

[54] DENTAL FLOSS HOLDER

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[51] Int. Cl. A61c 15/00

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

[56] References Cited

UNITED STATES PATENTS

3,421,524 1/1969 Waters 132/92 R

2,577,597 12/1951 Wright et al. 132/92 R
1,833,671 11/1931 Byars 132/92 R
2,451,181 10/1948 Swartzman 132/92 R

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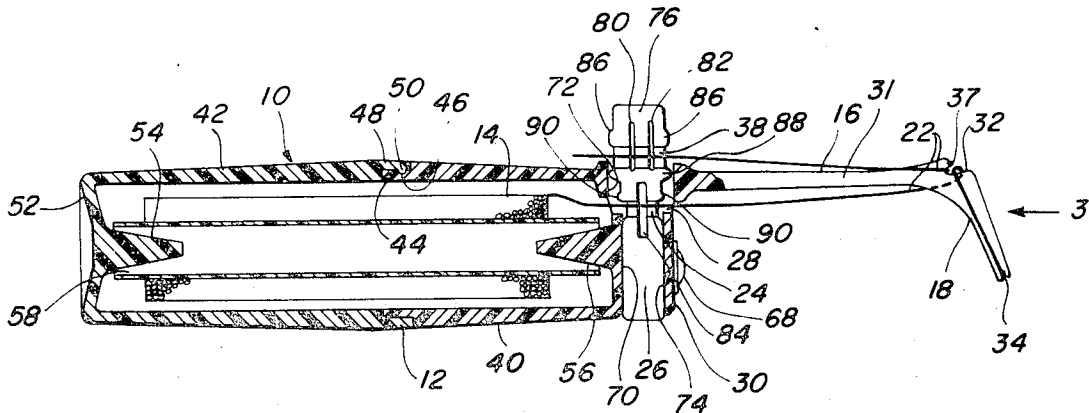
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[57]

ABSTRACT

A dental floss holder comprising a unit including a container for a spool of dental floss and a fork having tines across which the floss is stretched by manipulating a lock, the construction being such that the soiled floss never contacts the clean floss.

