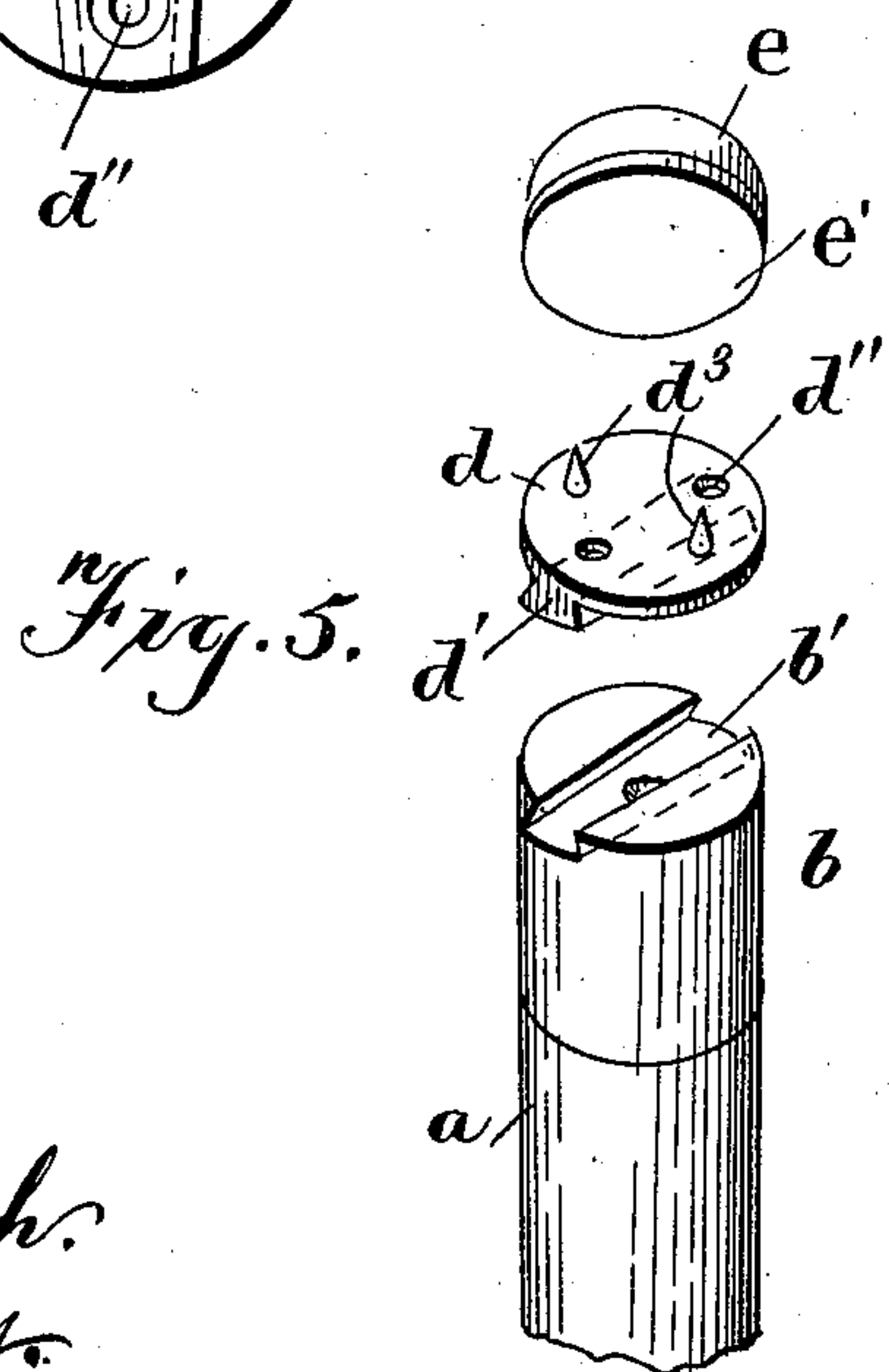
