

[54] DENTAL FLOSS DISPENSER

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 180,344, Sept. 14, 1971, Pat. No. 3,747,611.

[52] U.S. Cl. 132/92 A

[51] Int. Cl. A61c 15/00

[58] Field of Search 132/92 R, 91; 222/206

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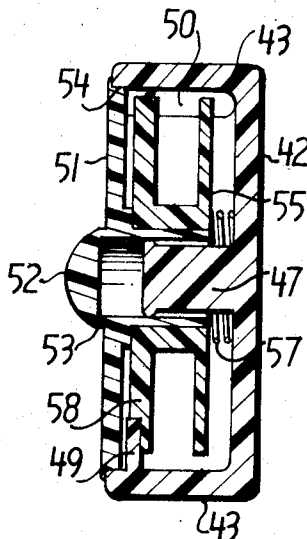
Attorney, Agent, or Firm—Millen, Raptis & White

[57]

ABSTRACT

This invention relates to a dental floss dispenser comprising an elongated finger section and a dental floss spool holding section. Dental floss on a spool is easily threaded from the spool section to the end of the finger section through an open slot on the side and through open slots in the finger of the dispenser. Turning of the spool to withdraw floss is controlled by a pin which engages a notch on the spool. Push button means on the side of the dispenser release the spool from the pin to permit the spool to turn.

6 Claims, 5 Drawing Figures



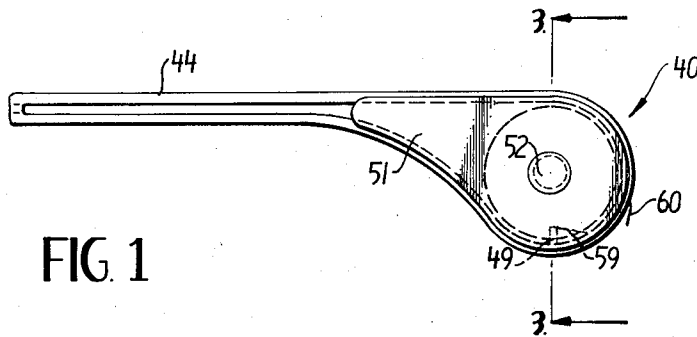


FIG. 1

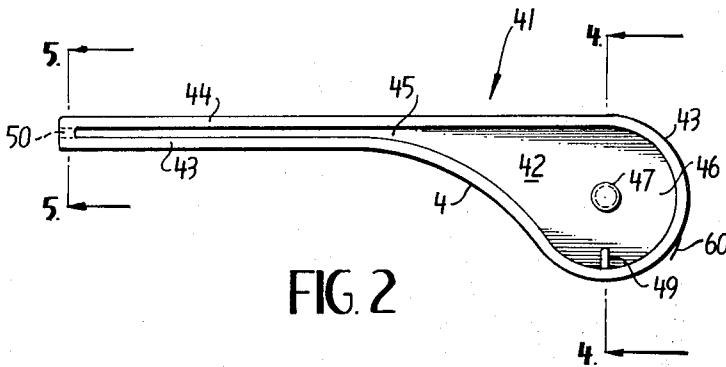


FIG. 2

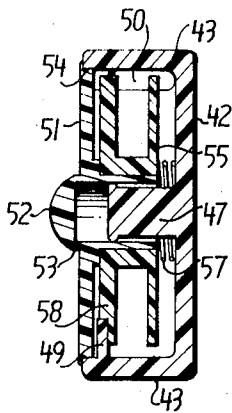


FIG. 3

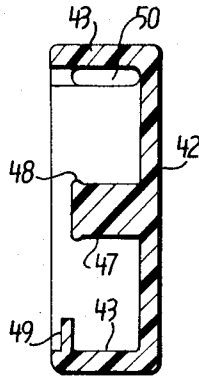


FIG. 4

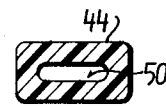


FIG. 5

DENTAL FLOSS DISPENSER

This application is a continuation-in-part of my co-pending application Ser. No. 180,344, filed Sept. 14, 1971 now U.S. Pat. No. 3,747,611.

This invention relates to an improved dental floss dispenser. More particularly, it relates to a spool-type dispenser of improved design permitting easier threading of the floss in the dispenser and a simplified dispensing means.

There have been many types of dental floss dispensers developed heretofore which have the means for dispensing floss. However, many of these dispensers are complicated and expensive to manufacture. A particular problem with many of them is the difficulty in the threading of the floss through the dispenser and the ability to hold the floss taut during use.

An object of this invention is to provide a dental floss dispenser of improved design permitting easy threading of the floss through the dispenser.

Another object of this invention is to provide a dental floss dispenser having means for dispensing floss in desired lengths with an automatic stop means for positive holding the floss taut after it has been dispensed and during use.

Another object of this invention is to provide a dental floss dispenser having an extended finger which can be inserted in the mouth of the user to facilitate manipulation of the floss between the teeth for dislodging food particles.

