

July 3, 1934.

R. G. STEVENS

1,965,009

RUBBER FINGER STALL TOOTHBRUSH

Filed March 13, 1933

Fig. 1.

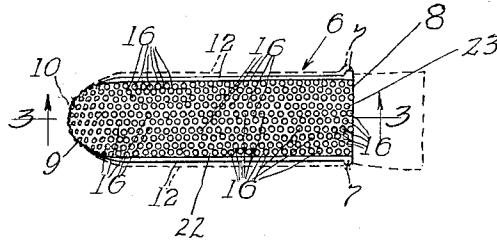


Fig. 2.

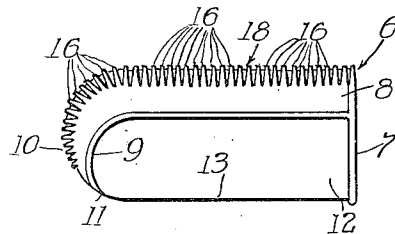


Fig. 3.

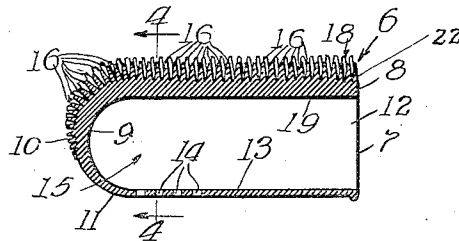


Fig. 6.

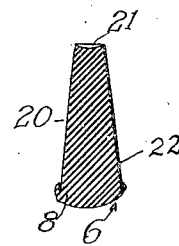


Fig. 4.

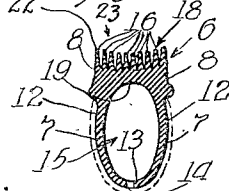
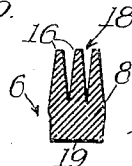


Fig. 5.



Witness:

Harry P. L. White

Inventor
Roderick G. Stevens.

Cox & Moore,
attys.

UNITED STATES PATENT OFFICE

1,965,009

RUBBER FINGER STALL TOOTHBRUSH

Roderick G. Stevens, Chicago, Ill.

Application March 13, 1933, Serial No. 660,442

3 Claims. (Cl. 15—188)

This invention relates to a tooth brush and particularly to a finger stall tooth brush made of rubber or other similar flexible material.

The primary object of the present invention is to provide a new and improved rubber finger stall tooth brush having certain characteristics to maintain the teeth or bristles of the brush in a predetermined angular position relative to its base regardless of the flexure of the finger engaging portion of the brush.

Another object of the invention is to provide a tooth brush having a relatively thick and relatively non-stretching tooth supporting base portion which extends over the end of the body of the brush to permit the brush to more efficiently perform the operation for which it is intended.

A further object is to provide a brush having a relatively non-stretching base and a freely stretchable body portion whereby the base portion will not stretch during use and the teeth or bristles thereof will be maintained in normal parallelism.

A still further object of the invention is to provide a new and improved tooth brush which has tapering flexible cup ended bristles made of rubber-like material; which is adapted for massaging the parts and areas of the teeth and gums to not only produce cleanliness but free flow of saliva which is helpful to the gums, appetite and general mouth circulation; and which brush is also provided with important advantages permitting the brush to be used for the purpose of cleansing the entire mouth including the tongue, roof of the mouth and inaccessible areas which are sensitive to all other forms of brushes.

Numerous other objects and advantages will be apparent throughout the progress of the following specification.

The accompanying drawing illustrates a selected embodiment of the invention and the views therein are as follows:

Fig. 1 is a detail elevation of the top side of the tooth brush showing the same applied on the finger of a person.

Fig. 2 is a detail side elevation of the improved rubber finger stall tooth brush.

Fig. 3 is a detail sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a detail sectional view on the line 4—4 of Fig. 3.

Fig. 5 is a detail sectional view showing some of the teeth or bristles and the base.

Fig. 6 is a detail sectional view of a tooth on a greatly enlarged scale showing a bristle or tooth provided with a vacuum cupped end.

