT PREVENTING GOLF CLUB HEAD

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DIVOT PREVENTING GOLF CLUB HEAD

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This invention relates to golf clubs, and more particularly to heads for golf clubs, of the kind which are substantially in the form of flat plates, usually of metal, an example of such a club being that generally known as an "iron."

The object of the invention is to provide a golf club head of the kind referred to which greatly reduces the risk of creating a divot prior to striking the ball and imposing the divot between the golf club head and the ball, so that the effort exerted is more effectively used to drive the ball.

Golf clubs of this type usually have a sole about half an inch wide which is presented to the ground when addressing the ball, this sole usually meeting the striking face of the club with a relatively sharp edge. It will be readily understood that extreme accuracy is required when swinging the club to ensure that the striking face of the club strikes the ball below its equator before the sole of the club strikes the ground, only professional players and low handicap players being able consistently to achieve this result. Players with handicaps of 10 and above very frequently swing their clubs in such a manner that the sole strikes the ground about an inch behind the ball, thus starting a divot which covers the face of the club at the moment of impact and results in what is generally known as a "fluffed" shot.

Attempts have been made to overcome this difficulty by rounding the sole of the club and so reducing the tendency for it to "dig in" to the ground, but the weight limitations imposed made it impossible to increase the width of the sole, and the rounding was not sufficient to prevent "digging in" if the club was swung with sufficient force for a satisfactory shot, whereas the club tended to bounce off the ground if weakly played.

The present invention provides a golf club head which avoids these difficulties and yet remains within the required weight limits.

According to the invention, in a golf club head of the kind comprising a substantially flat metal plate, there is provided, extending from the rear face of the said head, a projection including a ground-engaging portion spaced from the rear surface of the head.

The projection may be so formed as to provide a groove or recess between the lower edge of the club head and the ground-engaging portion of said projection.

A portion of the ground-engaging portion of the projection may be convexly curved in a direction substantially parallel to the direction of movement of the head when striking a ball.

The projection conveniently comprises a transverse web extending rearwardly from the rear face of the club head.

The invention is hereinafter described with reference to the accompanying drawings, in which:

FIGURE 1 is a front elevation of one form of golf club head according to the invention;

FIGURE 2 is an end view of the golf club head shown in FIGURE 1, looking from the toe end;

FIGURE 3 is a plan view;

FIGURE 4 is a view in the direction of the arrow 4 in FIGURE 2;

FIGURE 5 is a view similar to FIGURE 4 showing a modification;

FIGURE 6 is a view similar to FIGURE 2 showing another modification; and

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FIGURE 7 is a rear view of a golf club head showing another modification.

Referring to the drawings, and more particularly to FIGURES 1 to 4 thereof, the club head 10 comprises a metal forging or casting consisting of a substantially flat plate 11 and a tubular shank 12 to receive a shaft 13, the plate 11 having the usual flat sole 14 which is about half an inch thick from front to back, and meets the striking face 15 in a relatively sharp edge. The striking face 15 is so related to the shank 12 that it slopes upwardly and rearwardly when the sole 14 is parallel to the ground and the shaft 13 is held in a vertical plane. A projection in the form of a transverse web 16 extends rearwardly from the rear face of the club head, being joined thereto along a line somewhat above the sole 14. The web 16, as shown in FIGURE 4, extends from the toe 17 to the heel 18 of the club head, its rear edge being rounded so that it has its greatest width at about the middle of the length of the club head.

The web 16 presents itself to the ground with substantial negative back rake. The lowest portion of the web, i.e., the ground-engaging portion 19, is spaced from the sole 14 of the club to provide a groove or recess 21 on the underside of the web 16. The underside 19' of the portion of web 16 between ground-engaging portion 19 and groove or recess 21 is slightly convex.

The upper portion of the plate 11 may be substantially thinner than the sole 14. The line along which the web 16 is joined to the plate 11 is preferably such that it intersects or does not lie substantially above the point at which the club should strike a ball, so that the centre of gravity of the web is not above the said point.

The web 16 is preferably capable of being bent to adjust the position of its ground-engaging portion relative to the sole 14 of the club head so that, with the sole of the club horizontal and the shaft of the club in a vertical plane, the ground-engaging portion is slightly below (see FIG. 6), level with (see FIG. 2), or slightly above the plane of the sole (not shown).

Provided that the projection is suitably set for the user, the ground-engaging portion thereof is the lowest portion of the club when the latter reaches the lowest point of its swing, and therefore, if the club touches the ground the contact is made by the said ground-engaging portion and not by the sole of the club. Any divot which is formed is thus received in the groove or recess 21, and not on the striking face of the club head, so that it does not affect the shot.

One or more openings may be formed in the web 16, a single opening being shown at 22 in FIGURE 5, thereby reducing its weight.

The web, instead of being attached to the plate 11 above the sole, may be attached to the said plate at its lower edge so that it forms a rearward continuation of the sole surface, and the club head, in cross-section, has substantially the shape of a letter L. The web may form an obtuse or an acute angle with the plate 11, and may be bendable to vary its effective angle to the said plate. This arrangement is shown in FIGURE 6, the web 23 being flat.

As shown in FIGURE 7, the web, indicated by the reference 24 may be curved in the direction from the toe to the heel of the club head, so as to provide a ground engaging portion 25 only at approximately the centre of the length of the club head.

The web, instead of being forged integral with the club head, may be formed separately and brazed or otherwise secured thereto. The projection, instead of being a web, may be in the form of a bar connected to the plate portion of the club head by one or more connecting rods or like members. The web, when formed separate from

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the plate portion of the club head may be made of stiff flexible material, and such a web may be secured to an existing club head not specifically designed to receive it.

Whilst golf club heads of the kind referred to are usually made of metal, it will be understood that a similar club might be made of a plastic material and, although a club made of that material could, within the required weight limits, be provided with a substantially wider sole, a rearward projection according to the present invention might also be provided.

The projection or web, instead of being shaped so as to provide negative back rake on its undersurface, may provide neutral and/or positive back rake, which may be desirable on golf courses where the ground is very hard.

I claim:

1. A golf club head comprising a substantially flat surface constituting a striking face, a rear face, a heel, and a toe, a lower edge to said striking face, a downwardly facing surface extending rearwardly from said rear face and comprising a ground engaging surface behind and spaced from the lower edge of the striking face, and a groove in said downwardly facing surface parallel to and immediately behind said lower edge of the striking face.

2. A golf club head according to claim 1, wherein a portion of the downwardly facing surface immediately adjacent said groove is slightly convexly curved in a direc-

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tion substantially parallel to the direction of movement of the head when striking a ball.

3. A golf club head according to claim 1, wherein the downwardly facing surface is formed on a transverse web extending rearwardly from the rear face of the club head.

4. A golf club head according to claim 3, wherein the web is formed with an opening between the rear face and the ground-engaging surface.

5. A golf club head according to claim 3, wherein the web is curved in the direction from the heel to the toe of the club so that it is convex on its rear edge and locates the ground engaging surface substantially midway between the heel and toe of the club.

6. A golf club head according to claim 3, wherein the web is capable of being bent to adjust the vertical position of its ground-engaging surface relative to the lower edge of the head.

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