

No. 745,722.

PATENTED DEC. 1, 1903.

C. M. FREEMAN.
DENTAL TOOL.

APPLICATION FILED OCT. 9, 1902.

NO MODEL.

Fig. 1.

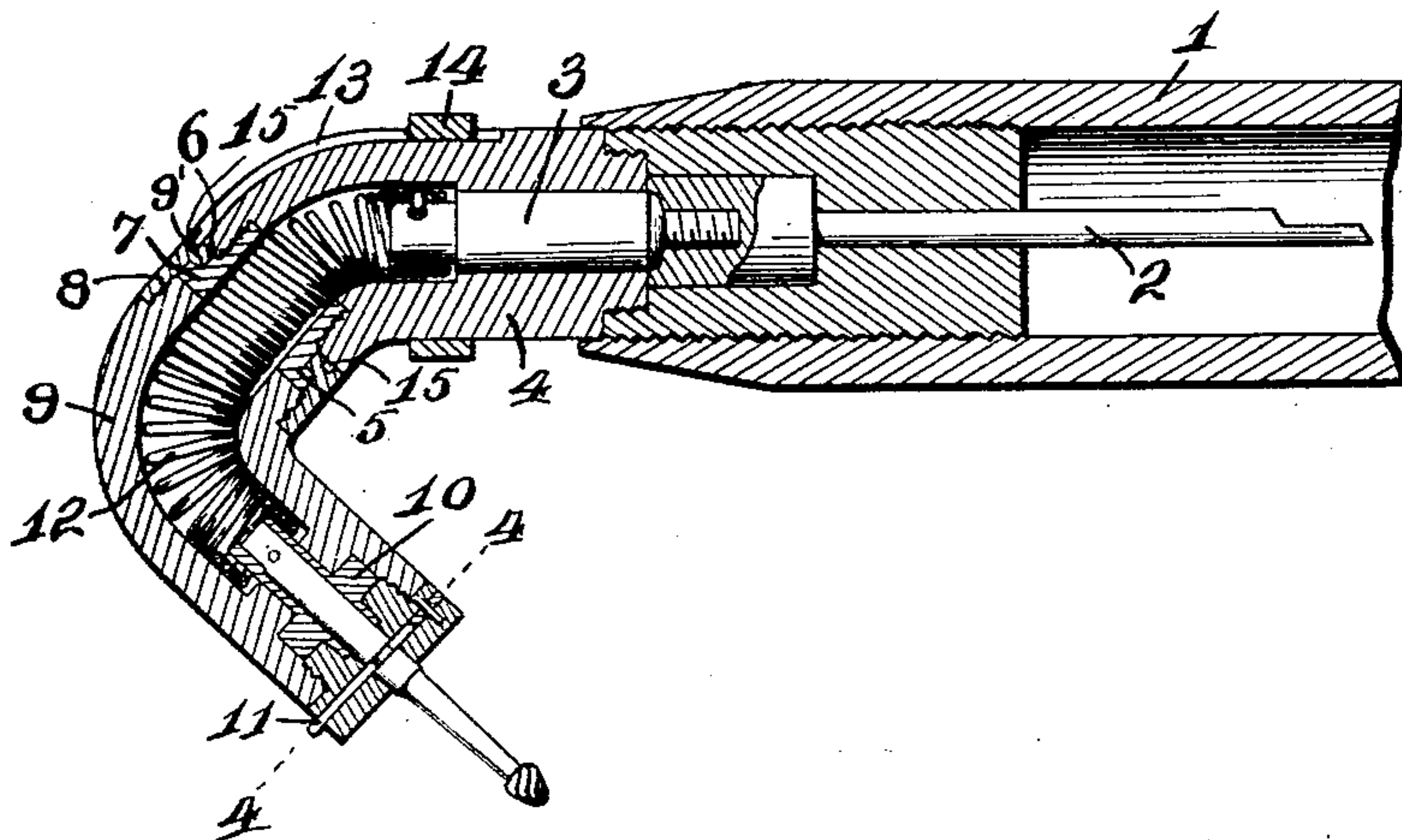


Fig. 2.

