

No. 753,677.

PATENTED MAR. 1, 1904.

J. G. CURTISS.
GOLF CLUB.

APPLICATION FILED MAY 2, 1903.

NO MODEL.

Fig. 1.

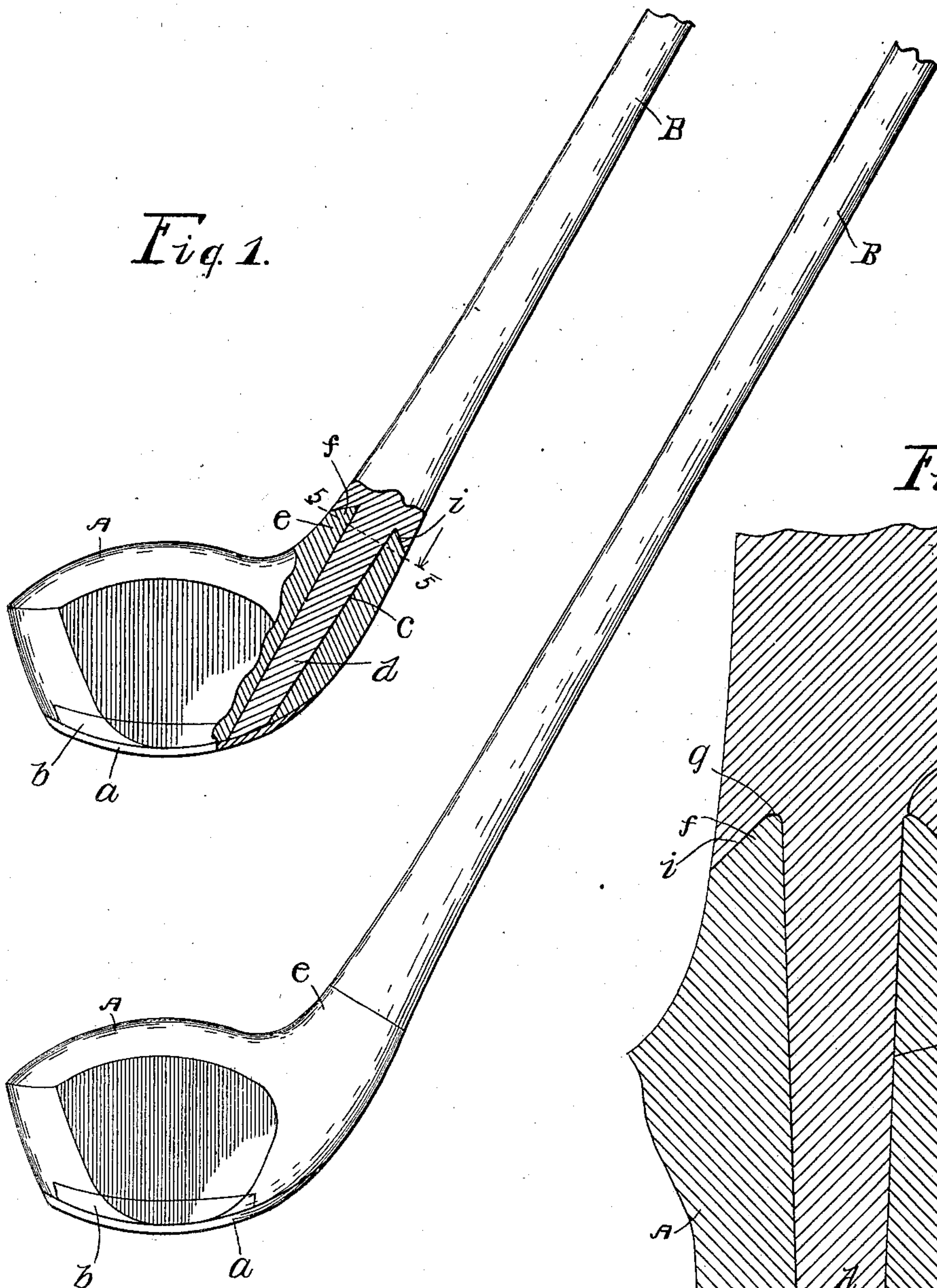


Fig. 3.