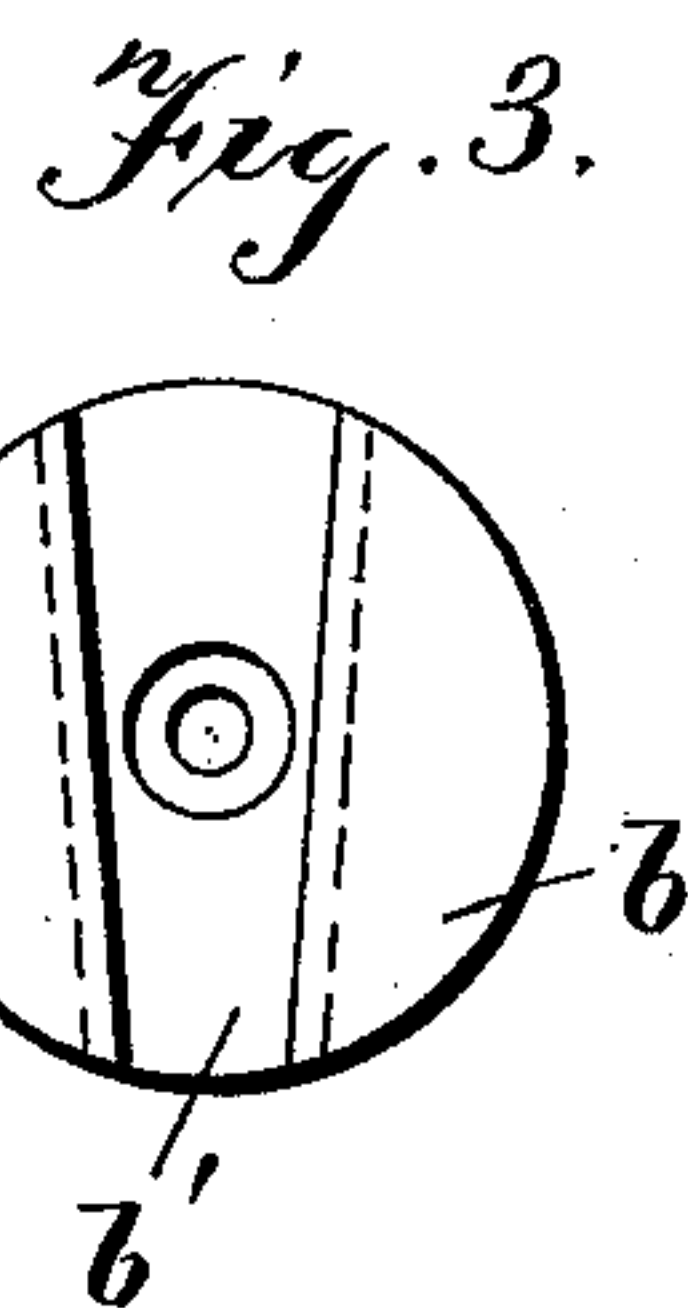
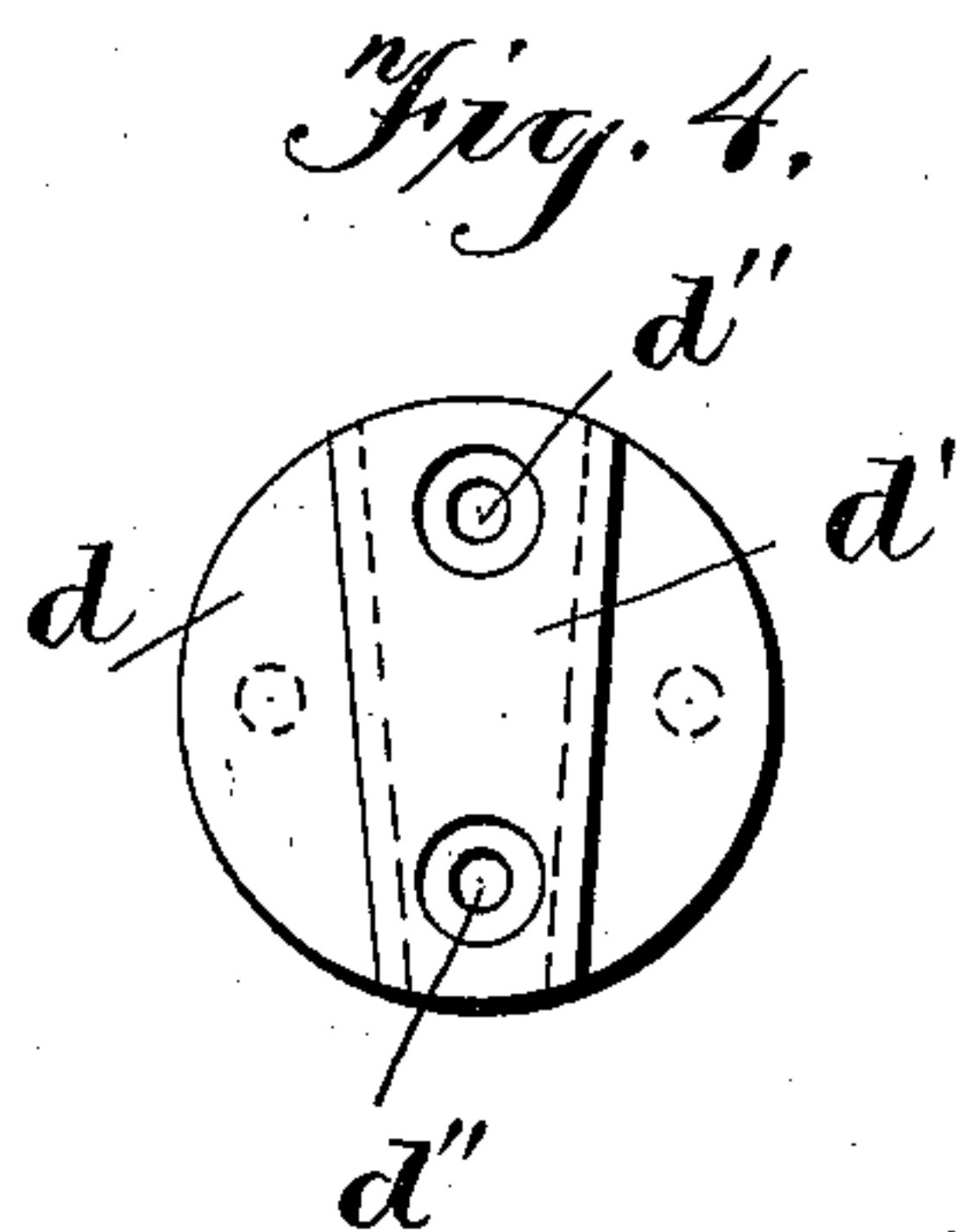
