

No. 774,838.

PATENTED NOV. 15, 1904.

L. H. C. DE FERNELMONT.  
DENTAL TOOTH PIN POINTING TOOL.  
APPLICATION FILED DEC. 16, 1903.

NO MODEL.

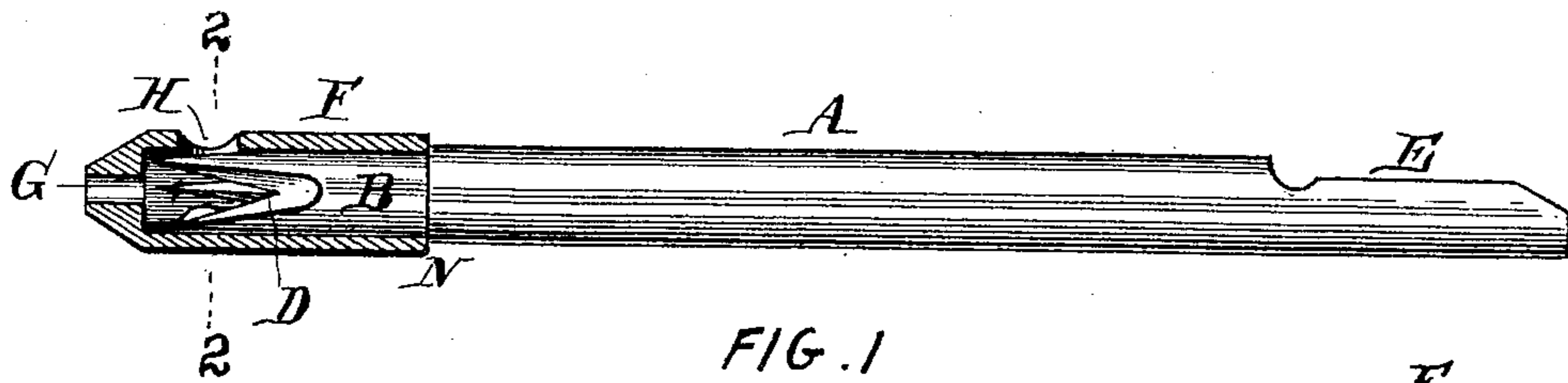


FIG. 1

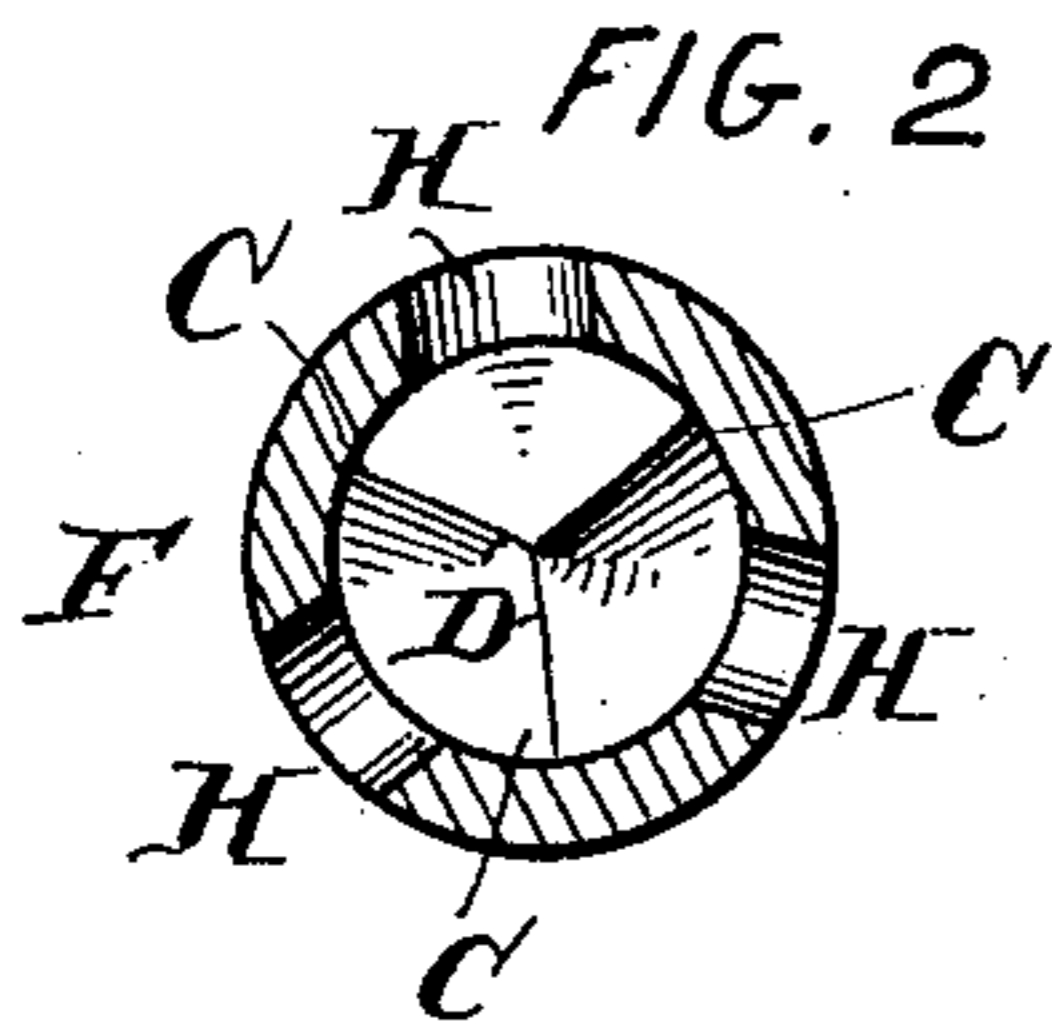


FIG. 2

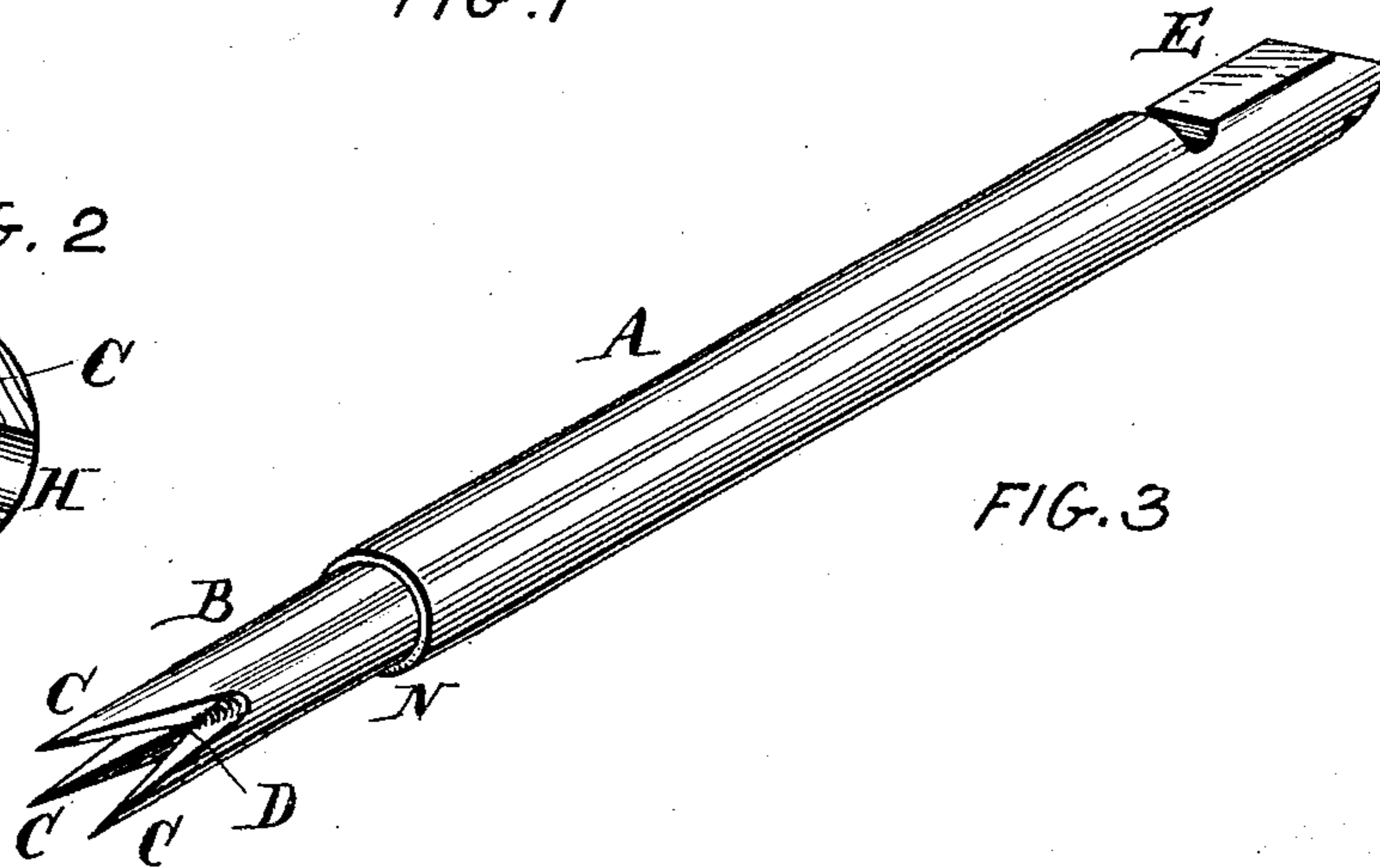


FIG. 3

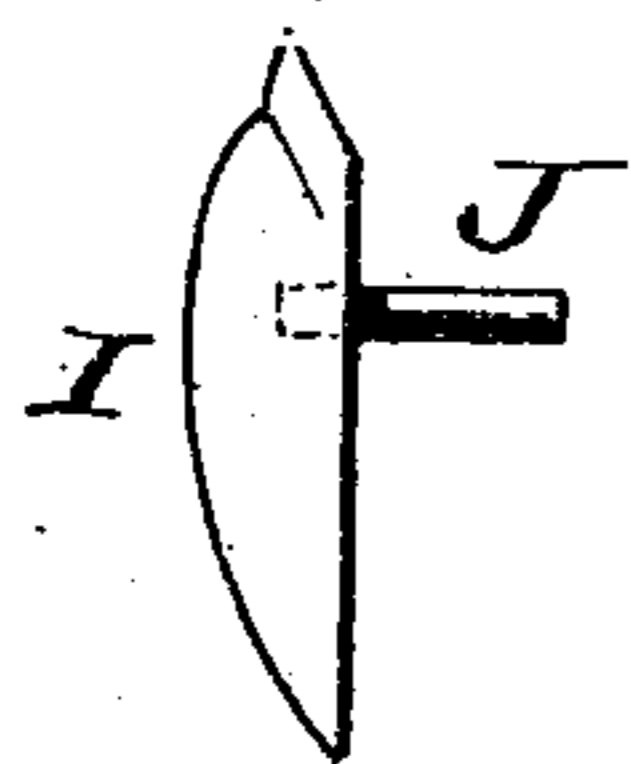


FIG. 4



FIG. 5

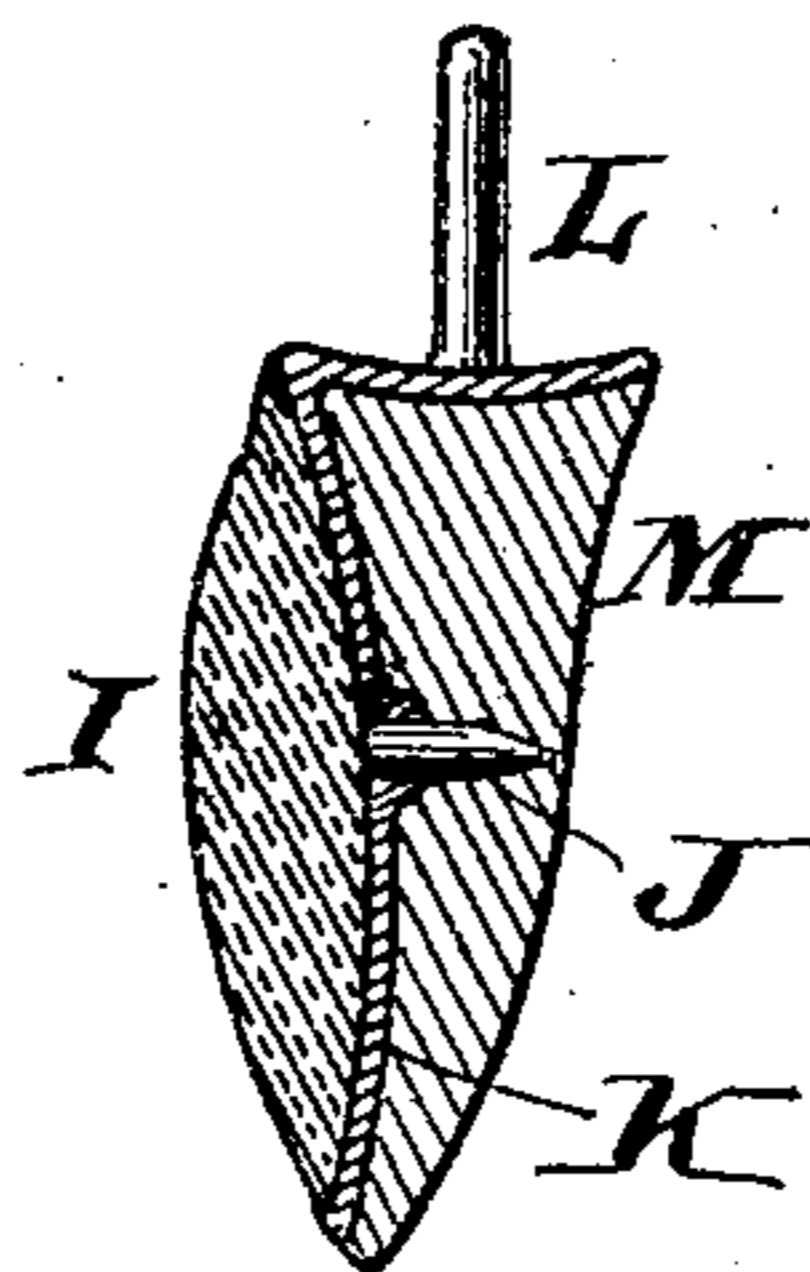


FIG. 6

Attest  
R. M. Kelly  
M. J. Egan

Inventor  
Leon H. C. de Fernelmont  
By his atty  
*[Signature]*

# UNITED STATES PATENT OFFICE.

LEON H. C. DE FERNELMONT, OF PHILADELPHIA, PENNSYLVANIA,  
ASSIGNOR OF ONE-HALF TO EUGENE P. M. DE FERNELMONT, OF  
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## DENTAL TOOTH-PIN-POINTING TOOL.

