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W. B. PEDERSEN

GOLF CLUB

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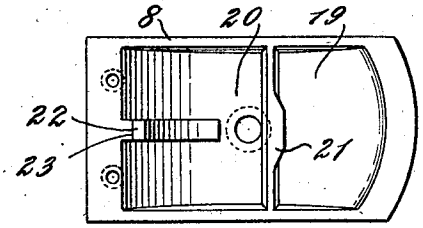


Fig. 4.

Fig. 1.

Fig. 3.

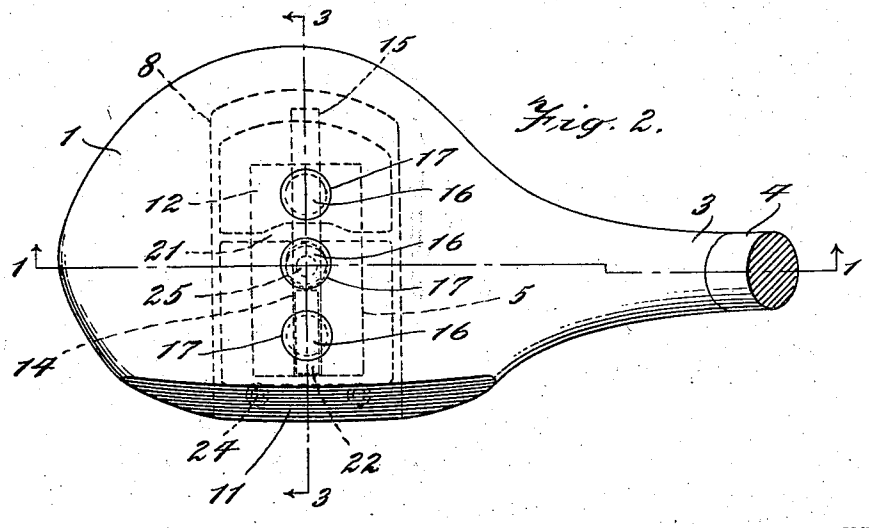


Fig. 2.

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GOLF CLUB.

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My invention relates to golf clubs, the same being designed for the production of a metal head for such clubs as the driver and the brassie.

The advantages of a metal head over one made of wood are well known, but difficulty has been experienced in the past in the production of a metal head, as a substitute for one made of wood, because of the inability to produce a metal head of substantially the same weight as a wooden one, because of the inability to produce a metal head which, with the shaft of the club, will have the same or a similar balance as a wooden one, and because of the inability to obtain a metal head which will have the resiliency of one made of wood.

I have overcome these difficulties by making a metal head with an enlarged cavity in it and an insert of hard resilient material completely enclosed thereby.

The details of the invention will hereinafter appear and that which I regard as new will be set forth in claims.

In the drawings forming part of the specification:

Figure 1 is a vertical central section through the head of the club, taken on the line 1—1 of Figure 2.

Figure 2 is a top plan view of the same.

Figure 3 is a section on the line 3—3 of Figure 2, and

Figure 4 is a view of the inner face of the wear plate.

Like reference numerals indicate like parts in the different views.

