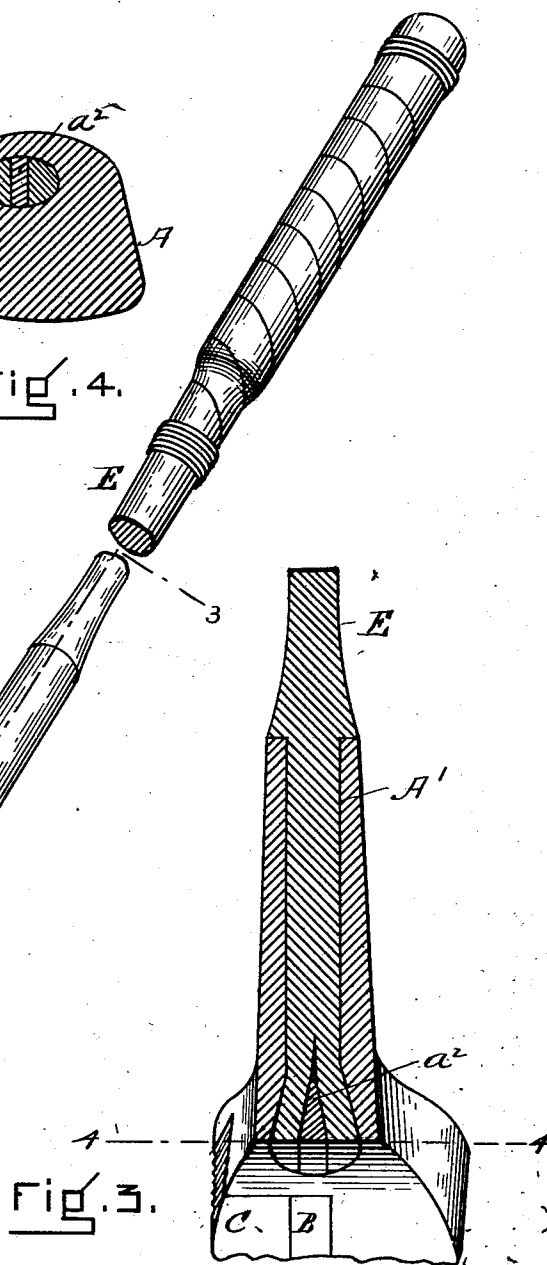
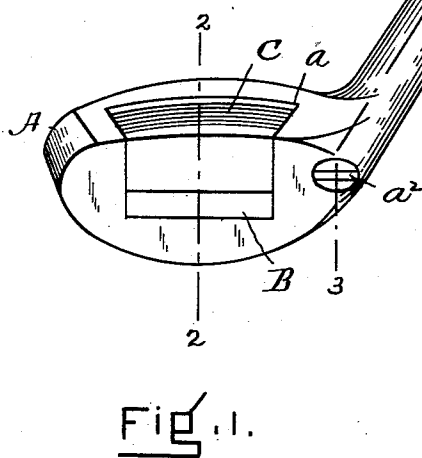
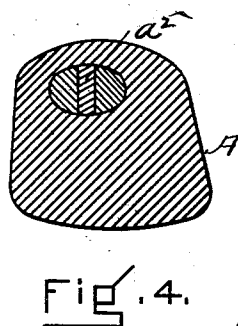
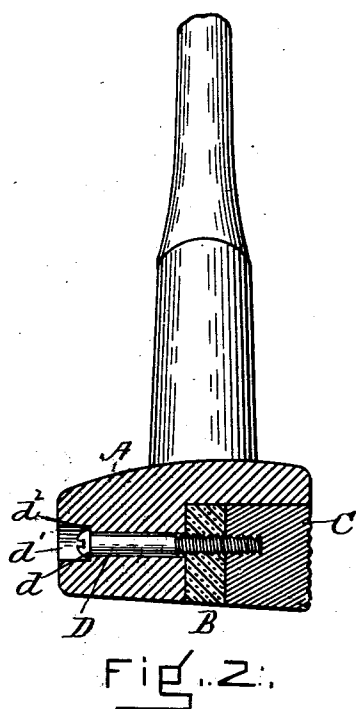


(No Model.)

E. SLADE.
GOLF CLUB.

No. 564,655.

Patented July 28, 1896.



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UNITED STATES PATENT OFFICE.

EDWARD SLADE, OF NEWTON, MASSACHUSETTS.

GOLF-CLUB.

SPECIFICATION forming part of Letters Patent No. 564,655, dated July 28, 1896.