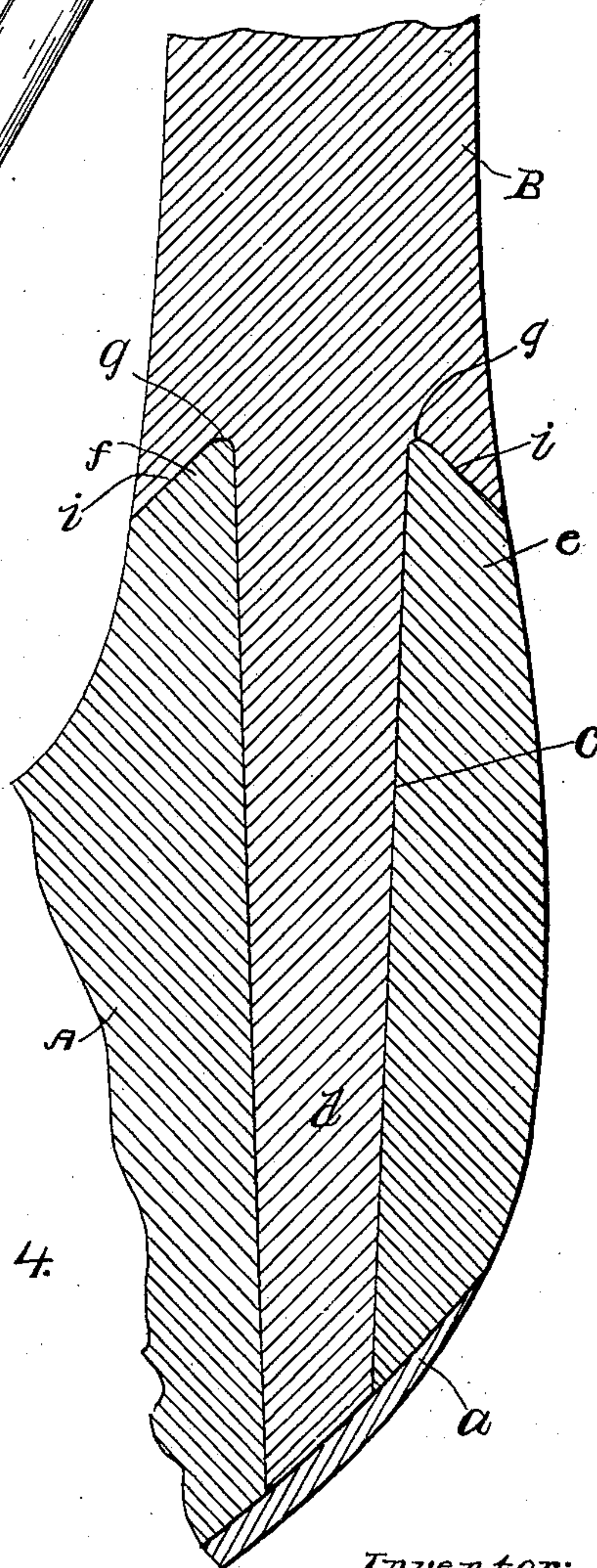


Fig. 2.