I prefer to use aluminum as the material of which the head 1 of my improved club is made. This is cast to the shape of the particular club to be produced, such as a driver or a brassie, and is formed with a cavity 2 in the body thereof which has been shown as extending throughout the length and breadth of the body, leaving relatively thin walls at all points. Extending upwardly at an angle from the body of the head is a shank 3 which is bored longitudinally for the reception of the usual shaft 4 which may be either of wood or metal. A rectangular, preferably oblong-shaped, opening 5 in the lower face of the head communicates with the cavity 2. Around this opening the metal of the head is cut away to form a flat or substantially flat surface 6, the two side edges of which are undercut, as shown at 7, to form shoulders between which fits the wear plate 8. Within the cavity are cast enlargements or thickened portions forming shoulders or abutments 9 and 10. These shoulders are in vertical alignment with each other and with one end wall of the opening 5. It is between these shoulders and the inner wall of the striking face 11 of the club that the insert 12 is located. This insert is preferably made of hard wood of the proper resiliency and of a weight or density to impart to the finished head the proper total weight. It may, however, be made of any other hard material of suitable resiliency and weight. It is cut to the proper shape to fit snugly against the upper wall 13 of the cavity 2, against the shoulders 9 and 10 at one end and against the inner wall of the striking face 11 at the opposite end. The grain of the wood runs longitudinally of the oblong opening 5,—that is, in the direction of the length of the head between the shoulders 9 and 10 and the striking face 11. It is made of such size that it is necessary to force it into place so that it will tightly and snugly engage both the shoulders 9 and 10 and the inner wall of the striking face 11. The lower face of the insert 12 lies flush with the flattened surface 6 surrounding the opening 5 and is provided with a longitudinally extending groove 14. This groove, when the insert is in place, forms a continuation of a centrally disposed inclined groove 15 in the flattened surface 6 at the end of the opening 5 opposite the striking face 11. The insert 12 is held in place within the cavity 2 by the wear plate 8. It is additionally held in place by a plurality of dowel pins 16 which are introduced into the insert through openings 17 in the upper face of the head of the club, the outer ends of said dowel pins being trimmed down so that they lie flush with the outer surface of said upper face.

The wear plate 8 is preferably made of bronze although it may be made of any other suitable metal. It is of a size and shape to fit upon the flattened surface 6 surrounding the opening 5, and between the undercut shoulders 7. It also lies flush with the lower face of the head of the club on opposite sides of the shoulders 7. To provide for the interlocking between the head of the club and the wear plate, the side edges of the latter are beveled as shown at 18. To provide for a further interlocking of these parts, the upper face of the wear plate 8

is recessed as shown at 19 and 20 to produce the laterally extending rib 21. There is also formed on the upper side of the wear plate 8, at the center thereof, an upwardly extending lug 22 forming a shoulder 23. The width of the lug 22 corresponds with the width of the grooves 14 and 15 so that the wear plate 8 may be introduced into position by sliding it longitudinally between the undercut shoulders 7 on the lower face of the head 1. When finally seated the shoulder 23 bears against the inner wall of the striking face 11, the end of the wear plate 8 lies flush with the striking face 11 and the opposite end thereof is beveled off to conform or merge into the lower surface of the head. The plate 8 is retained in place by the screws 24 and 25. Two screws 24 have been shown extending through the plate 8 into the body 1 and a third screw 25 has been shown extending through the plate 8 into the insert 12. The rib 21 on the underside of the plate 8 is tangent to the opening in the plate through which the screw 25 passes. As a result of this construction a broad bearing surface is provided behind the screw 25 so that there is no tendency to shear off the head of the screw. This is also effectually prevented by the engagement of the shoulder 23 with the inner wall of the striking face 11. The engagement of said shoulder with said wall prevents any longitudinal or sliding movement of the wear plate 8 as the face 11 of the club strikes against the ball. The rib 21 and shoulder 23, in connection with the undercut shoulders 7 and the screws 24 and 25, serve to effectually lock the wear plate 8 in position and prevent any movement whatever on the head of the club.

While I have described my invention as particularly adapted for use in connection with the manufacture of drivers and brassies, it will be understood that it may be found desirable to construct other clubs, such as putters, in accordance therewith.

What I claim is:

1. A head for a golf club comprising a hollow metallic body and a resilient insert completely enclosed thereby, said insert engaging the inner wall of the striking face at one end and an abutment within the body at the other.

2. A head for a golf club comprising a metallic body having a cavity formed therein with an opening in the lower face of the body leading into said cavity, a wood insert located in said cavity engaging the inner wall of the striking face at one end, and a wear plate for the bottom of said head, covering said opening.