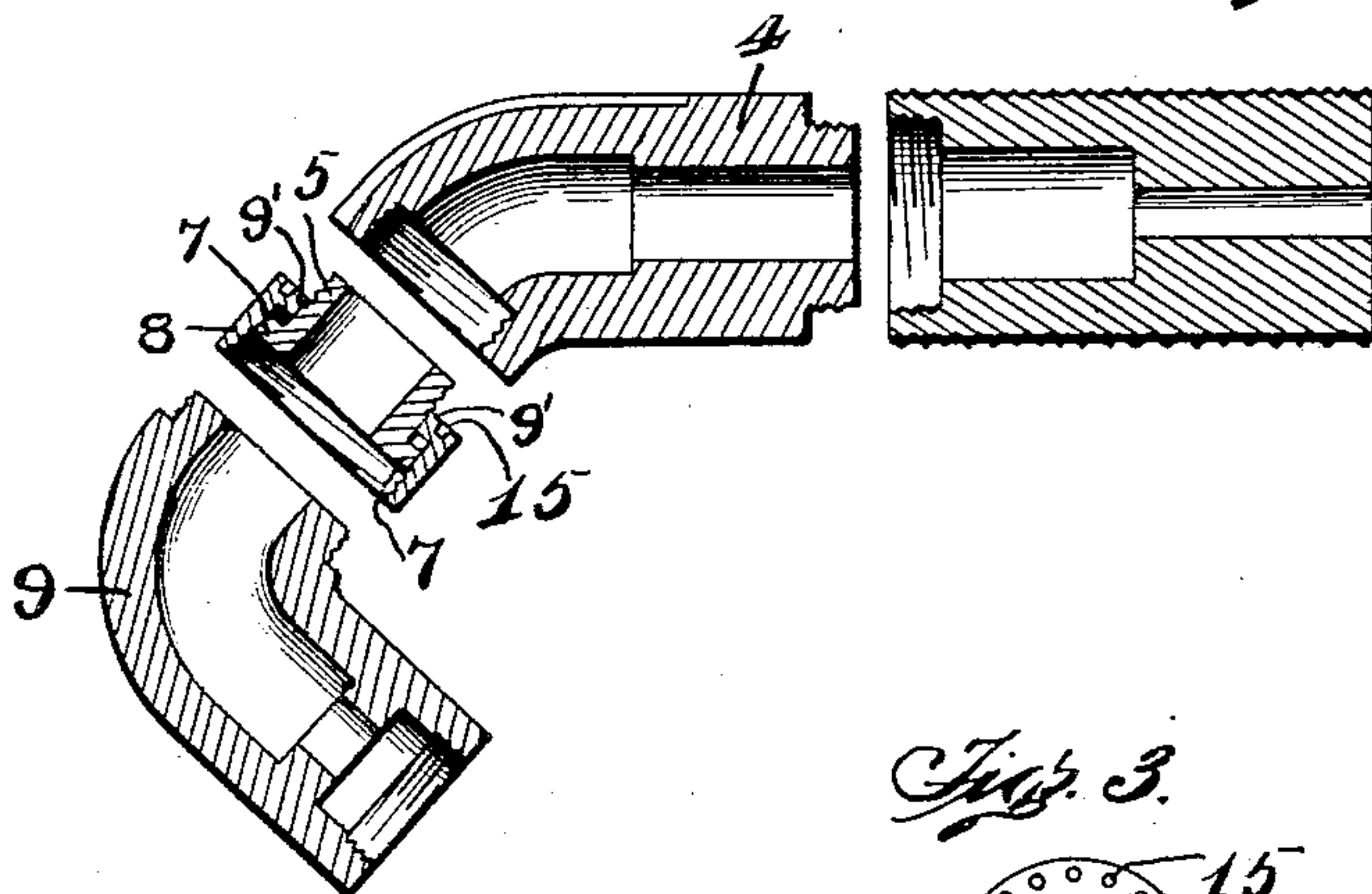


Fig. 3.

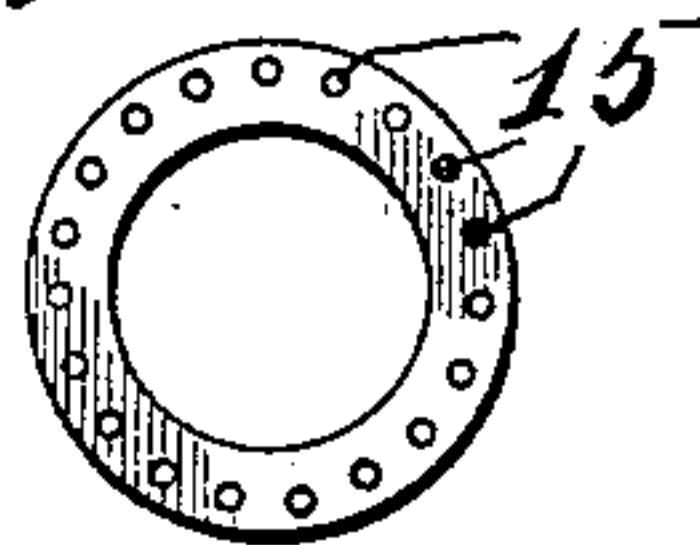
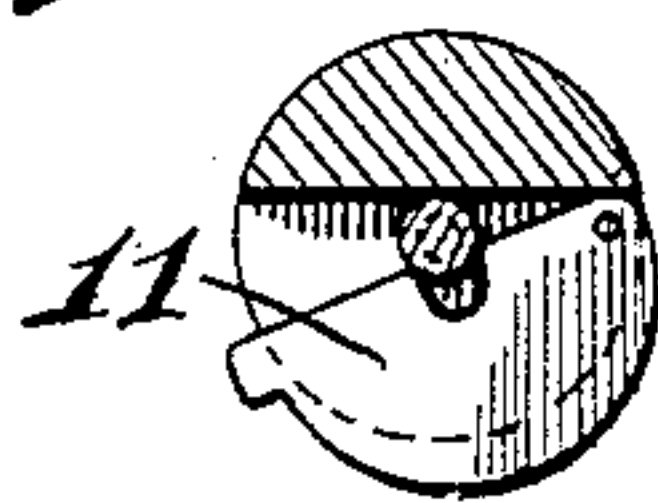


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

CHESTER M. FREEMAN, OF BALTIMORE, MARYLAND.

