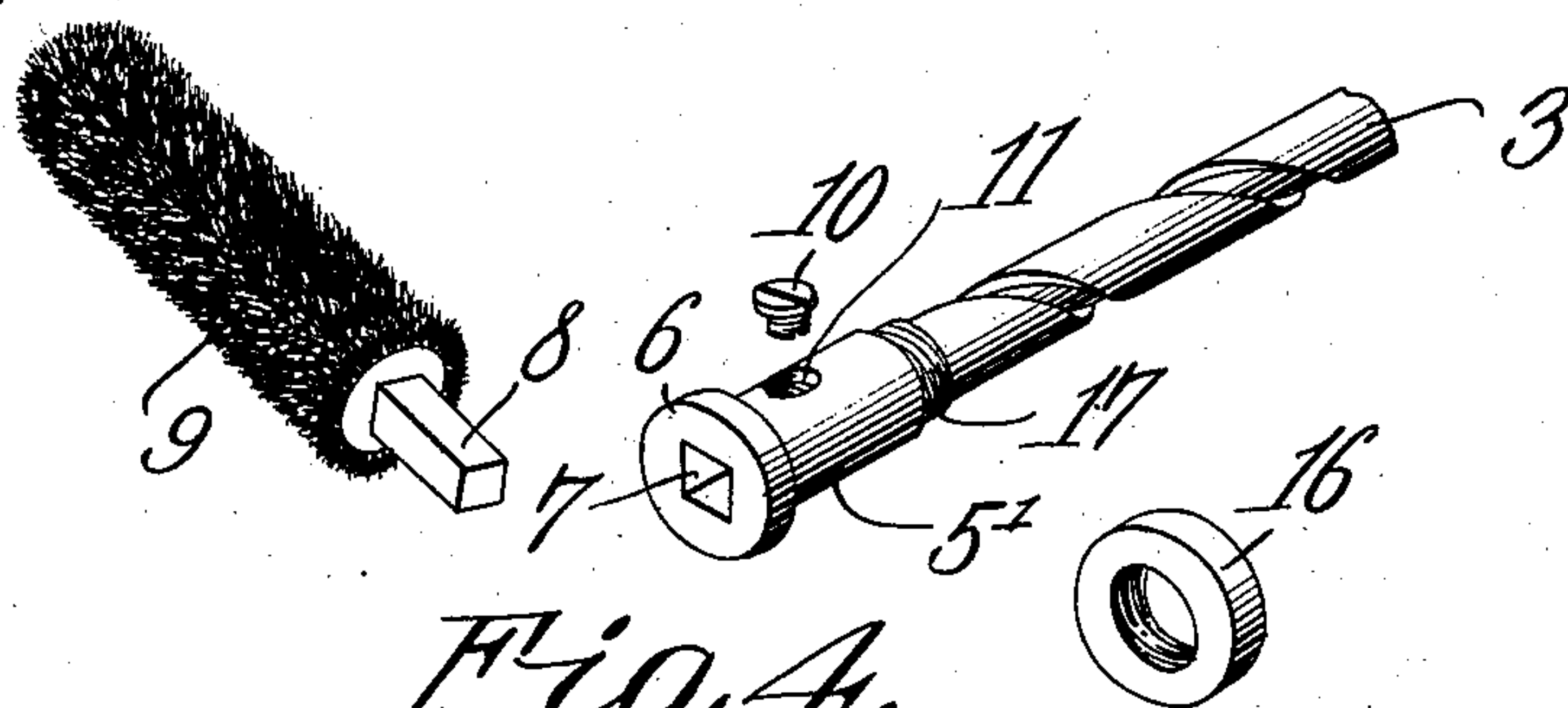
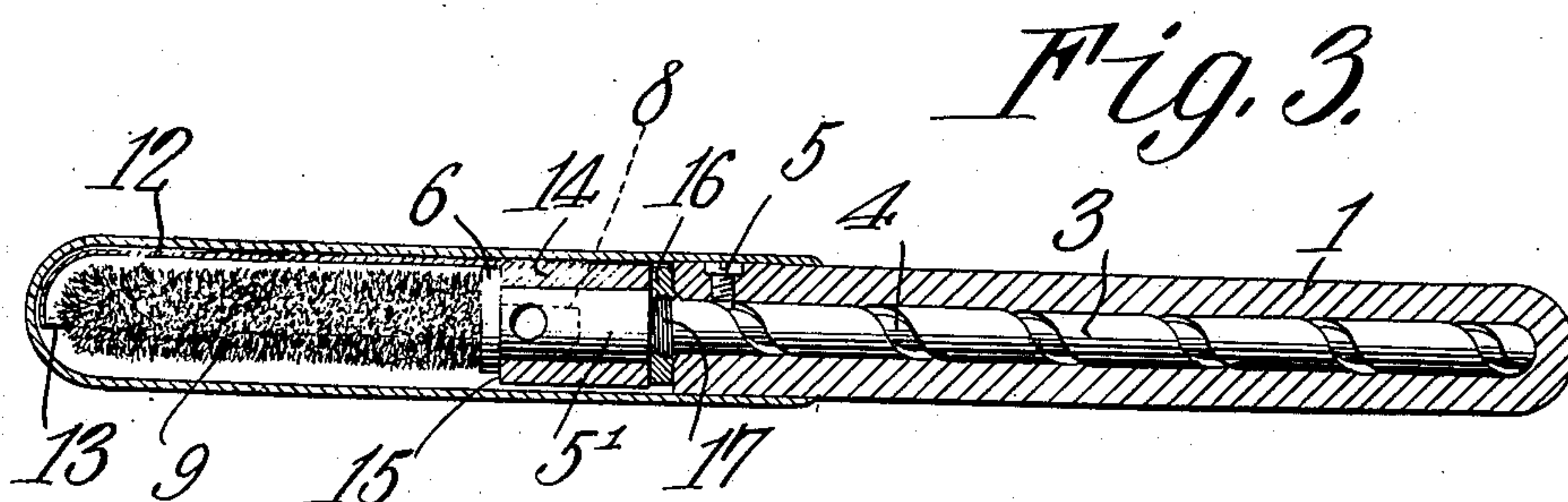