SPECIFICATION forming part of Letters Patent No. 774,838, dated November 15, 1904.

Application filed December 16, 1903. Serial No. 185,426. (No model.)

*To all whom it may concern:*

Be it known that I, LEON H. C. DE FERNELMONT, of the city and county of Philadelphia and State of Pennsylvania, have invented an  
5 Improvement in Dental Tooth-Pin-Pointing Tools, of which the following is a specification.

My invention has reference to dental tooth-pin-pointing tools; and it consists of certain improvements, which are fully set forth in  
10 the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to provide a special tool for dentists' use in the making of  
15 crown and bridge work wherein the enamel tooth is held to the gold backing by pins and which tool is designed for sharpening or pointing said pins, so that they shall be capable of being forced through the gold backing which  
20 is to hold the enamel tooth.

Heretofore it has been customary to employ the pins in a blunt form and to drill or punch the two small holes in the gold plate or shell to receive them. Great difficulty has been  
25 experienced in the endeavor to drill or punch the said small holes in exactly the proper position and distance apart. Moreover, the fit of the pins in the holes was often bad, and the borax flux would sometimes pass through to the enamel and after the gold-soldering was  
30 completed would cause unequal contraction and splitting of the tooth. By my invention the pins may be quickly pointed, so that they may be forced through the gold backing, and  
35 thus make their own holes. These holes will of necessity be exactly the shape of and in position to receive the pins without possibility of permitting the passage of the flux, and consequently my invention insures a more perfect  
40 result, while it at the same time reduces the cost and labor of the dentist.

In carrying out my invention I provide a tool preferably adapted to the ordinary dental engine and having one or more oblique  
45 cutting edges arranged laterally to the axis of rotation of the tool, and combined with this tool I provide a guide-shield which incloses

the cutting end and a guide for the pin to centralize it in the tool and an escape for the turnings from the pin to prevent clogging of  
50 the tool.

