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E. L. CHOTT

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DENTAL APPARATUS

Filed June 10, 1931

Fig. 1

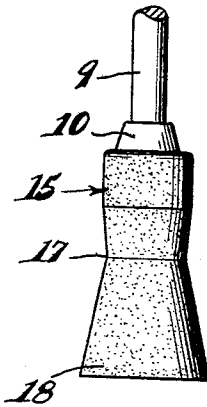


Fig. 4

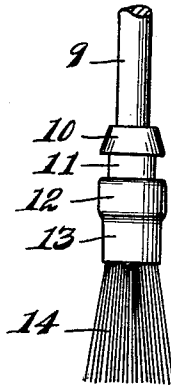


Fig. 7

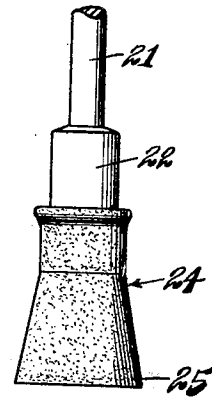


Fig. 2

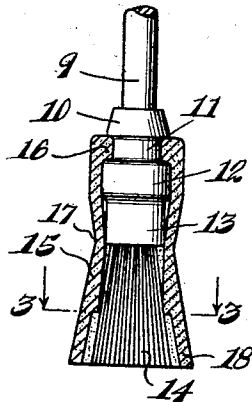


Fig. 5

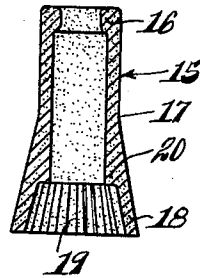


Fig. 8

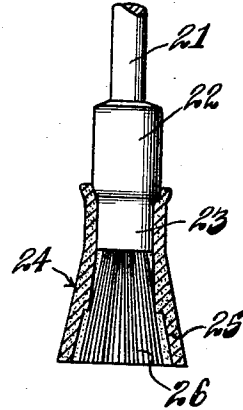


Fig. 3

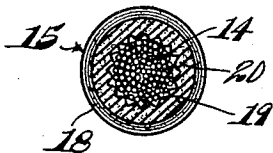
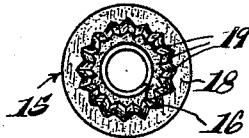


Fig. 6



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# UNITED STATES PATENT OFFICE

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## DENTAL APPARATUS

Application filed June 10, 1931. Serial No. 543,408.

This invention relates to certain new and useful improvements in dental apparatus, and more particularly to apparatus for use in cleaning teeth and massaging gums.

5 An object of my invention is the provision of dental apparatus which is economical, and yet which will perform more than one function in one operation by the operator. The apparatus is adapted to be used  
10 with the conventional dental engine, and may be used for cleaning the teeth, and at the same time will be very useful as a massage instrument in treating the under-gum margins.

15 The union of a dental cleaning cup and the brush in my apparatus causes each of the articles united to perform its function more efficiently. Some of the many advantages obtained are hereinafter set out. Because  
20 of the construction of the cup it will aid materially in retaining the bristles of the brush in a close compass and consequently will aid materially in giving the bristles additional strength. When the device is to be used  
25 with any cleaning powder or abrasive material, the cup, surrounding the bristles will aid in retaining the material used in close proximity to the bristles, and at the same time will prevent the bristles themselves  
30 from entering beneath the gum margins.

It is known that sometimes the bristle socket of the brush causes injury to the gums and teeth by striking against them, but in my apparatus this difficulty is obviated because of the buffing action of the cup. At  
35 the same time the bristles of the brush aid in forming a support for the dental cup, and consequently give it additional strength for the massaging operation. I have provided  
40 means for limiting backward longitudinal movement of the cup, and although the cup is retained upon the brush head, still it may be removed by the operator at will.

Other objects will appear hereinafter.  
45 I have illustrated my invention in the accompanying drawing, in which:

Fig. 1 is a side elevational view of my device;

50 Fig. 2 is a view similar to Fig. 1 with the cup being shown in section;

Fig. 3 is a view in section, taken substantially on the line 3—3 of Fig. 2;

Fig. 4 is a side elevational view of the brush and means for retaining the cup in proper position when applied;

Fig. 5 is a sectional view of the form of cup to be used with the brush illustrated in Fig. 4;

Fig. 6 is a bottom plan view of the cup illustrated in Fig. 5, and shows more particularly the serrated periphery of the cup;

Fig. 7 is an elevational view of a modified form of my invention; and

Fig. 8 is a view showing the brush in elevation and the cup in section.

As illustrated in Figs. 1 and 2, one form of my device comprises a metal shank 9 provided with an offset beveled shoulder 10 having a peripheral groove 11, another offset peripheral shoulder 12, and a crimped portion 13 for engaging bristles 14.

Cup 15 used with this brush, may be made of rubber or like material, and may be provided with an inwardly turned bead 16 for engagement by groove 11. Intermediate the ends of cup 15 it will be noted that portion 17 tightly engages crimped portion 13 and the intermediate and upper portions of bristles 14. Toward the lower end of cup 15 may be provided flared end 18 having a serrated internal periphery 19 which is of advantage in cleaning and polishing the teeth. It may be noted that the walls of cup 15 are thicker and heavier at point 20, and because of this construction provide additional support for bristles 14 and for the flared end 18.

A modified form of my invention is illustrated in Figs. 7 and 8, and comprises a shank 21 having a beveled and offset shoulder portion 22 and a crimped bristle engaging portion 23.

It can be seen that the cup 24 used with this modified form of brush, may be of less height than cup 15 used with the other form. Because of the frictional engagement of cup 15 on crimped portion 23, and also because of offset shoulder 22, the backward longitudinal movement of cup 24 on crimped portion 23 is limited or entirely obviated. In

other respects cup 24 is similar to cup 15 in that it is provided with a flared end 25 having an internally serrated periphery 26. The modified form illustrated in Figs 7 and 8 may be used interchangeably with the form of brush and cup illustrated in the remaining figures, and will perform its functions when so used.

It can now be seen that the advantages pointed out above are only a few of those to be realized from the use of my apparatus. In addition to those, it will be noted that because of the simple construction the cup may be removed from either form and thus sterilization of the instrument may be greatly facilitated. However, because of the cheapness of construction, the cup and brush may be discarded after use, if so desired. It can be seen also that because of the construction the cup will perform its functions in a better manner than if it were used alone, and the brush will likewise be used to a greater advantage than when it is used by itself. In addition to these advantages, the teeth may be cleaned, polished and brushed, and at the same time the under-margins of the gums may be massaged so as to keep them in a healthy condition and free from pyorrhea.

It can readily be seen that various structural alterations may be made without departing from the spirit and scope of my invention, and hence I do not wish to be limited to the precise structural details illustrated, but wish to avail myself of all changes coming within the scope of the appended claims.

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

1. In apparatus of the character described, the combination of a brush with a dental cup having longitudinally extending internal circumferential serrations.
2. In an apparatus of the character described, a dental cup having a longitudinal bore, a thickened wall portion, and a flared end portion having an internally longitudinally and circumferentially serrated periphery.
3. An apparatus of the character described the combination of a brush having a shank and an offset peripheral shoulder having a groove therein, with a dental cup having a longitudinal bore and an inturned bead thereon.

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

EDWARD L. CHOTT.