

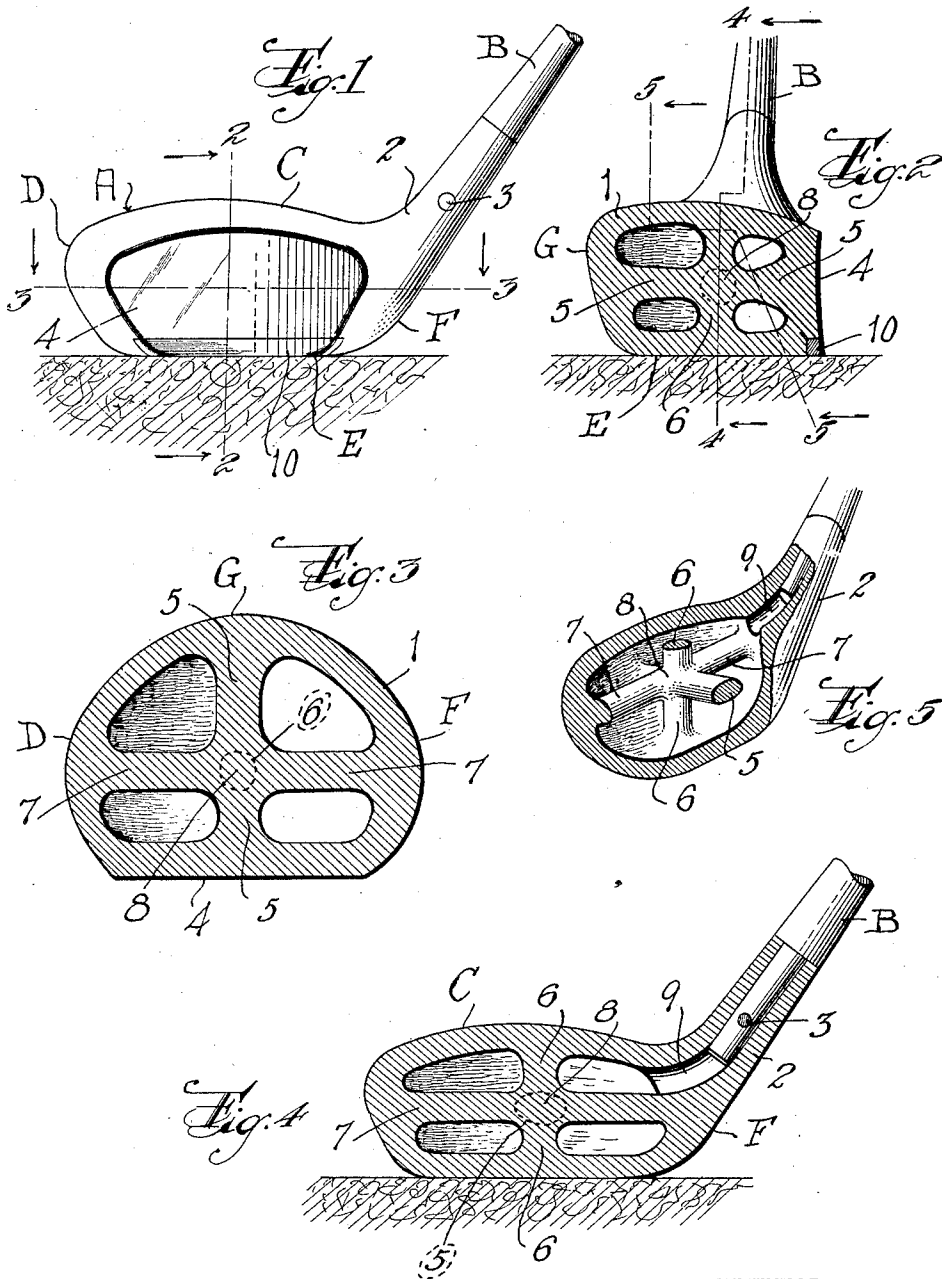
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METALLIC GOLF CLUB HEAD

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METALLIC GOLF-CLUB HEAD.

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This invention relates in general to golf clubs and more particularly to a one-piece metallic head for golf drivers and like clubs.

One object of the invention is to provide a metallic golf club head which is substantially hollow and cast of aluminum alloy or other suitable metal, and which is provided with interior integral reinforcements which serve both as balancing weights for the head and to prevent collapse or warping of the head as the result of use.

Other objects are to provide a metallic golf club head of the character described which has a plurality of integral and intersecting reinforcing struts or webs extending in a plurality of directions, certain of said struts serving to reinforce the striking face of the head and others of the struts reinforcing the head vertically and longitudinally thereof, said struts meeting and intersecting at substantially the center of gravity of the head so as to provide for proper balance and to enable the maximum and desired character of blow to be applied to the golf ball; to provide such a golf club head which can be simply cast or moulded and the core withdrawn without difficulty, and to obtain other advantages and results as will be brought out in the following description.