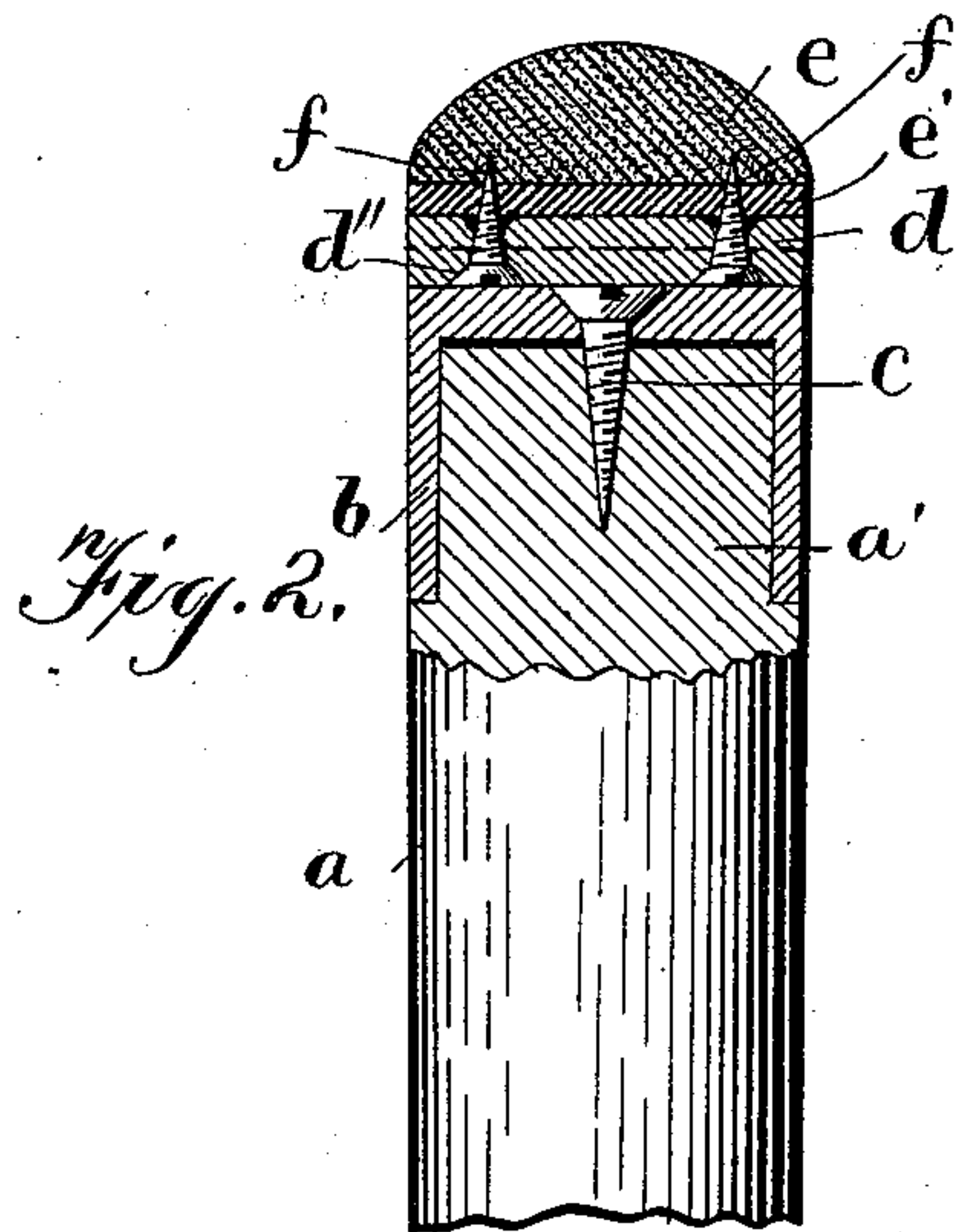
