

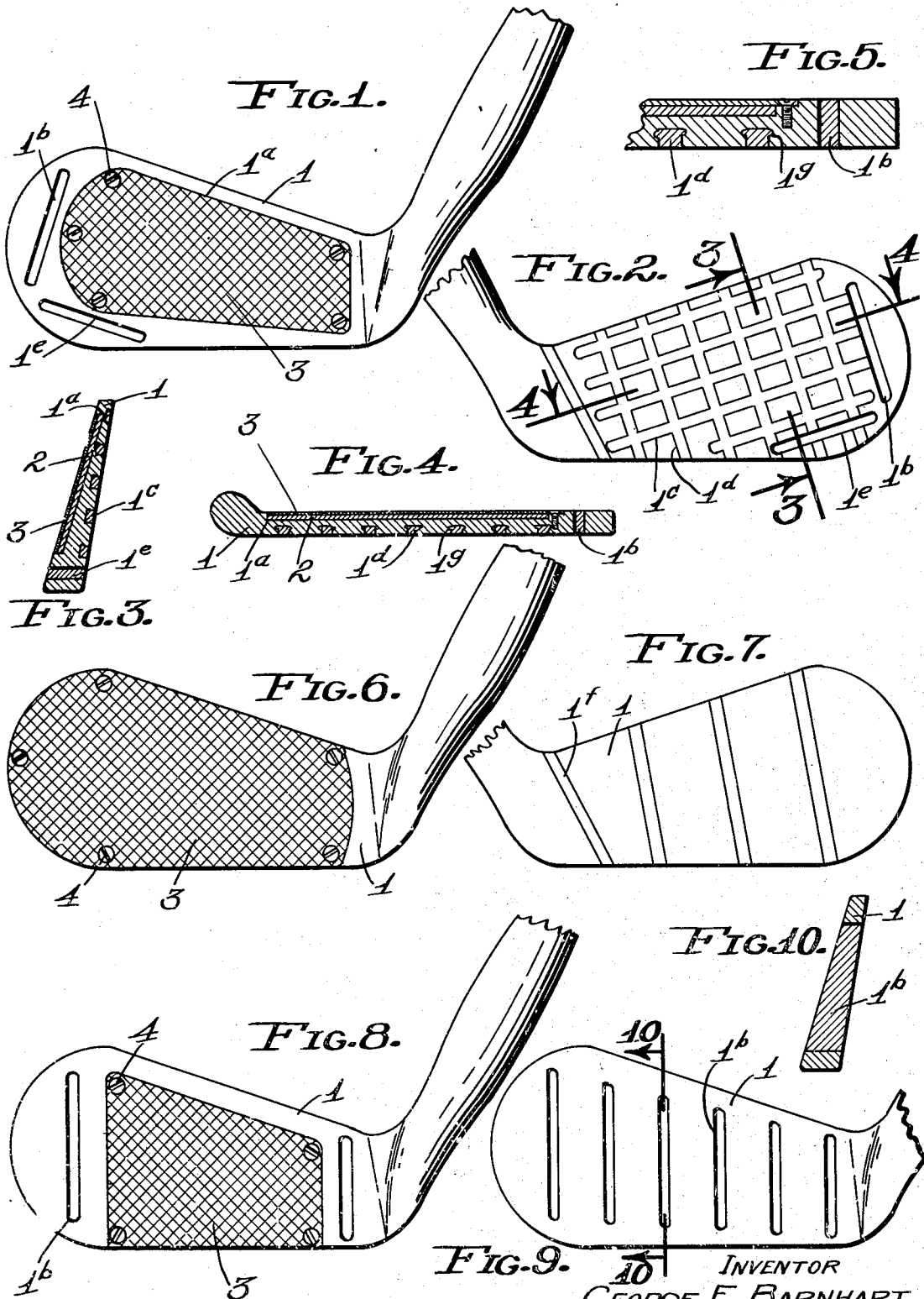
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GOLF CLUB

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GOLF CLUB

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9 Claims. (Cl. 273—77)