Referring to the accompanying drawings, in which corresponding and like parts are designated throughout the several views by the same reference characters,

Figure 1 is an elevation of a golf club embodying my invention, viewing the same from the striking face thereof;

Figure 2 is a transverse vertical sectional view, taken on the line 2—2 of Figure 1;

Figure 3 is a horizontal sectional view, taken on the line 3—3 of Figure 1;

Figure 4 is a longitudinal vertical sectional view, taken on the line 4—4 of Figure 2, and

Figure 5 is a sectional perspective view, taken on the line 5—5 of Figure 2.

Specifically describing the illustrated embodiment of the invention, the reference character A designates a golf club head which comprises a one-piece shell 1 which is cast of aluminum alloy or other suitable metals in the shape and of the size desired. The head A is provided with an integral tubular neck 2 into which is fitted the shaft B of the club which may be secured to the

head by suitable means such as the pin 3. The club head has the usual top portion C, toe portion D, sole or bottom portion E, heel F and rear portion G. The shell 1 is hollow except for integral reinforcements about to be described, and has at the front side thereof a striking face 4.

The wall of the shell forming the striking face preferably is of a thickness corresponding to the thickness of the other walls of the shell, as shown in Figure 3 of the drawings, and is reinforced interiorly of the shell by a transverse strut 5 formed integral with the shell 1 and with its axis disposed at substantially right angles to the plane of the striking face 4 and centrally thereof. Such a strut is preferably circular or elliptical and larger in cross-section than the shell 1 so as to effectively reinforce the striking face and to serve as a balancing weight for the head. The head is reinforced against warping or collapsing in directions between the sole and top portion as might be incident to use of the club, by a strut 6 which merges into the strut 5 intermediate their ends and at substantially the center of gravity of the head A, and is integral with the strut 5 and the shell 1. For reinforcing the head longitudinally between the toe and heel a longitudinal strut 7 is provided which intersects and merges into the struts 5 and 6 and is formed integral therewith. The struts 5, 6 and 7 are disposed at substantially right angles to each other and at their point of merging or intersection form a large mass of metal 8 which is substantially at the center of gravity of the head and in spaced relation to all points in the shell. A very desirable weight and balance of the head is thus obtained, and at the same time the mass of the metal is so related to the striking face that a blow resulting in a long and accurate drive may be struck.

It will be observed that in this construction all portions of the interior of the shell 1 communicate with each other and there are no closed pockets or corners. The passage 9 through the tubular neck 2 communicates with the interior of the shell, as clearly shown in Figures 4 and 5, and accordingly a core for casting the head may be easily withdrawn from the interior of the shell through the passage 9. Casting of the head is therefore extremely simple and

practical, and obviously the sizes and proportions of the struts 5, 6 and 7 may be readily varied.

5 Preferably a toe-strip 10 of steel is embedded at the corner formed by the intersection of the striking face 4 with the bottom side of the club, as clearly shown in Figures 1 and 2, said strip assuming the wear incident to the head striking the earth and thereby reinforcing the striking face.

10 It will be understood that while the illustrated and described embodiment of the invention is the now preferred form, the details of construction of the head may be modified or changed by those skilled in the art without departing from the spirit or scope of the invention. Therefore, I do not desire to be understood as limiting myself except as required by the following claims

20 when construed in the light of the prior art.

Having thus described the invention, what I claim is:

1. A metallic golf club head comprising a shell having a striking face portion, a rear portion, a sole portion, a top portion, a toe portion and a heel portion, a strut interposed between said striking face portion and said rear portion, a second strut interposed between said top portion and said sole portion, and a third strut interposed between said toe portion and said heel portion.

2. A metallic golf club head comprising a shell having a striking face portion, a rear portion, a sole portion, a top portion, a toe portion and a heel portion, a strut interposed between said striking face portion and said rear portion, a second strut interposed between said top portion and said sole portion, and a third strut interposed between said toe portion and said heel portion, said struts being integral with each other and said shell.

3. A metallic golf club head comprising a shell having a striking face portion, a rear portion, a sole portion and a top portion, a strut interposed between said striking face portion and said rear portion, and a second strut interposed between said top portion and said sole portion, said struts being in spaced relation to all walls of said shell except those between which the struts are interposed.

4. A metallic golf club head comprising a shell having a striking face portion, a rear portion, a sole portion and a top portion, a strut interposed between said striking face portion and said rear portion, and a second strut interposed between said top portion and said sole portion, said struts integrally merging into each other at a point in spaced relation to all walls of said shell.

5. A metallic golf club head comprising a one-piece cast metal shell having a plurality of integral angularly disposed struts between the walls thereof and in spaced relation to all of said walls except those between which the respective struts are interposed, and merging integrally into each other at substantially the center of gravity of said head.

6. A metallic golf club head comprising a shell having a striking face portion, a rear portion, a sole portion and a top portion, a strut interposed between said striking face portion and said rear portion, and a second strut interposed between said top portion and said sole portion, said struts being in spaced relation to all walls of said shell except those between which the struts are interposed, said shell also having an integral tubular neck portion the passage through which communicates with the interior of said shell.

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