7 Claims, 8 Drawing Figures



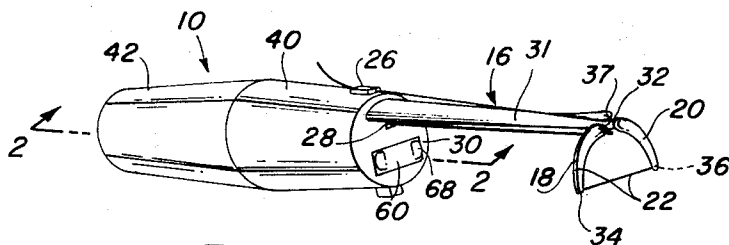


FIG. 1

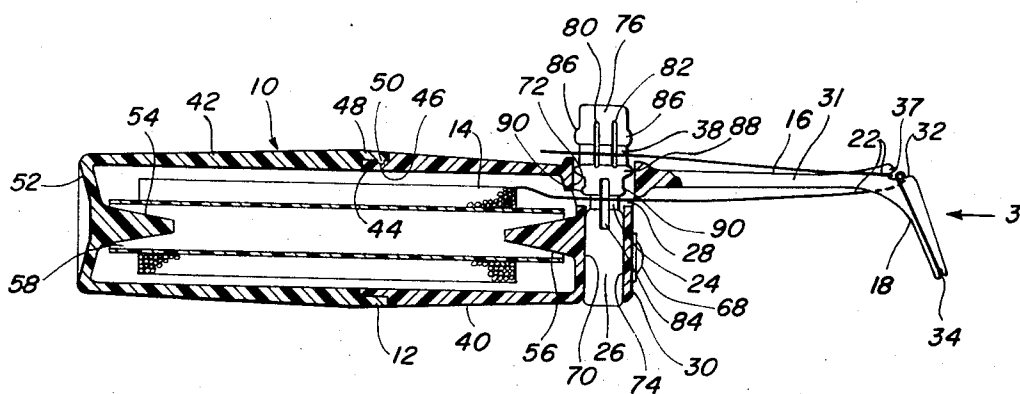


FIG. 2

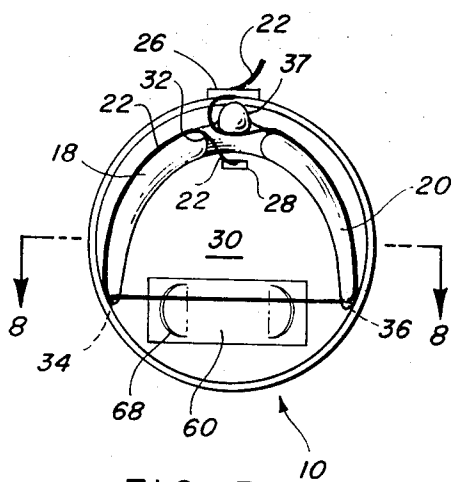


FIG. 3

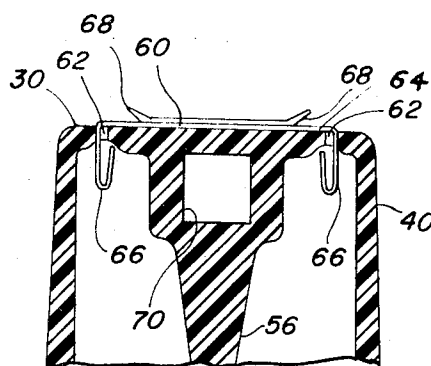


FIG. 8

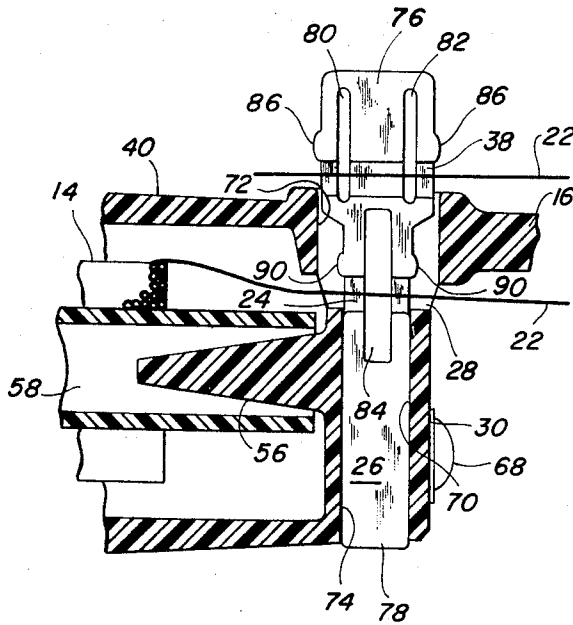


FIG. 4

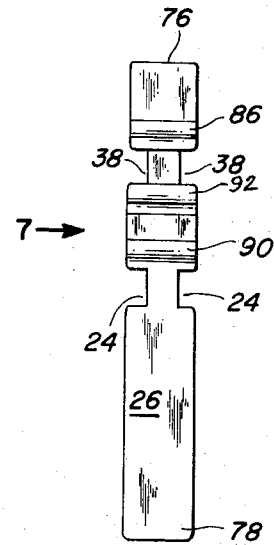


FIG. 6

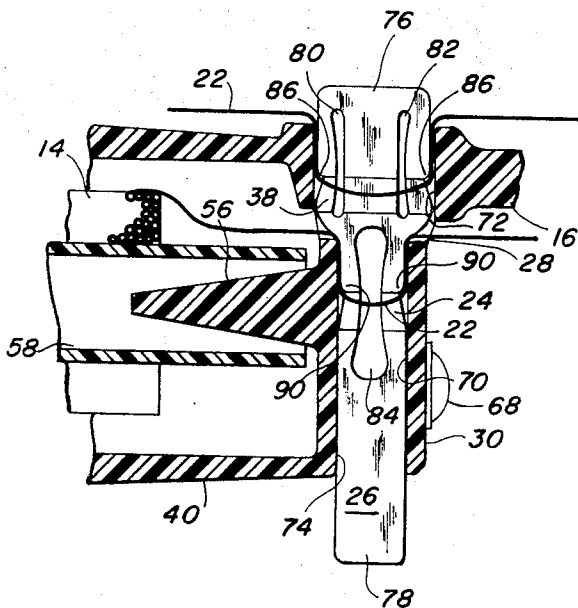


FIG. 5

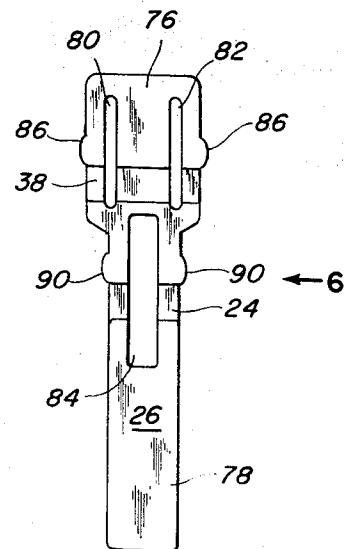


FIG. 7

DENTAL FLOSS HOLDER**BACKGROUND OF THE INVENTION****1. Field of the Invention**

The invention is directed to dental floss holders in which the floss is stretched between two tines of a fork and locked in stretched position.