Application filed April 2, 1896. Serial No. 585,855. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SLADE, a citizen of the United States, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Golf-Club, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates especially to the kind of club called a "driver;" and it consists in the improved construction of the head and also in the manner of attaching the shaft thereto.

The heads of golf-clubs have hitherto been usually made of wood with a piece of horn on the lower front edge to protect the face of the club. Sometimes a piece of brass has been attached to the bottom of the club to protect it. A club so made is known as a "brassy" and is used throughout the course, while the driver is used only at the starting-point or T, where there is less danger of breaking the club on stones. Great inconvenience and expense have been occasioned by the breaking of the drivers, and various attempts have been made to overcome this difficulty. I have accomplished it by making the head of the club of aluminium, which is tough, and yet light enough to be easily swung.

My improved club may be used either as a driver or brassy, and thus combines two clubs in one.

Another feature of my invention consists in making the face of the club removable, so that a different one may be inserted. In this way an injured face may be replaced in a few moments.

In the drawings, Figure 1 shows the bottom and front side of a club-head involving my invention. The shaft is broken away for convenience in illustration. Fig. 2 is a vertical section on line 2 2 of Fig. 1, looking in the direction of the arrow. The position of the club in this figure is different, the sole being represented as parallel to the bottom of the sheet, whereas in Fig. 1 the club was tilted on one side. Fig. 3 is a vertical section on line 3 3 of Fig. 1, looking in the di-

rection of the arrow. Fig. 4 is a cross-section on line 4 4 of Fig. 3.

The head A may be made of any suitable metal, but I prefer to make it of aluminium, and I have found that the following formula gives the best results: copper, two per cent.; zinc, three per cent.; aluminium, ninety-five per cent. It is made of any desired shape, but preferably like an ordinary wooden head, as shown in the drawings. On the front edge of the head a recess *a* is formed, which may be of any desired size and shape. I have shown it as extending from the lower edge of the head almost to the upper edge and from the front about half-way to the back and like a dovetailed joint in shape. This is the size and shape that I prefer, but I do not limit myself to it. In the recess *a* I insert a piece of rubber or other suitable elastic material B, made of a shape to fit it. In front of this is placed the face C, made of any suitable material, though I prefer to make it of dogwood, boxwood, or fiber.

The elastic block B and the movable face C are held in place by the screw D, which extends from the back of the head through the elastic block into the face C and about half-way through it. The head *d* of the screw is free to slide for a short distance in the cylindrical hole *d'*, being prevented from moving too far forward by the shoulder *d''*.

The operation of this part of the invention is as follows: When the club meets the ball, the shock of concussion forces the movable face C against the elastic block B and moves The screw D a short distance in the hole *d'*. The elastic block instantly rebounds and drives the face C against the ball with great force, causing it to fly to a great distance. As the screw is free to move it allows the face C a certain amount of play. If the club strikes by accident a hard immovable substance, such as a stone, the face will be allowed sufficient motion to prevent injury thereby. The shaft E is attached to the head in the manner shown in Figs. 3 and 4. A socket A' is made in the head of a size to fit a portion of the shaft. At the lower end this socket is made of the shape shown in Figs. 3 and 4, being oval in cross-section. The socket is tapered longitudinally to this shape, as shown in Fig.

3. The end of the shaft is split and it is wedged into position by the wedge a^2 . The ends of the shaft are thus forced into the tapered sides of the socket with the result that the connection between the head and shaft is a very strong one, and that the head will not be allowed to turn on the shaft. A screw a' may also be used to prevent the slipping of the shaft should the latter shrink.

10 Clubs made according to my invention are much stronger and less likely to break than other clubs, and thus a great saving in expense and in convenience of players is brought about. The weight of the head may be changed by filing off part of the metal and thus the balance of the club varied to suit the fancy of its owner.

20 Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. As an improved article of manufacture, a golf-club head having a recess in the front

part thereof, a removable face placed in said recess, a block of elastic substance in said recess behind said face and a screw extending through the elastic block into the removable face adapted to be movable when the face is brought into contact with a ball or other object, as and for the purposes described.

2. The combination in a golf-club head of the dovetailed recess a extending from near the upper edge of the front face to the bottom thereof, and from the front about half-way to the back, the removable face C, the elastic block B placed in said recess behind the face C, the hole d' at the back of the head having the shoulder d^2 and the screw D extending through the elastic block B and into the block C, as and for the purposes described.

EDWARD SLADE.

Witnesses:

EVA A. GUILD,
JAMES A. LOWELL.