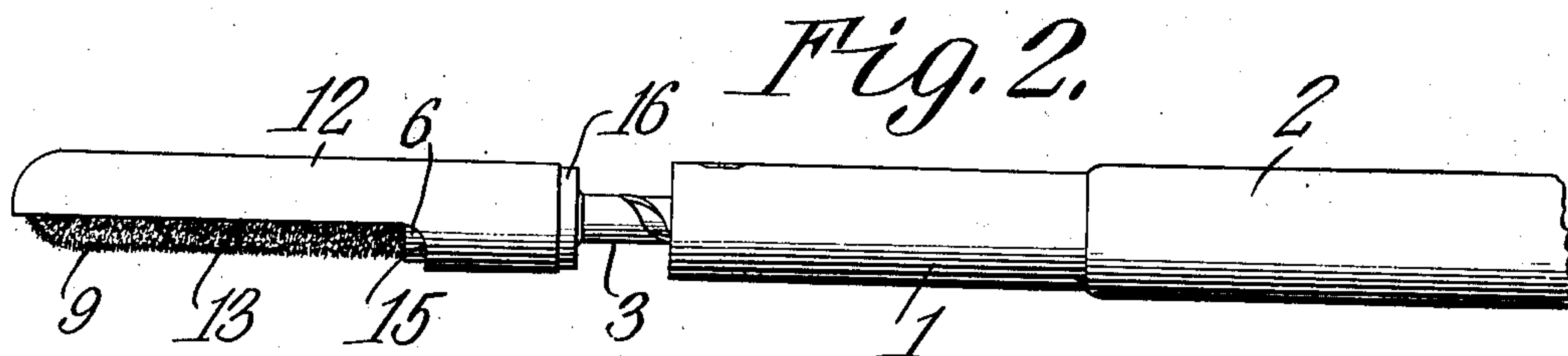
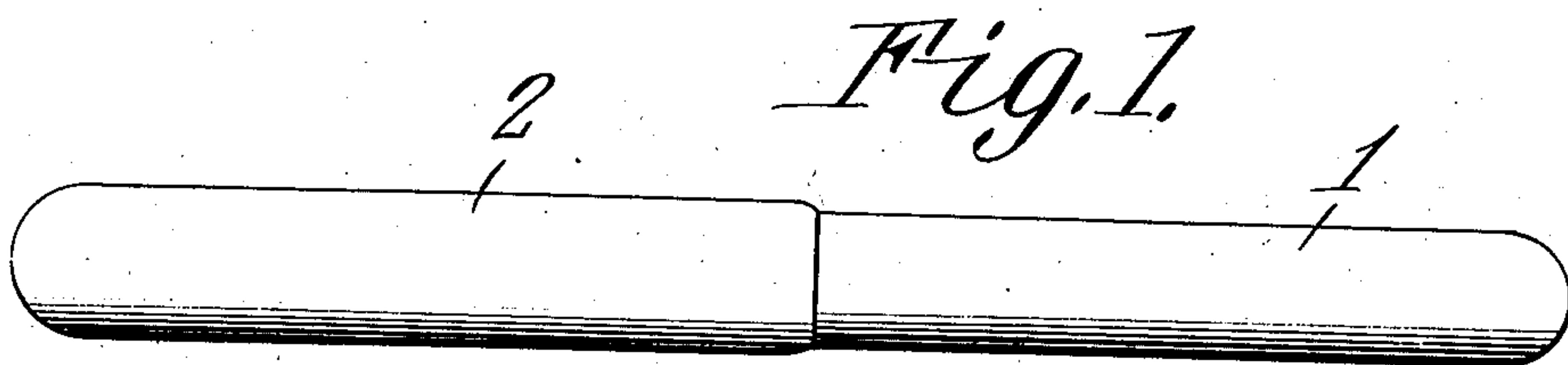