DENTAL TOOL.

SPECIFICATION forming part of Letters Patent No. 745,722, dated December 1, 1903.

Application filed October 9, 1902. Serial No. 126,586. (No model.)

To all whom it may concern:

Be it known that I, CHESTER M. FREEMAN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Dental Tools; 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.

The present invention relates to improvements in dental tools, and particularly to the construction of grip or handle for a dental engine.

The object in view is the provision of means for rotating a bur at either an acute or an obtuse angle to the handle, means being provided for the transmission of power through the handle.

With this and further objects in view the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a longitudinal central section through a portion of the handle of a dental engine embodying the features of the present invention. Fig. 2 represents a similar view of the parts detached. Fig. 3 represents a detail plan view of the locking-sleeve connection. Fig. 4 represents a section on the plane of line 4-4 of Fig. 1.

Referring to the drawings by numerals, 1 indicates any suitable handle for a dental engine, inclosing a rotary shaft 2 of the common and well-known type, into the head of which is threaded a rod 3. Surrounding rod 3 and threaded or otherwise suitably secured to the handle 1 is a section 4. The outer end of the section 4 receives a union 5, which is threaded into the same and is provided near its outer end with an annular smooth portion 6 and at its end with an annular flange 7, said union being passed through a coupling 8, formed with an annular inwardly-extending shoulder 9', having its inner surface normally engaging the smooth portion 6 of union 5 and its edge contacting with the edge of flange 7 for preventing disconnection of the parts and at the same time permitting rotation of coupling 8 and the parts carried there-

by. Threaded into or otherwise suitably secured to coupling 8 is a bur-carrying section 9, curved so as to have its outer end extending at an angle to the handle 1. A tool-carrying member 10 is rotatably arranged within section 9 and formed of the ordinary construction for receiving the shank of a bur, any suitable means, as a cam 11, being employed for preventing longitudinal movement of said bur.

The section 4 has its outer end bent, as clearly indicated in Fig. 2, so that the union 5 enters the same at an obtuse angle, and the outer end of section 9 being bent extends at an angle to said union, whereby rotation of the section 9 will cause the same to assume various degrees of angles from an acute to an obtuse angle with respect to the handle 1.

A coiled spring 12 is connected to the outer end of rod 3 in a suitable manner for preventing rotation of either without rotating the other, said spring passing through the curved passage formed through section 9 and union 5 and coupling 8 and having its outer end similarly connected with the member 10, whereby rotation of shaft 2 will rotate the bur carried by said member.

In operation the section 9 is rotated to the necessary degree for positioning the bur carried thereby at a desired angle relative to handle 1 and is locked in position by a finger 13, carried by a sleeve 14, surrounding and slidably mounted upon section 4, said finger moving in a longitudinal groove formed in said section and entering one of a plurality of apertures 15 formed in the edge of coupling 8. The finger 13 is permitted to remain within the respective aperture 15 until it is desired to alter the angle of section 9, when the said finger is withdrawn by the movement of the sleeve 14 rearwardly, whereupon the said section 9 will be free to be adjusted as desired and may again be locked in the manner described.

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

1. In a device of the class described, the combination with a suitable handle, a union connected therewith and provided with an annular flange, a coupling inclosing the flange of said union and formed with a shoulder en-

gaging the same, a tool-carrying section retained by said coupling and extending at an angle to said handle, a rotating shaft within said handle, tool-carrying means within said
5 section, and means of connection between said shaft and tool-carrying means permitting rotation of said section and extending through said union and coupling, substantially as described.

10 2. In a device of the class described, the combination with a suitable handle, of a tool-carrying section retained thereby and extending at an angle thereto, means rotatably securing said section to said handle, and a
15 longitudinally-movable finger engaging said connecting means for locking the section against rotation, substantially as described.

20 3. In a device of the class described, the combination with a suitable handle, a grooved section carried thereby, a tool-carrying section, a coupling rotatably connecting said

sections, and formed with apertures in its end adapted to be brought into register with the groove of the first-mentioned section, and a longitudinally-movable locking member in
25 said groove, substantially as described.

4. In a device of the class described, the combination with a suitable handle, of a section carried thereby, a tool-carrying section, a coupling rotatably connecting said section
30 and formed with a series of apertures, a sleeve slidably mounted upon and surrounding said first-mentioned section, and a finger carried by said sleeve adapted to be passed into one
35 of said apertures for locking the parts, substantially as described.

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

CHESTER M. FREEMAN.

Witnesses:

LULU S. LANGE,
EVA LINTHICUM.