My invention relates to golf clubs, and the objects of this invention are: first, to provide a golf club whereby, when a golf ball is struck thereby in a normal manner, the load and sudden impact against the head will not be imparted to the hand of the player as a disagreeable or sharp sting as in the case of many golf clubs now in use; second, to provide a golf club having a head which will yield sufficiently to such impact as to absorb substantially all or a material amount of the shock so that the same will not be imparted to the hands of the player in a disagreeable manner; third, to provide a golf club of this class which will reduce the strain and distortion on the shaft; fourth, to provide a novel and simple cushion construction for the front face of golf clubs for effecting at least in part, the functions above and hereafter mentioned; fifth, to provide novel head construction for golf clubs whereby the head, though made of metal and of considerable mass, is bodily yieldable and resilient so that the portion of the head member striking the ball temporarily and resiliently yields under the impact, allowing the adjacent portions of the head to advance by momentum, thus reducing the strain on the club and the shock or sting upon the hands of the player; sixth, to provide a golf club head which is not materially altered in size or weight over the conventional club though embodying the advantages and additional features herein mentioned; seventh, to provide a head construction of this class which may be incorporated wholly or in part in the forms of golf clubs now in use; eighth, to provide as a whole a novel golf club head construction; and, ninth, to provide a head of this class for golf clubs which is very simple and economical of construction proportionate to its functions, durable, and which will not readily deteriorate or get out of order.

With these and other objects in view as will appear hereinafter, I have devised a golf club having certain novel features of construction, combination and arrangement of parts and portions, as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawing and to the characters of reference thereon which form a part of this application in which:

Figure 1 is a front elevational view of the head end of a golf club incorporating my invention in one form, showing the front face of the head; Fig. 2 is a similar view taken from the back side of the head; Fig. 3 is a transverse sectional elevational view of the head taken through 3—3 of Fig. 2; Fig. 4 is a longitudinal sectional view of

the head taken through 4—4 of Fig. 2; Fig. 5 is an enlarged fragmentary sectional view similar to that shown in Fig. 4 but of the tip end only of the head; Fig. 6 is a fragmentary front side elevational view of my golf club in a slightly modified form of construction; Fig. 7 is a fragmentary back side elevational view showing another slightly modified form of construction; Fig. 8 is a fragmentary front side elevational view of another slightly modified form of construction; Fig. 9 is a fragmentary front side elevational view of still another slightly modified form of construction of my golf club; and, Fig. 10 is a transverse sectional view thereof taken through 10—10 of Fig. 9.

Like characters of reference refer to similar parts and portions throughout the views of the drawing.

The embodiment of my present invention is preferably in connection with iron or other metal head golf clubs, and preferably in the clubs known as driving iron, mid iron, mid mashie, mashie iron, mashie, spade mashie, mashie niblic, and niblic, the embodiment in various forms in the various clubs. It will be noted, however, that certain features of my invention are applicable to other clubs.

In Figs. 1, 3, 4, 6, and 8, I have shown a golf club with a yieldable cushion at the front face by which the ball is struck with a cushioning effect. In Fig. 1 the head 1 is provided with a shallow recess 1a, the edges of the recess being spaced from the edges of the face of the head. Over the bottom of the recess is positioned a layer or sheet of yieldable material 2. This material or substance is preferably resilient and may be made of rubber, felt, rawhide, or similar substances, or, in some instances, it may be only slightly yieldable material, such as lead. Over the opening and over the outer side of the yieldable and resilient material is secured a relatively thin and resilient metal plate 3. This metal plate may be secured in place by screws 4 or other suitable means.

With this construction, the face of the club will yield when the ball is struck and will absorb to a large extent the hard and sudden impacts and will prevent to a material degree the usual sting or shock upon the hands gripping the club. Such cushioning effect upon the club will also increase the driving force of the club.

In Fig. 6 there is no recess but the cushioning means extends substantially over the whole face of the head and to the edges thereof.

