Oct. 21, 1958 M. E. FLEMING 2,856,939

DENTAL CLEANERS

Filed Jan. 13, 1956

Fig. 1.

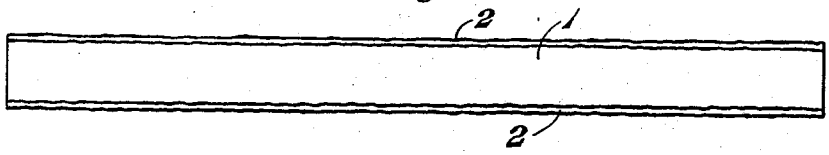


Fig. 1a.



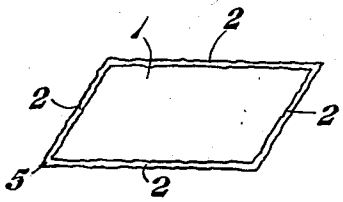


Fig. 2.

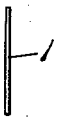


Fig. 3.

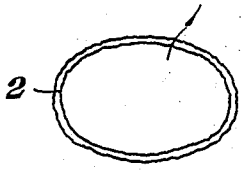


Fig. 4.



Fig. 5.

Fig. 6

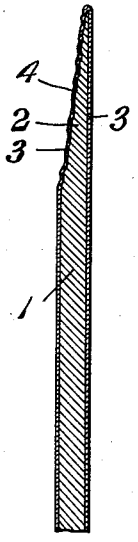


Fig. 7.

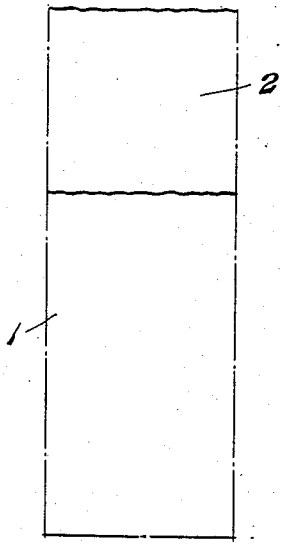


Fig. 8.

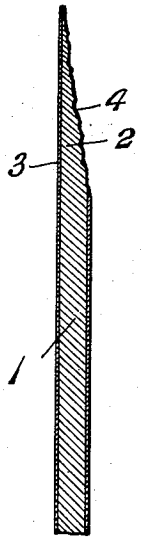
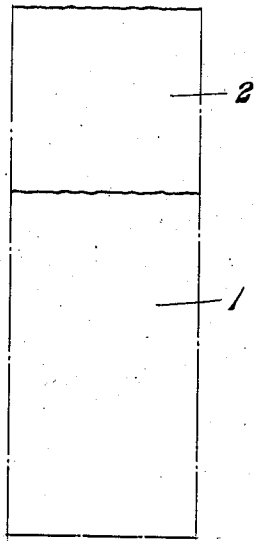


Fig. 9.



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DENTAL CLEANERS

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Application January 13, 1956, Serial No. 559,071

4 Claims. (Cl. 132—93)

The invention relates to dental cleaners for removing food particles from between adjacent teeth, this application being a continuation in part of the application Serial Number 461,142, filed October 8, 1954, entitled the same as this application. Known dental cleaners comprise tooth picks of various kinds, dental floss, and dental ribbons the wax impregnated threads of which are bonded together by the wax, and all of which tend to injure or cut the gums for lack of having a self-cushioned soft edge.

An object of the invention is to provide a dental cleaner consisting of a strip of thin flexible paper of wet strength having a soft cushioned bordering edge beveled and having the pulp of said paper exposed upon one side thereof and having a thin superficial coating of water repellant reinforcing material upon its non-beveled side adapted to support said soft edge against undue yielding during its use, said soft edge being adapted to have a brushing action between adjacent teeth. Another object is to provide said soft edge with a thin superficial coating of water repellant reinforcing material upon both its beveled and its non-beveled sides. Other objects and advantages will appear hereinafter or will be obvious.

The invention consists in the novel construction and combinations of parts as hereinafter set forth in the claims.

In the accompanying drawings.

Figure 1 is a side view of the ribbon form dental cleaner.

Figure 1*a* is an edge view of the same.

Figure 2 is a side view of the quadrilateral form dental cleaner.

Figure 3 is an edge view of the same.

Figure 4 is a side view of the elliptical form dental cleaner.

Figure 5 is an edge view of the same.

Figure 6 is a transverse section on a much enlarged scale of a fragment of the paper having the reinforcing coating applied to both sides of the soft edge.

Figure 7 is a side view of the same.

Figure 8 is a view similar to Figure 6, in which the reinforcing coating is applied to the non-beveled side of the soft edge.