My invention will be better understood by reference to the drawings, in which—

Figure 1 is an elevation of my improved pointing-tool with the guide-shield in section.  
55 Fig. 2 is a cross-section of same on line 2 2. Fig. 3 is a perspective view of the tool with the guide-shield withdrawn. Figs. 4 and 5 are respectively side elevation and plan of a tooth and its pins, and Fig. 6 is a sectional  
60 elevation of a completed crown-tooth.

A is the shank of the tool and has one end E-shaped to fit the socket of the handpiece of the dental engine and the other end made with the cutter B. This cutter B is cylindrical out-  
65 side and of a diameter preferably slightly less than that of the shank A, so as to form a shoulder N, and has three cutting-prongs C, forming a conical cutting-socket D, the cutting edges being oblique and so arranged that  
70 they meet on the axis of the tool. The spaces between the prongs C permit the turnings or chips to escape. Fitting over this cutter B is a guide-shield F, which is cylindrical and is received against the shoulder N on the shank  
75 of the tool. It has its end closed over the cutter and provided with a central guide-hole G to receive and center the pin of the tooth which is to be pointed. I prefer to form the  
80 end of the guide-shield conical, as shown. The body of the guide-shield is also provided with apertures H through its wall in line with the spaces between the cutter-prongs C, so that the turnings or chips may freely pass away from the tool. The guide-shield is made re-  
85 movable, so that when necessary it may be removed to sharpen the cutter or clear it of any clogging or obstruction.

While I have ordinarily employed three prongs to the cutter, it is evident that any  
90 number desired may be used. One cutter-prong would perform the function, because the guide-hole G holds the pin up to the cutting edge of the cutter. Less strain is put

upon the pin where three cutting-prongs are employed, as they centralize and support the pin.

As the teeth I, Fig. 4, are sold on the market they have the pins J with blunt or flat ends; but these are pointed, as shown in Fig. 6, by use of my improved tool. After pointing the pins they are forced through the gold sheet K, which backs the enamel tooth, as shown in Fig. 6. This backing also supports the pin L for entering the root of the tooth in the jaw. M is the gold-solder, which is used to fill in the backing K and give it strength and also to constitute the real tooth for mastication. The pins J by being forced through the gold backing K leave no possibility for the borax flux to find its way through the holes around the pins to the enamel, and consequently the tendency of its destruction, as before pointed out as occurring in the cases where the holes are drilled or punched and the pins blunt, is entirely obviated. When the pins are forced through the backing, they form an outward flange, as shown in Fig. 6, which may be burnished tightly around the pin before applying the gold-solder M, and in this way an absolutely tight joint is secured and the backing securely held in position.

My invention may be employed for sharpening wires or pins for any purpose other than pins of teeth.

While I prefer the construction of my improved tool as shown, I do not confine myself to the details thereof, as the essential feature is a tool having an oblique cutting edge laterally disposed to the axis of the tool and directed inwardly, combined with a guide for holding the pin to the said cutting edge during the rotation of the tool.

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

1. A tooth-pin-pointing tool formed of a shank terminating in a cutter provided with prongs formed integral with the shank and

having inwardly-directed oblique cutting edges forming a central recess in the end of the tool between the prongs, and longitudinal V-shaped grooves between the prongs which meet at the center whereby said prongs are of greater thickness at their roots than at their ends, in combination with a pin-guide fitted over the prongs of the tool and having a centrally-disposed aperture for the pin in line with the recess between the several prongs.

2. A pin-pointing tool having a shank reduced in diameter at one end to form a shoulder N and terminating in a cutter formed of a series of prongs integral with the shank and having inwardly-directed oblique cutting edges forming a central recess in the end of the tool between the prongs for the reception of the pin to be cut, in combination with a guide-shield fitting over the cutting-prongs and having a guide-hole through its end in line with the axis of the tool and supported against the shoulder N of the shank.

3. A pin-pointing tool having a shank terminating in a cutter provided with prongs whose outer surfaces are cylindrical and which have inwardly-directed oblique cutting edges and forming a central recess in the end of the tool between the prongs for the reception of the pin to be cut, in combination with a cylindrical guide-shield fitting over the outer surfaces of the cutting-prongs and having a guide-hole through its end in line with the axis and central recess of the cutting edges of the tool, and also having lateral apertures through its side wall in line with the spaces between the prongs to permit the escape of turnings and chips.

In testimony of which invention I hereunto set my hand.

LEON H. C. DE FERNELMONT.

Witnesses:

R. M. HUNTER,  
R. M. KELLY.