2. Description of the Prior Art

The prior art is disclosed in the patents to Byars, U.S. Pat. No. 1,833,671; Atols, U.S. Pat. No. 2,516,539; Wright, et al, U.S. Pat. No. 2,577,597; and Parks, Jr., U.S. Pat. No. 2,870,773. These patents disclose structure of the type in which the soiled floss must engage the clean floss when the floss is stretched over tines, thus causing fouling of the floss prior to being in usable position.

SUMMARY OF THE INVENTION

The dental floss holder comprising a unit that includes a container for a spool of dental floss and a fork having tines about which the floss is strung. Two paths

cent the end of the body 39 of the fork, then through a slot 38 in lock 26.

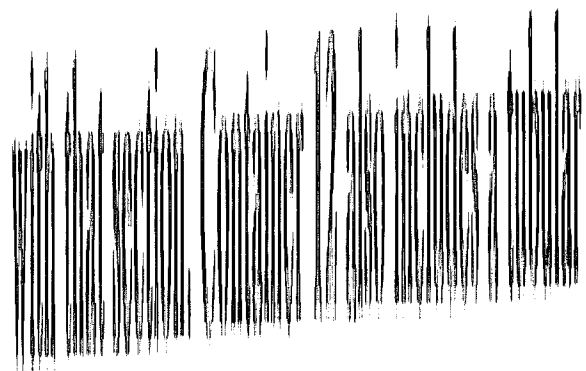
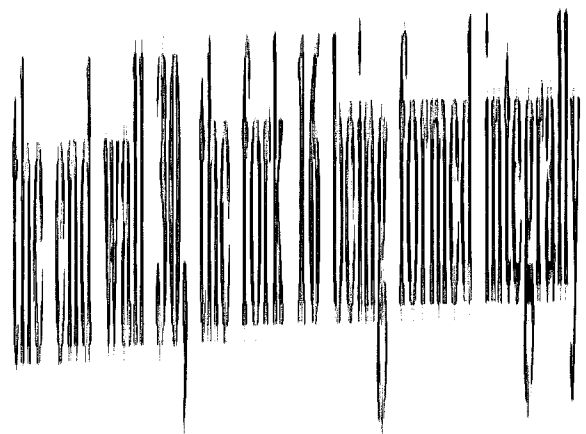
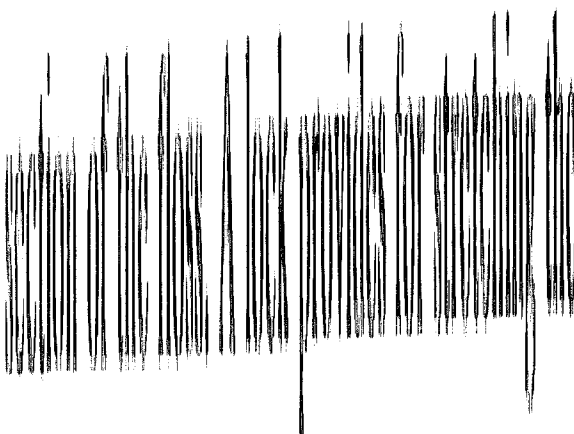
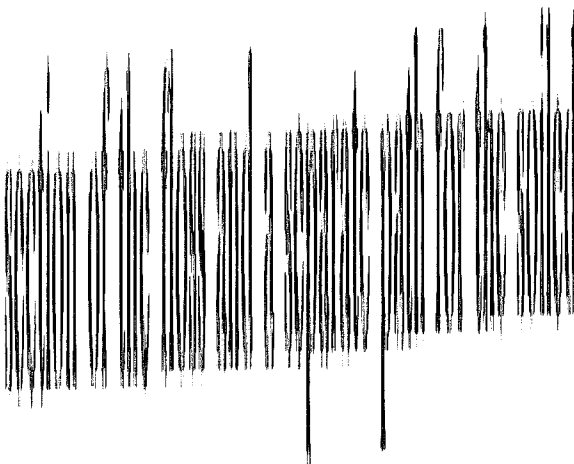
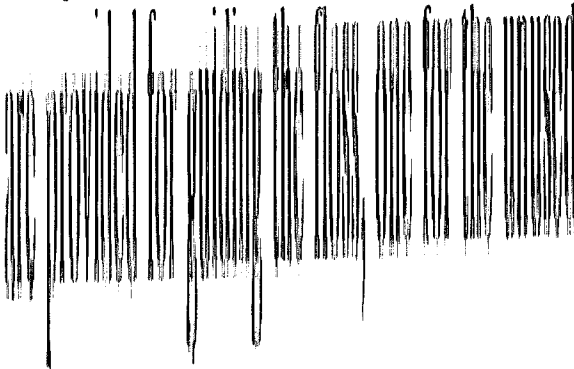
By pushing inwardly on the lock, the sections within the slots 24 and 38 will be locked in position. During the locking action, those sections will be pulled downwardly resulting in pulling the floss tightly between the ends of the tines 18 and 20.

