W. L. HUNTER.

DENTAL JIG POLISHER.

APPLICATION FILED JUNE 1, 1914.

1,151,361. Patented Aug. 24, 1915.

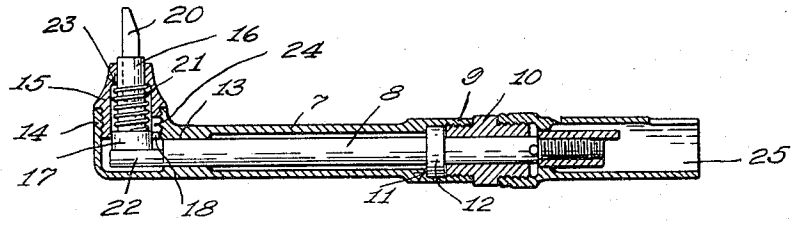


FIG. 1

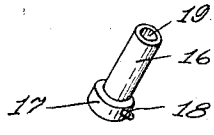


FIG. 3

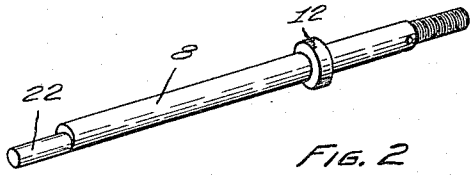


FIG. 2

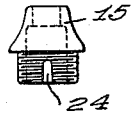


FIG. 4

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DENTAL JIG-POLISHER.

1,151,361. Specification of Letters Patent. Patented Aug. 24, 1915.

Application filed June 1, 1914. Serial No. 842,066.

To all whom it may concern:

Be it known that I, W. LEE HUNTER, citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a certain new and useful Improvement in Dental Jig-Polishers, of which the following is a specification.

My invention relates to improvements in dental jig-polishers adapted to be employed by dentists in the operation of polishing and cleaning teeth in the treatment of pyorrhea and the object of my improvement is to provide a polisher which shall embody simple and efficient mechanism for converting the rotary motion of a shaft into a reciprocatory motion at right angles to the axis of said shaft which mechanism shall be so constructed that all of the working parts thereof shall be completely inclosed whereby such working parts shall be protected from dirt and dust and be effectively prevented from engaging with exterior objects.

I accomplish this object by devices illustrated in the accompanying drawings in which—

Figure 1 is a longitudinal sectional view of a dentist's jig-polisher embodying my invention; Figs. 2 and 3 are views in perspective of details of the same; and Fig. 4 is a view in side elevation of a detail of the same.

Referring to the drawings throughout which like reference numerals indicate like parts, 7 is a tubular casing that serves as a housing for the drive shaft 8 of my jig-polisher, such casing 7 being provided with an enlarged upper end 9 that is threaded to receive a bearing piece 10 and is narrowed at a suitable point to provide a shoulder 11 with which an integral collar 12 that is formed on the shaft 8 may engage to prevent such shaft from moving endwise such collar 12 also being adapted to engage with the bearing piece 10 where such bearing piece is screwed into the casing 7 as more clearly shown in Fig. 1, and the casing 7 is further provided at its other end with a reduced bearing portion 13 and with a hollow internally threaded right angular projection 14 into which a tip 15 is adapted to be screwed.

A reciprocatory plunger 16, more clearly shown in Fig. 3, has one end provided with an enlarged head 17, within the periphery of which head is disposed an outwardly projecting pin 18, and the other end is provided with a hole 19, that is adapted to receive and hold a dental instrument 20, and such plunger 16 is disposed within the right angular projection 14 of the casing 7 and is adapted to be pressed inwardly by a compression spring 21 to cause the head 17 to engage with the side of an eccentric pin like portion 22 that is provided on the end of the shaft 8 whereby the plunger 16 will be moved outwardly by the pin 22 and inwardly by the spring 21 on each rotation of the shaft 8, the spring 21 engaging with the inside surface of the head 17 and with a shoulder 23 in the tip 15 to press the outside surface of the head 17 against the pin 22 at all times and the pin 18 on the periphery of the head 17 moves in a slot 24 that is provided in the cap 15, as the plunger 16 reciprocates.

The outer end of the shaft 8 is provided with any suitable mechanism to adapt it to be connected with a suitable dental driving mechanism, not shown, and is positioned within a tubular housing member 25 that is adapted to be screwed on the bearing member 10, as more clearly shown in Fig. 1.

The shaft 8 is rotated to cause the plunger 16 to be reciprocated at right angles to the axis of the shaft 8 whereby instruments may be easily inserted and used in certain parts of a person's mouth that are not easily accessible to a straight instrument.

Manifestly changes in the form of the various details embodied in my jig-polisher may be resorted to without departing from the spirit of my invention or sacrificing any of its advantages.

What I claim is:—

In a dental jig polisher, the combination with a tubular casing having an extension on one end thereof, disposed at right-angles thereto, of a shaft adapted to rotate within said casing, an eccentric pin provided on one end of said shaft adjacent to said extension with one side in alinement with said shaft, a tool holding plunger within said extension, a tip threaded into said extension and having a slot in one side opening at the bottom of the tip, an enlargement on the inner end of said plunger bearing on the eccentric pin, a shoulder formed on the in-

ner face of the tip adjacent the outer end thereof, a radial pin carried by the plunger enlargement and adapted to travel in said tip slot, and a coil spring surrounding the plunger engaging at one end the tip shoulder and at the other end the plunger enlargement.

In witness whereof, I hereunto subscribe my name this fifteenth day of May A. D., 1914.

W. LEE HUNTER.

Witnesses:
F. B. MATHENY,
O. JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."