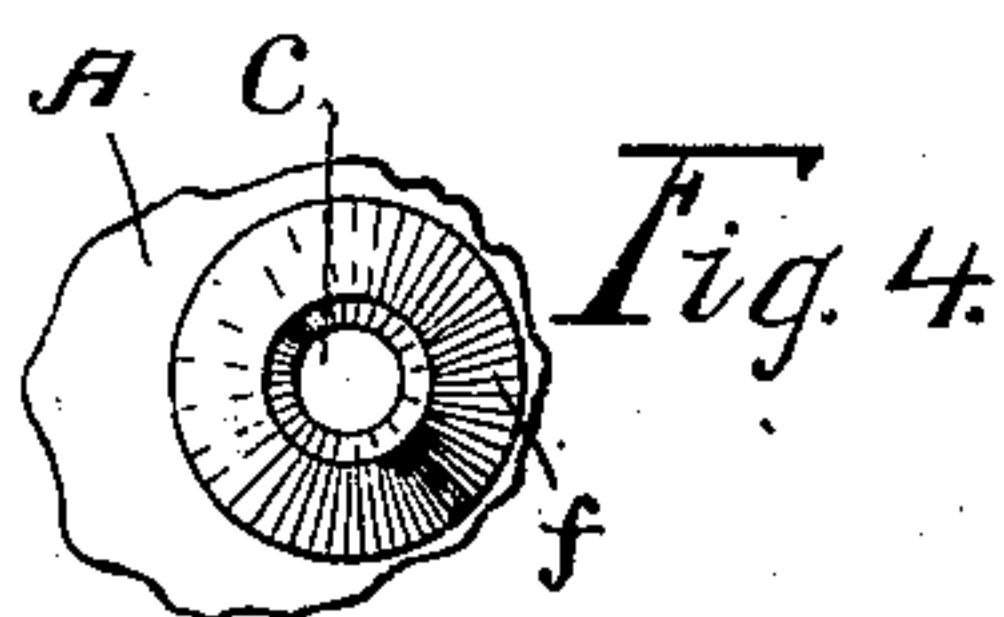
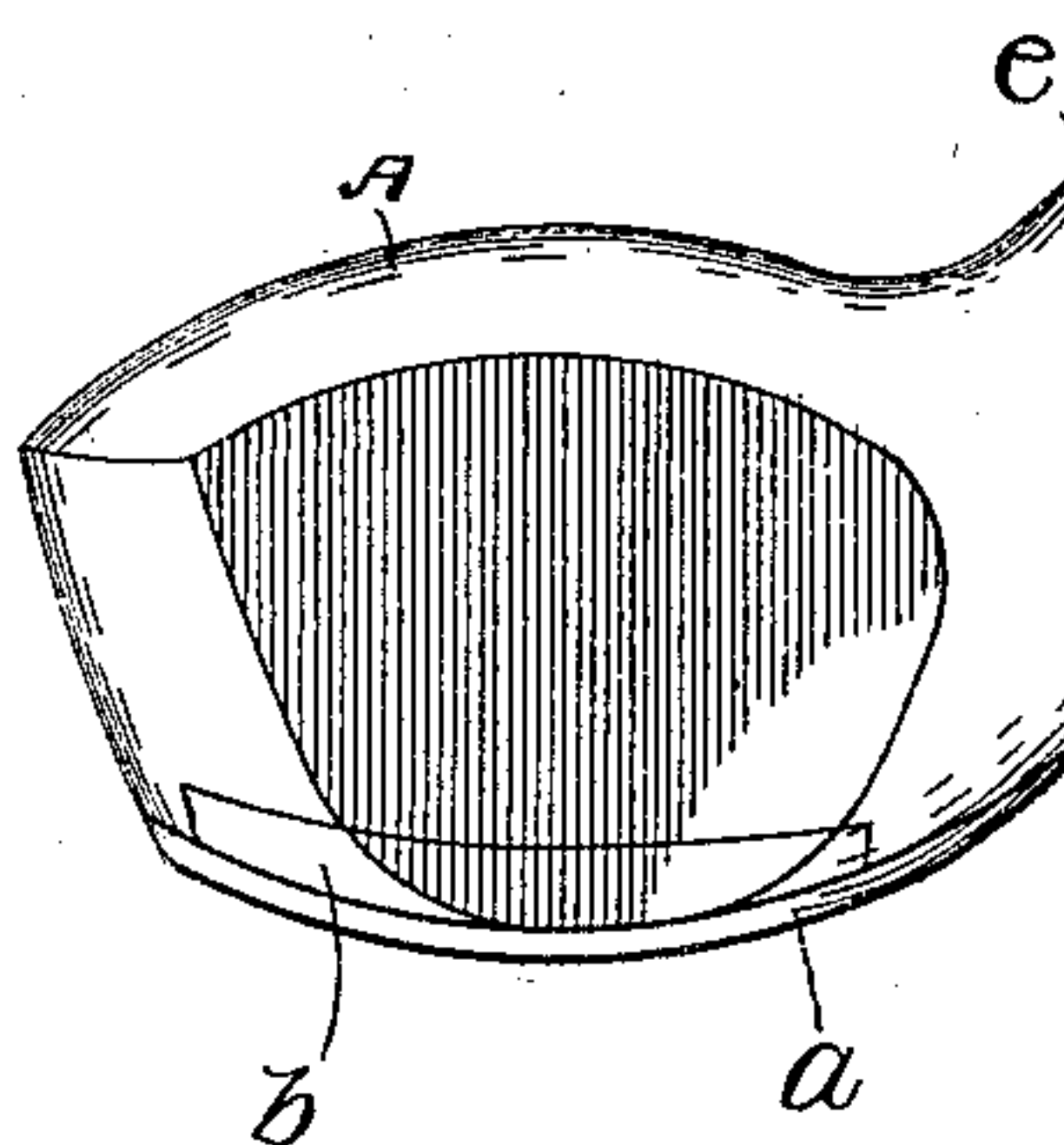