Referring to the several views of the drawing, 6 designates a finger stall or cot having a body portion 7 which is made of relatively thin yieldable stretchable material, such as rubber, and a supporting or base portion 8 which may also be made of rubber but which is substantially non-stretchable. The base portion extends over the closed end 9 of the cot or stall as indicated at 10 and merges with the body portion as indicated at 11. The side walls 12 merge with the base 8 and are continuous with the bottom 13 which is perforated, being provided with a plurality of perforations 14. The body portion 7 with the base 8 is continuous and forms a finger receiving recess or pocket 15 into which the finger of a person is inserted for the manipulation and operation of the brush. The base 8 and the end portion 9 is provided with a plurality of upstanding integral rubber teeth 16, the teeth extending from the end 17, about the part 9, and almost to the point 11 where the end merges with the bottom 13. The base 8 and its cooperating integral teeth 16 is made concave transversely as indicated at 18, Fig. 4, and provides a pocket to receive a ribbon of tooth paste and to assist in scrubbing the teeth and manipulating the gums during use. The teeth 16 at the end portion 9, permit the brush to be positioned to permit it to engage all the surfaces of the teeth and the crevices therebetween and particularly to permit scrubbing and massaging of the teeth and gums on the back side thereof. The underside of the base is curved as indicated at 19, Fig. 4, to fit the contour of a person's finger.

In Fig. 4 there is shown a type of tooth or bristle which is particularly adaptable for creating a vacuum action or abrasiveness on the teeth, gums and other parts of the oral cavity. The teeth or bristles 16, which extend upwardly from the base 8, may be provided with teeth 20, Fig. 6, which are dishd at their free ends to provide vacuum cups 21.

The outside rows of bristles may be made tapered as indicated at 22, while the inner rows of bristles may be made relatively straight as indicated at 23 and provided with the vacuum cup ends 21. The invention, however, contemplates the distribution, shape, size and contour of the bristles in any desired form and arrangement as set forth in the appended claims.

The entire brush is preferably made of rubber, although it can be made of other similar material. The primary features of the present brush are the provision of a thickened concavo-concave base 8 which is relatively non-stretchable coop-

erating with a finger receiving housing or body 7 which is stretchable within reasonable limits. This construction permits the teeth or bristles of the brush to remain in their initial parallel position regardless of the flexing or stretching of the body portion. In other words, the body portion of the brush can be stretched to a considerable extent without in any way stretching the base and consequently causing the bristles to attain a radial position relative to the axial center line of the brush. Another primary feature of the invention is the provision of the thickened end upon which the bristles or teeth extend so as to permit practically universal use and operation of the gums and particularly permitting the brush to be used for the purpose of cleaning the back of the teeth and the back of the gums. The bristles or teeth 16 are made of flexible material and are integral with the base, it being preferable that the entire brush be molded integrally from the same composition. The teeth or bristles are short enough to afford traction or the desired abrasiveness on the teeth but yet long enough to give a brushing effect.

The present brush contains advantages not disclosed in conventional types of tooth brushes and permits the cleansing of the entire mouth including the tongue, roof of the mouth, and inaccessible areas which are sensitive to other forms of brushes. Massaging of the parts mentioned not only produces cleanliness but also produces a free flow of saliva which is helpful to the gums, appetite, general mouth circulation, and insures oral hygiene. The formation of the vacuum cups at the ends of the bristles causes an abrasiveness which is a combination of rubbing and vacuum to stimulate and cleanse the teeth, gums, and other parts of the oral cavity. A relatively soft brush of the present type is not irritating like brushes containing animal bristles and, therefore, prevents the spread of mouth infection. The brush is also capable of being thoroughly washed and cleansed.

The invention provides a practical, useful, highly efficient brush which can be readily manufactured at a very low cost and which is sanitary, being easily washed providing oral hygiene. The perforation in the bottom 13 permits air to enter while the brush is being removed from the finger, thereby preventing a vacuum and permitting the brush to be readily and instantly removed.

Changes may be made in the form, construction, and arrangement of the parts without departing from the spirit of the invention or sacrificing any of its advantages, and the right is hereby reserved to make all such changes as fairly fall within the scope of the following claims.

The invention is hereby claimed as follows:

1. A one-piece finger stall tooth brush made of rubber-like material and having a closed end and a finger receiving opening, a freely stretchable body portion for said brush, a bristle supporting base on the body and extending to the closed end and practically non-stretchable, and flexible integral upstanding teeth on the base.

2. A finger stall tooth brush made of rubber-like material and having a closed end with a finger receiving opening, a bristle supporting base for said brush and extending to the closed end thereof, and rows of flexible rubber-like teeth extending upwardly from said base and parallel with each other, said base being concavo-concave transversely.

3. A one-piece finger stall tooth brush made of flexible rubber-like material and having a closed end with a finger receiving opening, a transversely concavo-concave supporting base for said brush and extending up and around the said closed end, and bristles integral with said base and extending from said open end completely over the closed end, said bristles at the closed end being shorter than the other bristles on the base.

RODERICK G. STEVENS.

45 120

50 125

55 130

60 135

65 140

70 145

75 150