

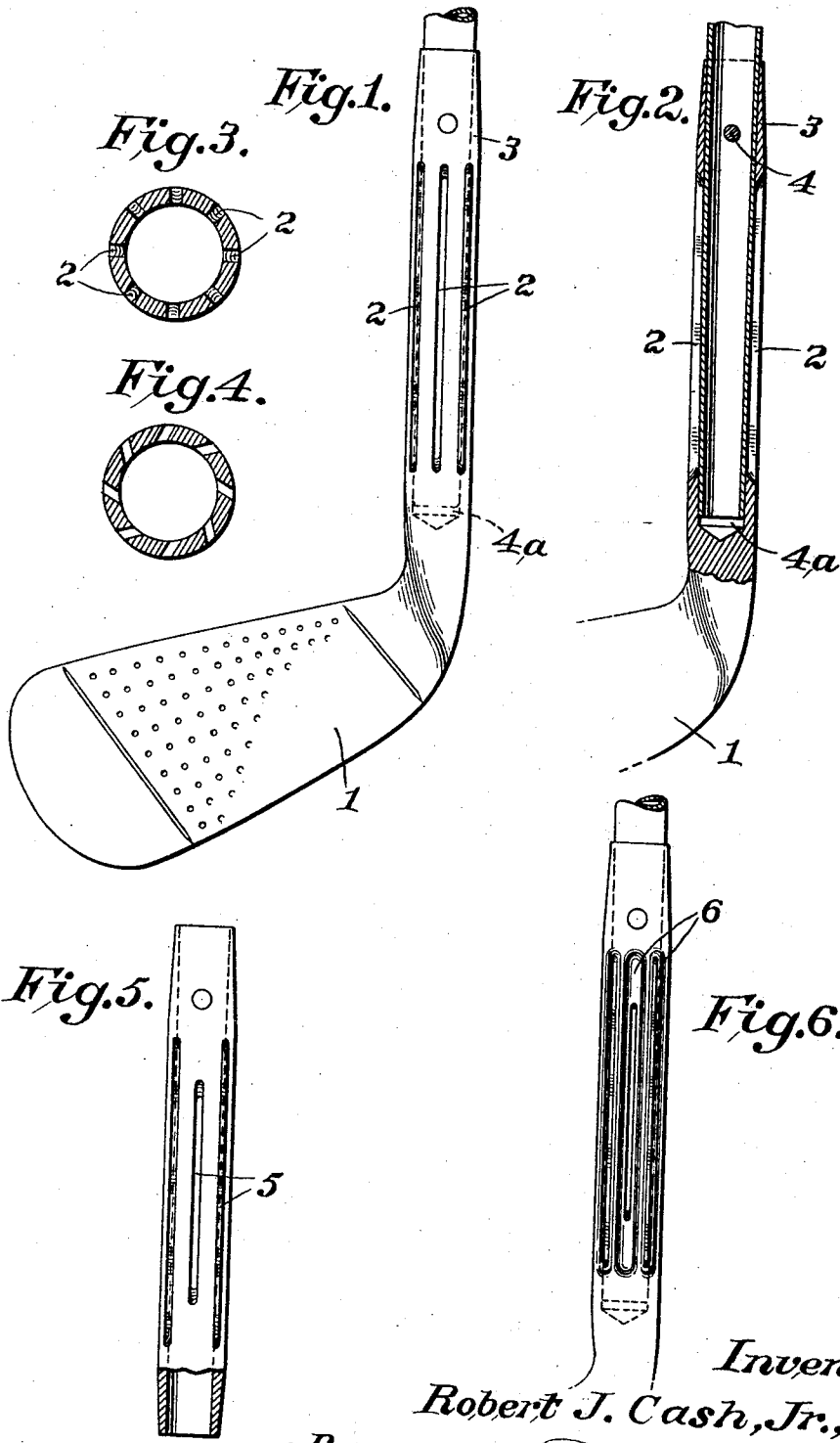
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GOLF CLUB

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GOLF CLUB

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One object of the invention is to secure torsional resiliency in the hosel of a golf club for the purpose of absorbing the shock upon striking the ball.

5 Other objects of the invention will appear from the following description.

The invention consists in the features and combination and arrangement of parts hereinafter described and pointed out in the
10 claims.

In the drawing

Figure 1 is a side view of one form of the invention.

15 Fig. 2 is a longitudinal sectional view of the hosel of Fig. 1.

Fig. 3 is a cross section of the hosel of Fig. 1.

Fig. 4 is a cross section of a modification.

20 Fig. 5 is a view of a hosel formed separately from and adapted to be attached to a golf head, said view illustrating also the fact that this invention is not limited in respect to the number or arrangement of the slots in the hosel.

25 Fig. 6 is a view of a modified form of resilient hosel.

It will be understood while I show in Fig. 1 an iron head, an integral metal hosel and a metal shaft, that the invention is not limited to any particular form of club, the broad object being to secure resiliency torsionally between the shaft and the head by the construction of the interposed hosel and the manner in which the shaft is assembled and united
35 therewith.

