W. L. ELLERBECK.

TOOTH POLISHING DEVICE.

APPLICATION FILED MAY 9, 1917.

1,335,825. Patented Apr. 6, 1920.

FIG. 1.

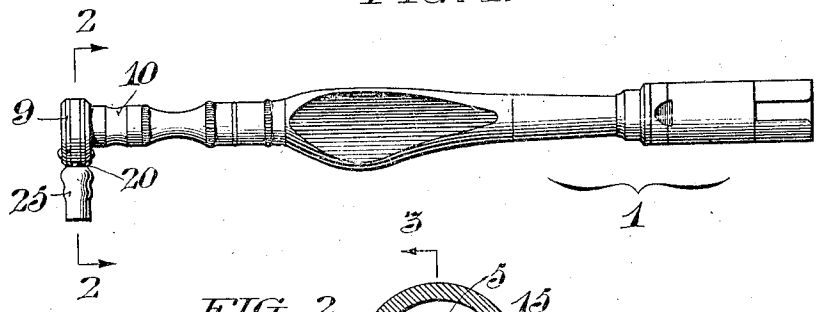


FIG. 2.

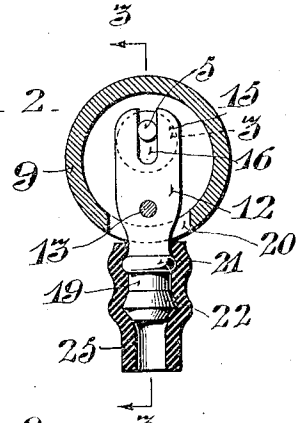


FIG. 3.

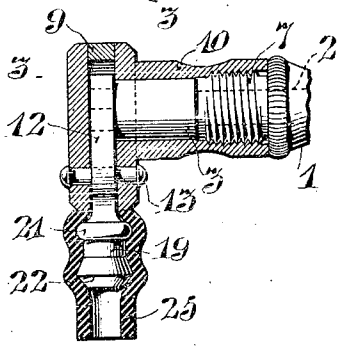


FIG. 4.

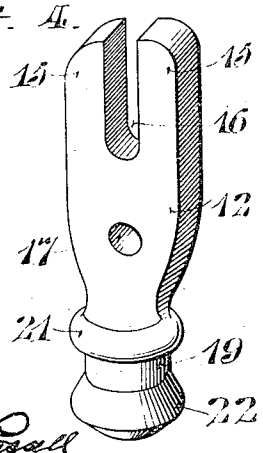
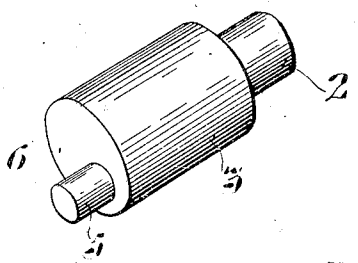


FIG. 5.



WITNESSES:

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TOOTH-POLISHING DEVICE.

1,335,825. Specification of Letters Patent. Patented Apr. 6, 1920.

Application filed May 9, 1917. Serial No. 167,404.

To all whom it may concern:

Be it known that I, WILLIAM L. ELLERBECK, a citizen of the United States, and a resident of Salt Lake City, county of Salt Lake, State of Utah, have invented certain new and useful Improvements in Tooth-Polishing Devices, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates particularly to that class of implements which impart a vibratory motion to the polishing tool, and is especially directed to the polishing tool and the mechanism whereby it is actuated.

The principal objects of my invention are to provide a device that will efficiently clean and polish the teeth, and to provide such device with means for removably holding the polishing tool, so as to be readily replaced to afford sanitation.

Other objects of my invention are to provide an improved device of the class described with a tool carrier, so constructed and arranged as to readily receive, and securely hold cut lengths of flexible tubing.

My invention comprehends an improved dental device in which the tool carrier is so mounted as to effect an oscillatory motion to the tool.

Specifically stated the form of my invention as hereinafter described provides a dental hand-piece with a rotatable member having an eccentric projection and a pivoted tool carrier having bifurcations embracing said projection and arranged to be oscillated thereby, and having means thereon for removably retaining cut lengths of flexible tubing.

My invention also includes all of the various novel features of construction and arrangement as hereinafter more definitely described.

In the accompanying drawings Figure 1 is a side elevational view of a tooth polishing device conveniently embodying my invention; Fig. 2 is a vertical transverse sectional view of said device, taken on the line 2—2 in Fig. 1; Fig. 3 is a fragmentary longitudinal sectional view of the forward end of said device taken on the line 3—3 in Fig. 2; Fig. 4 is a perspective view of the oscillatory tool carrier, *per se;* and Fig. 5 is a fragmentary perspective view of the rotary cylinder which is coöperative with said tool carrier to effect its oscillation.

In said figures the handle 1 comprises a well known form of dental hand-piece capable of being connected with a dental engine, and having the rotary shaft 2, terminating in an enlarged cylindrical body 3, which is provided with an eccentrically disposed wrist-pin 5 projecting forwardly from its forward face 6 as best shown in Fig. 5.

As best shown in section in Fig. 3, the forward end of the handle 1, is provided with a reduced threaded extension 7, forming a bearing for said shaft 2, and providing a support for the removable preferably circular housing or casing 9, which is provided with the tubular internally threaded barrel 10 in threaded engagement with the extension 7.

When thus assembled the wrist-pin 5, projects into the housing or casing 9, and being eccentrically disposed on the rotary cylinder 3, traverses a circular path therein about the axis of the shaft 2.

The tool carrier 12 is pivotally mounted within the casing 9 on the pintle 13 whose axis is disposed near the periphery of said casing, and said tool carrier has its inner end bifurcated, the bifurcations 15 thereof forming the slot 16 and embracing the wrist-pin 5, which is arranged to traverse said slot in its cycle of movement to effect the oscillatory movement of the tool carrier about the axis of its pintle 13, which extends through a suitably provided aperture 17 in said tool carrier.

The outer portion 19 of the tool carrier 12 projects laterally from the housing 9 through a suitably provided opening 20 in its cylindrical wall, and is preferably cylindriform, and provided with the relatively spaced ridges 21 and 22, by which the tool 25, which may be conveniently formed of cut lengths of tubing, composed of yielding material such as rubber, may be frictionally engaged with said tool carrier.

It will be observed that a device constructed in accordance with my invention will be highly sanitary, as the cleaning and polishing tool being readily attachable and detachable, and so formed as to be inexpensive

may be discarded and replaced after each operation; this also obviates the necessity of sterilizing said tool.

A device constructed in accordance with my invention is advantageous in that it may be employed with equal efficiency in massaging the gums.

I do not desire to limit my invention to the precise details of construction and arrangement herein set forth, as it is obvious that various modifications may be made therein without departing from the essential feature of my invention as defined in the appended claim.

Having thus described my invention I claim:—

In a device of the class described, the combination with a hand-piece having a rotatable shaft provided with a wrist-pin, of a casing having a projecting bearing boss forming a bearing for the free end of said shaft, removably connected in threaded engagement with said hand-piece, and slidably removable from said shaft, a tool carrier pivotally mounted in said casing, and having its inner end bifurcated and embracing said wrist-pin in coöperative relation therewith to effect its oscillation when said shaft is rotated, and a tool formed of flexible material detachably engaged with said tool carrier.

In witness whereof, I have hereunto set my hand this 30th day of April, A. D. 1917.

WILLIAM L. ELLERBECK.

Witnesses:
EARLE L. COPPOCK,
DAGMAR E. SCHADE.