Fig. 4.

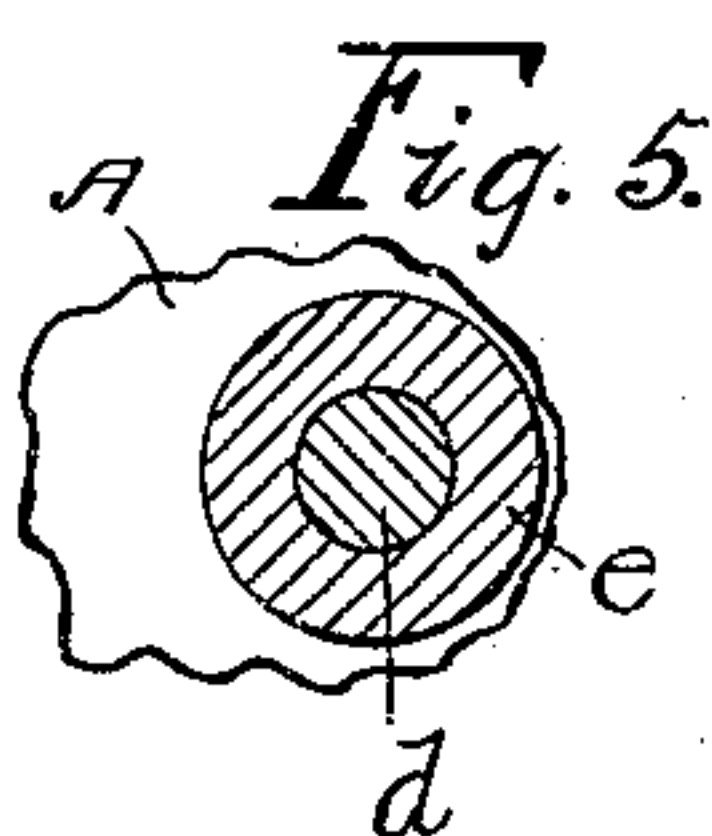


Fig. 5.

Attest:
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UNITED STATES PATENT OFFICE.

J GUERNSEY CURTISS, OF ROCHESTER, NEW YORK.

GOLF-CLUB.

SPECIFICATION forming part of Letters Patent No. 753,677, dated March 1, 1904.

Application filed May 2, 1903. Serial No. 155,418. (No model.)

To all whom it may concern:

Be it known that I, J GUERNSEY CURTISS, of Rochester, in the county of Monroe and State of New York, have invented a new and useful
5 Improvement in Golf-Clubs, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is an improved golf-club, the
10 same being hereinafter fully described, and more particularly pointed out in the appended claims, reference being had in this specification to the accompanying drawings, forming a part thereof.