No. 860,107.

PATENTED JULY 16, 1907.

T. REMINGER.  
TOOTH BRUSH.

APPLICATION FILED FEB. 21, 1907.



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# UNITED STATES PATENT OFFICE.

THEODORE REMINGER, OF TIFFIN, OHIO.

## TOOTH-BRUSH.

No. 860,107.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed February 21, 1907. Serial No. 358,674.

*To all whom it may concern:*

Be it known that I, THEODORE REMINGER, a citizen of the United States, residing at Tiffin, in the county of Seneca and State of Ohio, have invented a new and useful Tooth-Brush, of which the following is a specification.

This invention relates to tooth brushes of that type in which the brush proper is attached to a rotatable spindle whereby the brush is given a rotary motion by the reciprocation of the handle so as to remove the particles lodged on and between the teeth.

The invention has for one of its objects to improve and simplify the construction and operation of devices of this character so as to be comparatively easy and inexpensive to construct, and convenient and simple to manipulate and thoroughly efficient.

A further object of the invention is the provision of a tooth brush having a removable cap which attaches to the handle for inclosing the brush when not in use so that the article may be conveniently carried in the vest pocket.

A still further object of the invention is to provide a guard or shield for the rotary cleaning element or brush thereby to prevent the latter from lacerating or otherwise injuring the gums and cheek of the operator when using the same.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a side elevation of the tooth brush with the removable cap in place, as when the tooth brush is supported in the pocket, or not in use. Fig. 2 is a similar view of the tooth brush ready for use. Fig. 3 is a longitudinal sectional view of Fig. 1. Fig. 4 is a perspective view of the rotary brush, operating shaft and clamping collar in detached position.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved tooth brush forming the subject matter of the present invention includes a hollow reciprocatory handle and a removable cap 2 which engages the inner end of the handle, these parts being made of metal or other suitable material.

Arranged to move back and forth on the handle 1 when the cap 2 is removed is a shaft 3 having a spiral groove 4 of comparatively coarse pitch and into which projects the inner end of a screw 5, or equivalent means whereby the longitudinal movement of the handle 1 causes rotary movement of the shaft 3.

One end of the shaft 3 is provided with a cylindrical portion 5' and a terminal head 6, the latter being preferably circular in shape, as shown and provided

with a squared socket or recess 7 for the reception of the correspondingly squared shank 8 of the rotary cleaning element or brush 9.

The shank 8 is secured to and mounted for rotation with the shaft 3 by means of a screw or similar clamping device 10 which passes through a threaded opening 11 formed in the cylindrical portion 5' of the shaft and bears against the adjacent face of the shank 8.

As a means for preventing the brush 9 from lacerating or otherwise injuring the lining of the mouth when the brush is in operation there is provided a guard or shield consisting of a hood 12 having its lower portion cut away, as indicated at 13 so as to expose one side of the brush and provided with a tubular extension 14 which forms a bearing for the cylindrical portion 5' on the shaft 3 thus permitting said shaft to rotate within the tubular extension 14.

The head 6 of the operating shaft 3 bears against an annular shoulder 15 formed on one end of the tubular member 14, said head being held in engagement therewith by means of a clamping collar 16 which engages a threaded portion 17 formed on the shaft 3 and bears against the adjacent end of the tubular member 14, as shown.

When the cap 2 is attached to the handle 1, as shown in Fig. 1 the tooth brush resembles in appearance an ordinary fountain pen and may be conveniently carried in the vest pocket of the owner, the rotary brush being housed and protected by the cap.

When it is desired to use the tooth brush the cap 2 is removed from one end of the handle and placed on the opposite end thereof after which the brush is positioned against the teeth and held in position by grasping the guard or shield 13. The tooth brush is then held with the rotary brush or cleaning element in contact with the teeth and said brush rotated by moving the handle 1 back and forth, the brush being held in position by grasping the closed end of the guard or shield with the fingers of one hand while reciprocating the handle with the other. By thus reciprocating the handle the brush is rotated first in one direction and then in the opposite direction so that the teeth are thoroughly cleaned.

From the foregoing description it will be seen that there is provided an extremely simple, inexpensive and efficient device admirably adapted for the attainment of the ends in view.

Having thus described the invention what is claimed is:

1. A device of the class described including an operating shaft having an enlarged head having a socket formed therein, a brush having a threaded portion, and provided with a squared shank seated in said socket, a shield forming a partial closure for the brush and provided with a tubular extension embracing the shaft and bearing against the head thereof, a clamping member engaging the threads

on the shaft and bearing against the tubular member for locking the latter in engagement with the head, and a reciprocatory handle operatively connected with the shaft for rotating the latter.

- 5 2. A device of the class described including an operating shaft provided with a spiral groove and having one end thereof formed with an enlarged head, a brush detachably secured to the head, a shield forming a partial closure for the brush and provided with a tubular extension bearing  
10 against the head, a clamping collar threaded on the shaft and bearing against the tubular extension for forcing the

latter in engagement with the head, a hollow reciprocatory handle inclosing the shaft, and a pin carried by the handle and engaging the spiral groove in the shaft for rotating the latter when the handle is reciprocated.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

THEODORE REMINGER.

Witnesses:

W. F. NOBLE,

CHAS. F. KAHLER.