

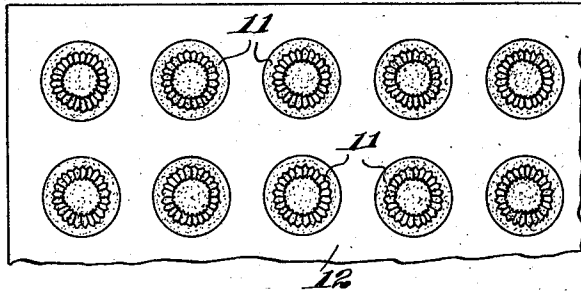
Oct. 4, 1927.

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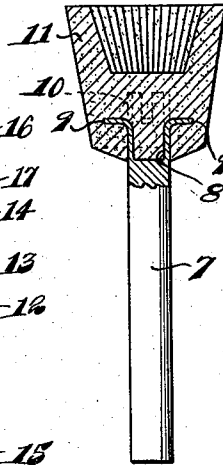
E. L. CHOTT  
TEETH CLEANING DEVICE

Filed Sept. 21, 1925

*Fig. 5*

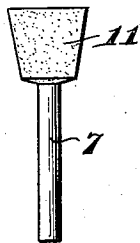


*Fig. 1*

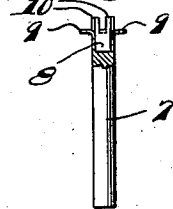


*Fig. 6*

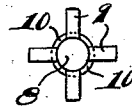
*Fig. 2*



*Fig. 3*



*Fig. 4*



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## TEETH-CLEANING DEVICE.

Application filed September 21, 1925. Serial No. 57,526.

My invention relates to improvements in teeth cleaning devices, adapted especially to be used by dentists and to be operated by the conventional dental engines for cleaning and polishing the teeth, and my invention has for its object the provision of an improved construction of this character which is highly efficient in use and capable of very economical manufacture.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 represents an enlarged central longitudinal section through an instrument made in accordance with my present invention,

Fig. 2 is a side elevational view of the instrument,

Fig. 3 is a side elevational view of the mandrel with a part thereof shown in section,

Fig. 4 represents an enlarged plan view of the top end of the mandrel,

Fig. 5 represents a top plan view of a mold body, fractionally shown, the same being illustrated as containing a number of my improved instruments as vulcanized therein, and

Fig. 6 represents a fragmentary section of the mold body, showing my improved instruments as vulcanized therein, and further showing base and top members applied thereto.

The preferred embodiment of my invention, as illustrated in the accompanying drawing, comprises a rod-like mandrel 7 which is adapted to have one end inserted within and secured to the usual mandrel holder of the flexible shaft on the conventional dental engine. The opposite end of the mandrel, herein shown to be the top end thereof, is provided with a central bore 8; and struck from the wall defining this bore are interval-spaced jutting parts 9 which are bent laterally as shown. In view of the provision of these interval-spaced laterally directed jutting parts, the remainder of the wall around the bore 8 consists of interval-spaced jutting parts 10 which are directed

axially of the mandrel. In practice, the central bore having been drilled out or otherwise produced, the jutting parts may be rapidly and inexpensively produced by means of a suitable punch and die mechanism.

Having thus produced the jutting parts on the end of the mandrel, my next step is to mold, compress and vulcanize the contact piece or polishing member 11 about the jutting parts and upon the mandrel. For this purpose I preferably employ a mold body 12 in which is provided a bore 13 suitable for the reception of the mandrel 7, and a matrix 14 with which said bore 13 has central communication. The bore 13 is of less length than the mandrel 7 so that when the mold body 12 is placed on a base plate 15, the jutting parts of the mandrel will be raised above the bottom wall of the matrix and also centrally thereof so that the raw rubber material may be forced by compression completely around the same. The matrix 14 is of the form necessary to give the contact piece the form desired. As herein shown, the contact piece 11 is cup-shaped in form. After the raw rubber material is placed in the matrix, a top member 16 is applied to the mold body, the said top member being provided with a boss 17 depending therefrom, and of a form necessary to produce the desired inner contour of the cup-shaped contact piece 11. Upon the application of pressure to the top member 16, the depending boss 17 compresses the raw rubber material into the bore 8, about the jutting parts 9 and 10 and also upon that portion of the mandrel which projects into the matrix. Compression of the raw rubber material also serves to increase its density and structural strength. Having thus compressed the raw rubber material about the jutting parts and upon the mandrel, the mold body with the base member 15 and top member 16 properly clamped thereto (clamping means not shown) is placed in a suitable vulcanizer where the temperature is raised to the point necessary for vulcanizing the contact piece about the jutting parts and upon the mandrel.

The mold body is preferably made with a large number of bores and matrices for the accommodation at one time of a large number of mandrels. By making the mold body

so that it will accommodate a battery of mandrels at one time, the cost of manufacture may be effectually reduced.

The polishing instruments of the present invention may be manufactured and marketed so cheaply that dentists can well afford to use a fresh polishing instrument on each patient and thereby avoid all danger from this source of transferring infection from one patient to another.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. A device of the class described comprising a mandrel; jutting parts at one end thereof; a bore in one end of said mandrel, said jutting parts being bent from the wall, defining said bore and a rubber contact piece

compressed and vulcanized about said jutting parts and within said bore to the bottom thereof and embedding the same therein, substantially as described.

2. A device of the class described comprising a mandrel; axial and lateral jutting parts provided thereon; a bore in one end of said mandrel, said jutting parts being bent from the wall, defining said bore and a rubber contact piece compressed and vulcanized upon said mandrel and within said bore for embedding therein said axial and lateral jutting parts and said bore, substantially as described.

3. A device of the class described comprising a mandrel provided with a bore in one end thereof; parts juttingly bent from the wall defining said bore; and a rubber contact piece compressed and vulcanized upon the end of the mandrel containing said bore and within said bore and embedding therein said jutting parts and said bore for holding said rubber contact piece fixed to said mandrel for rotation therewith, substantially as described.

In testimony whereof I have signed my name to this specification.

EDWARD L. CHOTT.