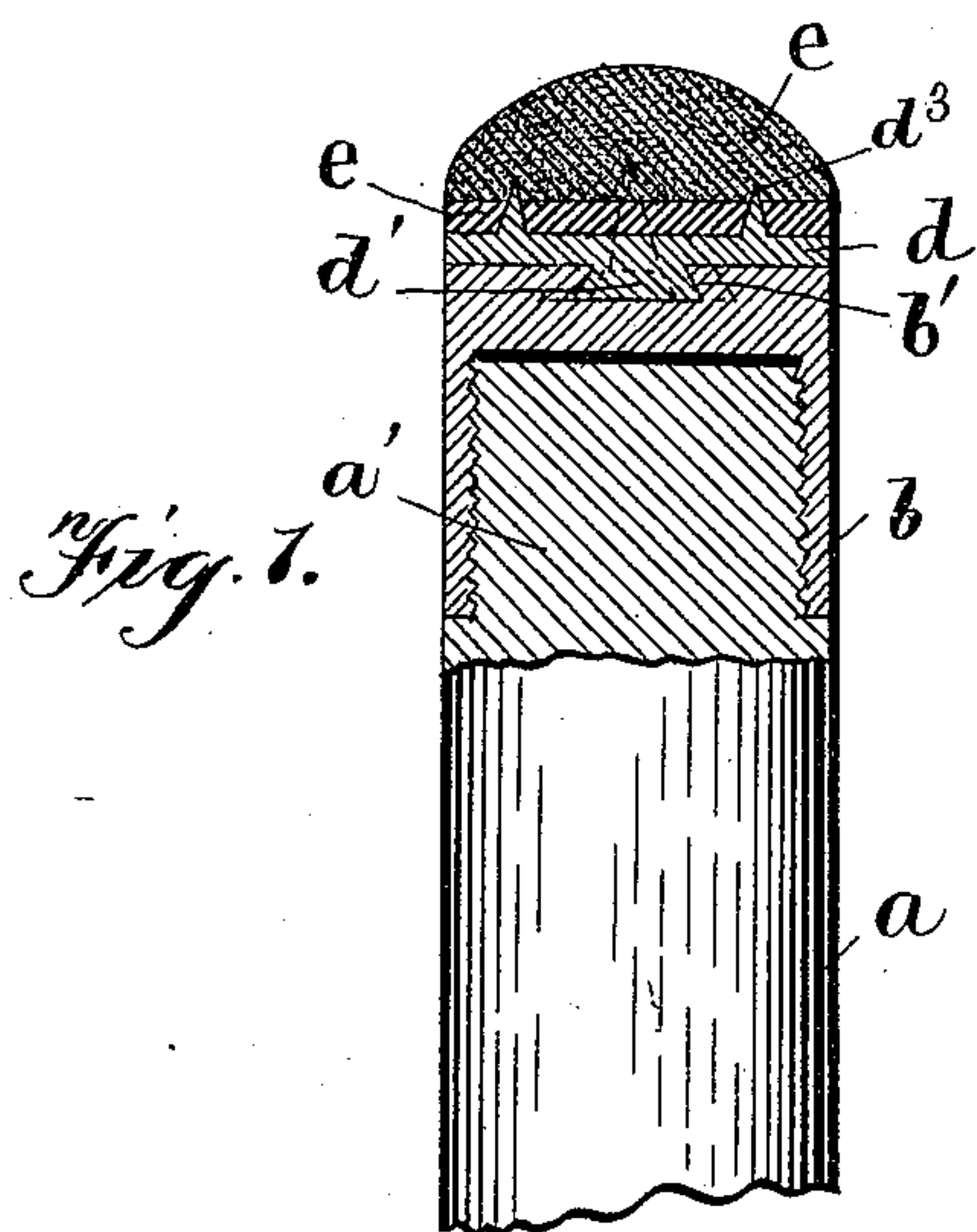