A further object of this invention is to provide a dental floss dispenser having a spool-type reservoir of dental floss which can be turned and stopped by push button means.

Another object of this invention is to provide a dental floss dispenser having ease of handling and use which is of simplified construction and inexpensive to manufacture.

Other features and advantages of the invention will appear from the following detailed description of one specific embodiment thereof taken in connection with the drawings wherein:

FIG. 1 is a side elevational view of the dental floss dispenser;

FIG. 2 is also a side elevational view of the dispenser shown in FIG. 1 with the retaining cap removed;

FIG. 3 is a section along line 3—3 of FIG. 1;

FIG. 4 is a section taken along line 4—4 of FIG. 2; and

FIG. 5 is a section taken along line 5—5 of FIG. 2.

The dental floss dispenser is generally designated by the numeral 40 in FIG. 1 and is designed to be manufactured from any conventional plastic materials, such as polyvinyl chloride, polystyrene, polyethylene, polypropylene and the like. The design is such that the dispenser can be produced entirely from molded sections. However, if a more durable, permanent type of dispenser is desired, it can be manufactured from a metal such as stainless steel for use by dentists, etc.

The dispenser 40 comprises two molded members. One member, generally designated by the numeral 41 in FIG. 2, comprises a rear wall 42 and a peripheral flange 43 which define a finger section 44 with an open guideway 45 and a spool retaining cell 46. A rod 47 extends axially from the rear wall 42 in spool cell 46 and has a nob member 48 at its end. A permanent pin 49 extends from the inside of peripheral flange 43 in the cell 46. The end of the finger section 44 comprises a

hole 50 through which the floss is withdrawn from the dispenser.

The second member of the modification, as shown in FIG. 3, is a flexible retaining cap 51 which covers cell 46 and the open guideway leading to the finger section. The cap comprises button means 52 and a cylindrical portion 53 adapted to snugly fit over the nob member 48 and rod 47 and is press fitted into peripheral flange 43 and held in place by means of peripheral rim 54.

Spool 55 is adapted to fit on cylindrical portion 53 and on which it can freely turn. Shoulder 56 of cap 51 abuts the spool and when button 52 is pushed will move the spool against the bias of a spring 57 on rod 47. Disc section 58 of the spool is provided with a V-notch 59 (FIG. 1) adapted to engage pin 49 and prevent turning of the spool. When button 52 is pushed, the flexible wall of the cap will permit movement of shoulder 56 against the spool, the notch 59 will be released from the pin 49, and the spool will be free to turn.

A floss cutter 60 is disposed on the outer part of peripheral flange 43. The cutter is molded as part of member 41. Used floss may be cut by bringing the floss under the cutter and pulling sharply upward.

The dispenser 40 is easily loaded and threaded. Cap 51 carrying spool 55 is pressed onto rod 47, carrying spring 57, with a length of floss pulled from the spool. The floss is threaded onto guideway 45 and out end 50.

The dispenser 40 has the advantage that an inexpensive dispenser can be essentially produced from only two molded parts and used with a replaceable spool of dental floss. However, it is also contemplated that the entire dispenser can be discarded after exhaustion of the supply of floss on the spool, in view of the fact that the dispenser is inexpensive to produce.

It will be understood that modifications, within the scope of the appended claims may be made in the design and arrangement of parts without departing from the spirit of the invention.

What is claimed is:

1. A dental floss dispenser adapted to dispense a metered amount of dental floss comprising in combination, a finger section communicating with a spool section, a freely turnable spool of dental floss in said spool section and retaining cap means for retaining said spool in said spool section, said spool containing a notch at its outer periphery, rigid pin means protruding into said spool section and normally engaging said notch of said spool and retain said spool from turning, pushbutton means on said cap means for axially moving said spool and thereby releasing said notch of said spool from said pin means permitting said pin to freely turn on the periphery of said spool upon withdrawal of dental floss from the end of said finger section until said pin engages said notch after one rotation of said spool to thereby dispense a metered amount of dental floss, and open guideway means in said spool and finger sections adapted to permit easy threading and for passage of floss from said spool section through said finger section and out the end of said finger section.

2. The dental floss dispenser of claim 1 wherein said finger and spool sections comprises a unitary molded member, said cap means comprises a unitary molded member which includes cylindrical means adapted to engage and permit said spool of dental floss to freely turn thereon.

3. The dental floss dispenser of claim 2 wherein said spool section comprises axially extending rod means

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adapted to engage said cylindrical means of said cap means.

4. The dental floss dispenser of claim 3 wherein said cap means and said spool are spring biased on said rod means whereby said spool can be axially moved to dis- 5 engage said notch of said spool from said pin means.

5. The dental floss dispenser of claim 3 wherein said rod means comprises terminal nob means adapted to engage said cylindrical means, and said cap means

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comprises peripheral rim means adapted to engage peripheral flange means of said spool section, whereby said cap means can be press fitted and retained in said spool section.

6. The dental floss dispenser of claim 1 wherein said guideway means extend along the side of said finger section.

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