In Fig. 1 the head 1, as an instance, is of metal and representative of any suitable golf club head. The hosel in this figure is shown as integral with the head.

40 It is slotted as at 2 to give resiliency to torsional force, and in the particular form shown the slots extend lengthwise of the hosel parallel with the axis and throughout the major portion of the length of the hosel.

45 At the upper end the hosel has a sleeve portion 3 unslotted. The shaft is fitted to the interior of the hosel so that there is a bearing contact to prevent chattering and at 4 a pin or suitable securing member is passed
50 through the upper ferrule or continuous

sleeve portion and through the shaft. Said shaft is not fixedly attached to the hosel below the point where this pin is located, but can have a limited amount of circumferential movement relative to the hosel at the portion below the point where the pin attachment above mentioned is effected.

The lower end of the shaft fits into a socket portion 4^a of the hosel below the slotted portion and as above intimated the contact between the shaft and the wall of this socket portion is such as to allow the shaft and hosel to swivel to a limited extent here when the resilient action torsionally takes place. The hosel by reason of the slotted construction has some flexibility longitudinally and this also acts to absorb the shock of the blow, the shaft itself also having some lengthwise flexibility.

Variations in the construction, and in the materials may be employed without departure from the underlying principle of the invention. The slots in the hosel may be of varying lengths as indicated at 5, and of various widths and the hosel may be made of a separate piece of attachment to the head. Flutes may be formed as at 6 Fig. 6 in the hosel and this fluted portion may be slotted to give the torsional and longitudinal resilience to the hosel. The slots may be of spiral form instead of straight. By extending the shaft throughout the slotted part of the hosel and allowing it to bear against the wall of the hosel the shaft serves as a support to the slotted portion and as a closure to the slots at the inner side of the hosel and prevents rush of air through the slots, which if left open would produce a "swishing" sound when the club is swung. Furthermore the shaft by bearing on the hosel on its inner side throughout the slotted portion prevents vibration which otherwise would tend to give off a sound akin to that of a tuning fork.

I do not limit myself to any particular number of slots as more or less may be employed in place of the number illustrated.

While I have shown modifications scattered throughout the several views, it will be understood that where these are capable of being combined in a single form of the de-
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vice, they are to be regarded as so combined for the purpose of this specification.

When the blow is delivered upon the ball, and particularly if the point of contact is considerably removed from the so-called "sweet spot" of the head, there is imposed on the shaft a torsional strain tending to twist it in the hands of the player and also resulting in a sensation which is unpleasant. With my improvement these objections are eliminated as the torsional strain is absorbed by the slotted hosel and is not imparted to the hands of the player.

The shaft is intended to have the standard taper.

While the invention is not limited to a golf club having a metal shaft, it avoids the objection in the use of metal shafts with metal club heads, namely, lack of torsional resiliency.

I claim:

1. A golf club having a hosel slotted in the general direction of its length with a shaft fixed to the upper end of the hosel above the slotted portion, said shaft extending below the point of fixture and free from fixed connection with the slotted part of the hosel and throughout said extended portion, substantially as described.

2. A golf club according to claim 1 in which the lower part of the shaft below the point of fixture with the hosel has contact with the hosel but only such as will allow some circumferential yielding of the hosel relative to the shaft, substantially as described.

3. A golf club according to claim 1 in which the shaft bears at its lower end against the wall of the hosel below the slotted portion with a relatively circumferential yielding fit, substantially as described.

4. A golf club according to claim 1 in which the slotted hosel has its upper end of sleeve or ferrule form and circumferentially continuous, the fixing means passing through this ferrule portion and the shaft, substantially as described.

5. A golf club having a hosel slotted in its body portion in the general direction of its length and a shaft affixed to the hosel only at the upper end thereof.

6. A golf club having a slotted hosel torsionally resilient and longitudinally flexible in different directions lateral to its axis and a shaft mounted in and fixed to said hosel only at its upper end, the said shaft and hosel below the point where they are affixed being free to have relative movement circumferentially.

7. A golf club having a hosel slotted in the general direction of its length with a shaft fixed to the upper end of the hosel, said shaft having a swivel engagement with the hosel at a point below the slotted portion, said slotted portion yielding torsionally relative to

the shaft, and deriving support internally from said shaft.

8. A golf club having a part provided with a shaft receiving socket, said part being slotted to provide a torsionally resilient portion intermediate of its length, a shaft fixed to the upper end of the socketed part above the slotted portion, said shaft extending below the point of fixture, and free from fixed connection with the slotted portion of said socketed part throughout said extended portion.

9. A golf club comprising a head, a tubular member connected with the head and slotted at a point intermediate of its length, a hollow metal shaft fixed to said tubular member above the slotted part thereof and having an extension reaching down along said slotted portion, said slotted portion and said extension of the shaft being free to have relative circumferential yielding movement, substantially as described.

In testimony whereof, I affix my signature.
ROBERT J. CASH, JR.

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