In Fig. 8 the length of the cushion is reduced. Such construction is employed in clubs which do

not require such large driving surface, or when it is desired to provide greater longitudinal yieldability and resiliency by providing transverse slots 1b from the front to the rear side of the head of the club, as shown.

In Fig. 2 I have shown the back side of the club as provided with longitudinal and transverse slots or grooves 1c and 1d, respectively. These slots or grooves are cut part way into the back side of the head, thereby reducing the longitudinal and transverse rigidity. The transverse grooves 1d permit the head to be distorted longitudinally when the ball is struck, while the longitudinal grooves permit transverse distortion, thus providing longitudinal and transverse yieldability and resiliency in the body of the head itself. These grooves, cut part way in, do not interfere with the cushion at the front face, but cooperate therewith to provide a yieldable and resilient head. In this structure, I have also shown slots 1b and 1e extending completely through the head transversely and longitudinally with respect thereto, but beyond the edges of the cushion plate. The latter slots also increase the longitudinal and transverse flexibility. These slots or grooves cause longitudinal and transverse flexibility and resiliency in the head itself and thereby cause a change of direction of the forces from the impact to be confined to the head instead of being imparted as vibratory motion in waves to the grip end of the club.

Both sets of grooves are preferably employed in the distance driving club. In the others the longitudinal grooves are preferably eliminated and the transverse grooves are reduced in number, as shown in Fig. 7, in the class or series approaching the spade mashie. In the latter there may be only the one groove 1f immediately adjacent to and parallel, or substantially parallel, to the shank.

The grooves or slots 1c, 1d and 1f, and the slots 1b and 1e also, may be filled with a flexible and preferably resilient or semi-resilient filler, such as rubber, and the like. The grooves or slots may be undercut slightly, or dovetailed, as indicated by 1g in Fig. 5, in order, more effectively, to retain the filler in position. Such filling of the slots which are cut through the head prevents whistling to a large extent when the club is swung. Such filling also presents a smooth and attractive appearance and prevents dirt from accumulating in the slots or grooves. A resilient filler will also add to the resiliency of the head and at the same time dampen the vibration.

The cushion may be entirely omitted as shown in Fig. 9, and instead a plurality of transverse slots 1b may be provided, such slots extending completely through the head from the front to the rear side.

In such clubs as the mashie niblic and niblic, the transverse slots or grooves are preferably omitted and only a cushion face is provided.

Various combinations of cushion faces, slots and grooves may be made to suit the various players.

It will be here noted that a cushion face may be made by providing a yieldable plate in spaced relation from the face of the head member, that is, by omitting the yieldable and resilient material 2.

Though I have shown and described a particular construction, combination and arrangement of parts and portions of my golf club, and certain modifications thereof, I do not wish to be limited to the particular construction and modifications disclosed, but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a golf club, a head member having relatively deep slots extending along the back side thereof, and a resilient filler in said slots.
2. In a golf club, a head member having relatively deep intersecting channels in the back side thereof, and a yieldable filler in said channels.
3. In a golf club, a head member having slots extending along the face thereof and through from the front face to the back side thereof, and a yieldable filler in said slots.
4. In a golf club, a head member having relatively deep intersecting cross channels in the back side thereof, rubber filling said channels, and a rubber facing for the front side of said head member.
5. In a golf club, a relatively thin narrow metallic head member having relatively deep intersecting cross channels in the back side thereof, rubber filling said channels, and a yieldable face positioned on the front side of said metallic head member.
6. In a golf club, a metallic head member having a rubber cushion intermediate its ends along the front face thereof, and having slots extending through from the face to the back thereof, said slots spaced from each end of said cushion, and a semi-resilient cushion material fitting the slots which permits flexing of the club head in an axis substantially parallel to the golf club shaft.
7. In a golf club, a head member having intersecting cross channels in the back side thereof, and rubber filling said channels.
8. In a golf club, a head member having intersecting cross channels in the back side thereof, rubber filling said channels, and a yieldable covering for the front side of said head member.
9. In a golf club, a relatively thin narrow metallic head member having intersecting cross channels in the back side thereof, and rubber filling said channels.

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