3. A head for a golf club comprising a metallic body having a cavity formed therein with an opening in the lower face of the body leading into said cavity, a wood insert located in said cavity engaging the inner surface of the upper wall of the body on one side, an abutment within the cavity at one end and the inner wall of the striking face at the other end, and a wear plate for the lower face of the head, covering said opening.

4. A head for a golf club comprising a metallic body having a cavity formed therein, an opening in the lower face of the body and an internal shoulder, a wood insert located in said cavity engaging said shoulder at one end and the inner wall of the striking face at its other end, and a wear plate for the bottom of said head covering said opening.

5. A head for a golf club comprising a metallic body having a cavity formed therein with an opening in the lower face of the head leading into said cavity, a wood insert located in said cavity engaging the inner wall of the striking face at one end, the grain of the wood of said insert extending longitudinally of the head, and a wear plate for the lower surface of said head covering said opening.

6. A head for a golf club comprising a metallic body having a cavity therein, a wood insert within said cavity and dowel pins extending through openings in the upper wall of the body into said insert.

7. A head for a golf club comprising a metallic body having a cavity therein, with an opening in the lower face of the head leading into said cavity, a wood insert fitting within said cavity engaging an abutment within said cavity at one end and the inner wall of the striking face at the other, dowel pins extending through openings in the upper wall of said body into said insert and a wear plate for the lower surface of the head covering said opening.

8. A head for a golf club comprising a metallic body having a cavity therein, with an opening in the lower face of the head communicating with said cavity, a wood insert within said cavity, a wear plate for the lower surface of the head covering said opening, means for securing said wear plate to the body and interlocking means for preventing relative movement of said wear plate with respect to said body.

9. A head for a golf club comprising a metallic body having a cavity therein, an opening leading into said cavity and shoulders on opposite sides of said opening, a wood insert extending through said opening into said cavity, a wear plate fitting between said shoulders, means for securing the wear plate to said body and interlocking means for preventing the relative movement of said wear plate with respect to the body.

10. A head for a golf club comprising a metallic body having a cavity therein, an opening leading into said cavity and under-

cut shoulders on opposite sides of said opening, a wood insert extending through said opening into said cavity, a wear plate having beveled side edges fitting between said undercut shoulders, means for securing the wear plate to said body and interlocking means for preventing the relative movement of said wear plate with respect to the body.

11. A head for a golf club comprising a metallic body having a cavity therein, an opening leading into said cavity and shoulders on opposite sides of said opening, a wood insert extending through said opening into said cavity, a wear plate fitting between said shoulders, having a projecting lug on its upper side adapted to engage a fixed part of the body and means for securing the wear plate to the body.

12. A head for a golf club comprising a metallic body having a cavity therein, an opening leading into said cavity and shoulders on opposite sides of said opening, a wood insert for said cavity having a longitudinally extending groove in its lower face, a wear plate fitting between said shoulders and having a lug on its upper side adapted, when inserting the wear plate into position, to fit and move within the groove in said filler and also adapted to engage the rear wall of the striking face of the head for preventing relative longitudinal movement of the wear plate with respect to the body, and means for securing the wear plate in place.

13. A head for a golf club comprising a metallic body having a cavity therein, with an opening in the lower face of the body leading into said cavity and shoulders on opposite sides of said opening, a wood insert fitting within said cavity having a longitudinally extending groove in its lower face, a wear plate fitting between said undercut shoulders, having a transversely extending rib on its upper side and a longitudinally extending lug, the said lug adapted to fit and move within the groove in said insert, when inserting the wear plate into position, and to engage the inner wall of the striking face of the club to prevent relative longitudinal movement of the wear plate with respect to the body and screws for retaining the wear plate in place, the opening in the wear plate through which one of the screws passes lying in advance of and tangent to said rib.

In witness whereof, I hereunto subscribe my signature.

WALTER B. PEDERSEN.