(No Model.)

N. B. WILDER.
CUE TIP FASTENER.

No. 594,165.

Patented Nov. 23, 1897.



Witnesses
Geo. C. French.
Wm. Barry.

Inventor
N. B. Wilder
Per Hubert E. Peck
Attorney

UNITED STATES PATENT OFFICE.

NORMAN B. WILDER, OF PROPHETSTOWN, ILLINOIS, ASSIGNOR OF ONE-HALF TO H. E. PADDOCK AND W. F. MILLIKAN, OF SAME PLACE.

CUE-TIP FASTENER.

SPECIFICATION forming part of Letters Patent No. 594,165, dated November 23, 1897.

Application filed March 15, 1897. Serial No. 627,555. (No model.)

To all whom it may concern:

Be it known that I, NORMAN B. WILDER, a citizen of the United States, residing at Prophetstown, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Cue-Tip Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain improvements in billiard-cue tips, and more particularly to improvements in detachable fastenings for cue-tips.

The object of the invention is to provide exceedingly simple, economical, and yet extremely strong and durable means for detachably securing the soft tips or cushions to the ends of cues, so that said tips can be quickly and easily removed and renewed whenever desired without the employment of glue or cement and also without the employment of the objectionable springs or catches or other complications of parts.

The invention consists in certain novel features of construction and in combinations and arrangements of parts, as more fully and particularly pointed out and described hereinafter.

Referring to the accompanying drawings, Figure 1 is an elevation, partially in section, of part of a cue provided with my invention. Fig. 2 is a corresponding view, the section being taken in a plane at right angles to the plane of the section of Fig. 1, a screw being shown fastening the ferrule on the end of the cue. Fig. 3 is an end view of the ferrule detached. Fig. 4 is a bottom view of the tip-carrying plate detached. Fig. 5 is a perspective showing the parts detached.

In the drawings, *a* is a cue of any desirable or usual construction, preferably, although not necessarily, formed with the reduced end or tenon *a'*. *b* is a metal cap or ferrule fitted on said reduced end of the cue and secured rigidly and firmly thereon in any suitable manner or by any suitable means. In Fig. 1 this ferrule is shown secured by screw-threads, while in Fig. 2 a screw *c* is shown passing through the closed end of the ferrule into the end of the cue to secure the ferrule, and, if

desired, glue or cement can be employed for securing the ferrule on the cue. The closed end of the ferrule is formed flat or square and smooth and is of sufficient thickness to permit the formation therein of the transverse undercut or dovetailed groove or mortise *b'*, extending centrally across the outer side of the closed end of the ferrule and opening through the outer surface or circumference thereof. Where it is desired to secure the ferrule on the cue by the screw *c*, a countersunk hole is formed in the bottom of the groove *b'* to receive said screw, so that its head will be flush with the bottom of the groove. This groove is tapered or gradually decreased in width from one end toward or to the other end for the purpose hereinafter mentioned.