Figure 9 is a side view of the same.

In the drawings, 1 designates the dental cleaner, consisting of a strip of thin flexible sized wet strength paper having a soft cushioned edge 2 extending along it as a border, said soft edge being beveled and having the pulp of said paper exposed upon one side 4 thereof, and having a thin superficial coating 3 of water repellant reinforcing material upon its non-beveled side adapted to support said soft edge against undue vertical yielding during movement of said strip between adjacent teeth with its soft edge pressed vertically against the gums, the pressure load being distributed between said soft edge and said coating, said soft edge having said coating being adapted to have a brushing action during said movement.

The strip of flexible paper is capable of being torn from and along a scored or indented weakened tear line of a sheet of said paper having said coating to provide said strip with said soft edge 2 extending along it as a border having said coating 3 upon its non-beveled side, or alternatively other suitable means may be used for this purpose.

Referring to Fig. 6, a strip of thin flexible sized wet strength paper being first torn from and along a scored or indented weakened tear line of a sheet of said paper to provide said strip with said soft edge 2 extending along it as a border, said strip and its soft edge are thereafter provided with said coating 3 of water repellant reinforcing material, so that said soft edge will have said coating upon both its beveled and its non-beveled sides.

The reinforcing materials 3 may consist of any suitable water repellant material having good adhesiveness, such for example as a silicone or a wax, and it may be thinned by a suitable solvent to the requisite thinness, so that it does not add greatly to the thickness of the paper. The reinforcing material 3 upon one or alternatively both sides of the soft edge is such as not to interfere with the flexibility of said strip nor with the soft cushioned nature of said edge 2. The reinforcing material has substantially no penetration in the paper, such penetration being only sufficient to bond it to the paper. It may be applied to the paper in any suitable manner.

In the preferred embodiment of Fig. 8, the soft edge 2 having the pulp of said paper exposed upon its beveled side 4 tends to lose its strength and become disintegrated upon being moistened by the saliva, to avoid which tendency said paper is of high wet strength. This is important on account of the weakness of said soft edge which needs all of its strength.

The flexible paper may be sized to close its pores, it may be calendered by calender rollers to make it smooth and compact, and it may be of long fiber to increase its tensile strength. Said paper must be thick enough to provide an adequate soft edge.

Said strip may be of any suitable form. For example it may be of narrow ribbon form, as shown in Fig. 1, one of its longitudinal edges being constituted by said soft edge. It may be of quadrilateral form, as shown in Fig. 2, said quadrilateral strip having longitudinal and transverse edges each of which is constituted by said soft edge and which intersect in points 5. It may be of elliptical form, as shown in Fig. 4, having an elliptical edge constituted by said soft edge. The coating 3 may serve as a base or carrying agent for an antiseptic or antibiotic preparation.

The right is reserved to modifications coming within the scope of the claims and to any other uses for which the invention is adapted, such for example as cleaning between an edge of the finger nail and the adjacent cuticle and cleaning under the eyelids.

I claim:

1. A cushioned dental cleaner, consisting of a strip of thin flexible sized wet strength paper having a soft cushioned edge extending along it as a border, said soft edge being beveled upon one side thereof and having a thin superficial coating of water repellant reinforcing material upon its non-beveled side adapted to support said soft edge against undue vertical yielding during its use, said soft edge having said coating being adapted to have a brushing action.

2. A cushioned dental cleaner, consisting of a strip of thin flexible sized wet strength paper having a soft cushioned edge extending along it as a border, said soft edge being beveled upon one side thereof and having a thin superficial coating of water repellant reinforcing material upon its non-beveled side adapted to support said soft edge against undue vertical yielding during movement of

said strip between adjacent teeth with its soft edge pressed against the gums, the pressure load being distributed between said soft edge and said coating, said soft edge having said coating being adapted to have a brushing action during said movement.

3. A cushioned dental cleaner, consisting of a strip of thin flexible sized wet strength paper having a soft cushioned edge extending along it as a border, said soft edge being beveled upon one side thereof and having a thin superficial coating of water repellant reinforcing material upon both its beveled and its non-beleved sides adapted to support said soft edge against undue vertical yielding during its use, said soft edge having said coating being adapted to have a brushing action.

4. A cushioned dental cleaner, consisting of a strip of thin flexible sized wet strength paper having a soft cushioned edge extending along it as a border, said soft edge being beveled upon one side thereof and having a thin superficial coating of water repellant reinforcing material

upon both its beveled and its non-beveled sides adapted to support said soft edge against undue vertical yielding during movement of said strip between adjacent teeth with its soft edge pressed against the gums, the pressure load being distributed between said soft edge and said coating, said soft edge having said coating being adapted to have a brushing action during said movement.

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