15 Golf-clubs consist each of a head and a shaft, sometimes constructed of a single piece, which parts, however, it is found desirable to make separately and of different materials—as, for example, two kinds of wood joined. The
20 shaft of the club needs to be light and slender, so that the instrument may be wieldy and readily handled and also that it may yield and spring or bend with an elastic action when a blow is given. On account of this neces-
25 sary slenderness of the shaft and the parts where joined some difficulty has been heretofore experienced in constructing the joint, the parts thereat being of small transverse dimensions and liable to split or break or to
30 become loosened from use. The head of this style of golf-club usually consists of a firm strong wood, as ebony or dogwood, and the shaft, preferably, of straight fine-grained hickory. Frequently heretofore in manufactur-
35 ing this style of club the parts where joined have been reinforced or strengthened by winding them with waxed thread; but this external mass or body of thread, though not large or bulky, has been found to be objectionable, as
40 it tends to mar the form and beauty of the club, destroy its symmetry and trimness, and render it less pleasing to the eye. Sometimes, also, in forming the joint a third piece is added, consisting of a strip of wood or other
45 material embedded longitudinally in the shaft and the head, so as to cross the joint between them. This renders the manufacture of the club more expensive, while being otherwise objectionable.

50 My invention relates to golf-clubs in which the head and the shaft are made of two differ-

ent woods joined; and the invention consists particularly in the manner of forming and constructing the joint between the head and the shaft.

The main object in producing my present invention has been to form the joint between the head and the shaft of the club without a third part and so that the joint shall be complete and strong within itself and so need no
60 strengthening, external or otherwise, and one in which the overlapping parts are so proportioned as to as nearly as possible equally divide the strength of the material of the two parts joined.

Figure 1 in the drawings is a side elevation of the head and adjacent part of the shaft of the club, partly in longitudinal section along the axis of the joint. Fig. 2 is a side elevation showing the club as in use. Fig. 3, drawn
70 to an exaggerated scale, is an axial section of the joint, showing more clearly the details of its form. Fig. 4 is a view of a part of the head at the joint, seen as indicated by arrow 4 in Fig. 1, parts being broken away. Fig. 75 5 is a transverse section of the parts, taken on the dotted line 5 5 in Fig. 1.

A in the drawings is the head of the golf-club, and B the shaft. The head is formed at its rear side or edge with a short upwardly-
80 extended part or neck *e*, pierced longitudinally by an inclined tapered or conical opening or bore *c*, extending from the upper end of the neck downward to and out at the lower surface of the head, the upper end of the neck
85 being made conical, as shown. The shaft B is formed with a reduced, tapered, or conical part *d* to fit and fill the tapered bore *c* and with a shallow conical cavity *i* to fit the conical part *f* of the head, said conical parts *d* *f*
90 being coaxial and of reverse conicality. In putting the two parts together to form a complete club a thin coat or sizing of some adhesive substance, as glue, is first applied to the surfaces of the parts to be joined. Thus
95 joined the two parts of the club become practically as one solid piece, rigid and strong, the completed club consisting, so far as the joint is concerned, of only two parts.

In forming the two independent tapered or
100 conical parts of the club to make the joint I prefer to form the circular edge where the

two conical surfaces meet slightly blunted or rounded, as shown at *g* in Fig. 3, which tends to prevent the splitting of the shaft at that place when the parts are firmly pressed together.

In constructing this club the ordinary metal plate or shoe *a* may be employed and also the india-rubber body *b*, common to these clubs. These parts, however, form no part of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A golf-club consisting of a head and a shaft of different material joined, the joint consisting of two reverse conical parts, the circular meeting edge of the conical surfaces being rounded.

2. A golf-club consisting of a head and a shaft joined, the head having upwardly-extending neck in line with the shaft and conical bore and conical part surrounding the upper end of the bore, and the shaft formed with reduced conical part fitted to said bore and a conical cavity to receive the conical part of the head, said conical parts being coaxial and of reverse conicality.

In witness whereof I have hereunto set my hand, this 28th day of April, 1903, in the presence of two subscribing witnesses.

J GUERNSEY CURTISS.

Witnesses:

ENOS B. WHITMORE,
MINNIE SMITH.