d is the tip or cushion carrier or plate and is usually formed circular and flat on the side receiving the tip and also flat on the under or opposite side to rest and fit squarely against the end of the ferrule, with the exception of a transverse dovetailed tenon *d'*, arranged centrally across the under side of the plate and formed out of the same piece of metal of which the plate is formed. This tenon is formed to fit and slide in the groove in the ferrule and is also tapered from one end toward and to the opposite end, so that when the tenon is inserted in one end of the groove and pushed therein the plate moves laterally over and onto the end of the ferrule with its periphery flush with the periphery of the ferrule. By having the tenon and groove thus tapered the plate will be rigidly and firmly locked to the ferrule by the wedging action incident to forcing the tenon completely into the groove, so that the plate can be released and detached by a sharp tap or blow with the proper instrument.

One or more screw-holes *d''* are formed in the plate *d*, extending through the tenon, so as to give greater strength and bearing for the screws, and each hole is countersunk at the lower face of the tenon and also at the upper face thereof to receive the leather forced out by the screw. The upper or outer face of the plate can be provided with one or more spurs *d³*, usually, but not necessarily, formed integral therewith and preferably arranged on diametrically-opposite sides of a

plane including the two screw-holes d'' . By countersinking the upper ends of holes d'' the leather forced out by the screws does not raise the tip.

5 e is the tip or cushion, of any ordinary or suitable construction, having a convexed or rounding striking-surface and the flat inner face. These tips are usually formed of a soft or elastic leather or other suitable material
10 secured rigidly on a disk or backing e' of a tougher or harder leather or other suitable material, which forms the flat inner face. The flat inner face of the tip rests against the outer face of the plate d , with the periphery
15 of the tip flush with the peripheral edge of the plate. The tip is forced or pressed against the plate so that the spurs enter the backing-piece or hard portion of the tip, as shown in Fig. 1. The tip is secured detachably to the
20 plate d by the small screws $f f$, passing up through the holes d'' and entering the hard backing of the tip and forming a part thereof and drawing the tip tightly against and holding it firmly to the plate d .

25 It should be noted that in employing the construction herein described the leather cue-tips can be easily renewed and replaced by sliding the plate d from the ferrule and then removing the two screws $f f$, which entirely
30 releases the leather tip, and a new one can be attached quickly by the screws and the plate carrying the tip returned to and wedged in its normal position on the ferrule. These leather tips require constant care and atten-
35 tion and replacing, which attention and replacing are attended with much cost, difficulty, and annoyance where the tip is glued or cemented to a ferrule or directly to the end of the cue, as is generally done in practice.

40 The fastening device of the present invention can be manufactured and supplied at a low cost and permits most easy and inexpensive replacing and renewing of tips without in any way injuring the cue, ferrule, or tip
45 being removed.

It is evident that one or more screws or

other fastening means can be employed to detachably attach the tip to the plate, and also that the tenon and groove might be transposed.

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

1. A cue-tip fastener comprising the ferrule having a flat end formed with a central diametrical dovetailed groove or mortise opening through the edge of the ferrule, the detachable plate fitting on the end of the ferrule with its edge flush with the edge of the ferrule and formed at its inner flat face with the diametrical dovetailed tenon arranged to enter one end of the said groove and wedge therein, the detachable cushion or tip resting on said plate, and removable securing-screws passed through said plate from its inner side into and detachably holding the cushion thereto, so that by sliding the plate transversely from the end of the ferrule and removing said screws the cushion is released and a new one can be substituted, substantially as described.

2. A cue-tip fastener comprising the metal ferrule having at its end the diametrical dovetailed groove tapering from one end to the other and open at its ends, the plate having at its under side the dovetailed diametrical tenon tapering from one end to the other to wedge and lock in said groove, said plate having the transverse screw-holes countersunk at both ends and the rigid points or spurs at its outer face, the detachable cushion, and the removable screws passing through said holes into the cushion and drawing the same against the plate and the spurs into the cushion, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

NORMAN B. WILDER.

Witnesses:

HUBERT E. PECK,
DAVID E. MOORE.