The tines 18 and 20, in addition to extending downwardly from the yoke, extend outwardly as viewed in FIGS. 1 and 2. The design of the unit is such that easy access can be had not only for cleaning between the front teeth, but also for cleaning between the extreme rear teeth.

A notch similar to notch 32 is provided in the yoke at the upper end of tine 20 whereby, instead of lacing the floss through notch 32, it can be laced in the notch located at the upper end of tine 20 and then strung along the outer side of tine 20 through groove 36 of tine 20, then through groove 34 in tine 18, then about protuberance 37, then through slot 38 in the lock 26.

Referring more in detail to the drawings, the con-

FIG. 1 includes a tubular front section 40 including



Referring to FIGS. 2 and 4, it will be seen from FIG. 2 that floss can flow freely from the spool of floss, but when the lock 26 is pressed inwardly to the position shown in FIG. 5, the floss is locked in position between the beads 90 and 92 and the lower walls that form the hole 70, and is locked in position between the beads 86 and 88 and the upper walls that form the hole 70.

When the lock 26 is in the locked position, as shown in FIG. 5, the lower end thereof protrudes below the container 12. The locking can be released by pushing upwardly on the lower end of the lock.

The lock 26 is formed preferably of resilient and flexible material. Referring to FIGS. 4 and 7, it will be seen that the width of the lock, including beads 86, is greater than the width of the upper part of hole 70 and that the width of the lock, including the beads 90, is greater than the width of the lower part of hole 70. Thus, it will be observed that, due to the fact that the lock is formed of flexible material, the slots 80, 82 and 84 permit the pushing inwardly of the lock and also provide for resiliently retaining the lock in locked position.

It can be seen, particularly from FIGS. 2 and 4, that the distance between the lower part of beads 90 and 92 and the upper part of slots 24 is less than the distance between the lower part of beads 86 and 88 and the upper part of slots 38. Therefore, the floss is locked in position adjacent the spool 14 prior to being locked in position at the upper part of the lock. Consequently, by pulling on the floss to the left of the lock and simultaneously pushing the lock inwardly, the floss is firmly stretched across the tines. The stretch is also augmented while the floss is being pushed downwardly.

From the foregoing it is apparent that by virtue of the present invention, I have provided material improvements over the prior art of dental floss holders. The holder of the present invention is relatively more simple and, therefore, less expensive to produce. Too, by the present construction, the soiled section of the floss is never brought into contact with the clean section of floss.

Having described my invention, I claim:

1. A dental floss holder, comprising in combination:

A. means forming:

1. a hollow casing for receiving a spool of dental floss, said casing having:

a. an end wall having:

- i. a passage through which dental floss is threadable,
- ii. a passage extending transversely of and through and intersecting the first mentioned passage,

b. a fork connected with the end wall, said fork having:

- i. a pair of tines, each of said tines having a groove in the ends thereof for receiving a section of the dental floss,
- ii. a notch adjacent the junction of the tines and forming a guide for the floss;

B. a shiftable lock in the second mentioned passage

in the end wall, said lock having:

1. a passage alignable with the first mentioned passage in the end wall for receiving a section of the dental floss,

2. a second passage disposed parallelly of the first mentioned passage in the lock for receiving another section of the dental floss, said lock being shiftable from a position in which the second passage thereof lies outside said transverse passage in the end wall, to a position in which the first mentioned passage in the lock is in nonaligned position with the passage in the end wall and in which the second mentioned passage in the lock extends into the transverse passage in the end wall, the width of the lock and the width of the walls forming the transverse passage in the end wall being such so as to lock both sections of the floss between the walls of the lock and the walls of the transverse passage in the end wall when the lock has been moved to the second mentioned position.

2. A dental floss holder as defined in claim 1, characterized in that the transverse passage in the end wall extends through the container and further characterized in that the lock is extendable through the transverse passage.

3. A dental floss holder as defined in claim 1, characterized in that the width of the transverse passage adjacent the first mentioned passage in the lock is narrower than at the second mentioned passage in the lock, and that the width of a section of the lock adjacent the first mentioned passage in the end wall is narrower than that section of the lock lying adjacent the second mentioned passage in the lock.

4. A dental floss holder as defined in claim 1, characterized in that the sections of the lock that extend in the transverse passage in the end wall have a width that is greater than the width of the said transverse passage and are formed of flexible and resilient material.

5. A dental floss holder as defined in claim 1, characterized in that the lock is elongate and is formed of resilient and flexible material and further characterized in that the lock is provided with longitudinally extending passages that span the passages.

6. A dental floss holder as defined in claim 1, characterized in that the transverse passage in the end wall is non-circular and further characterized in that the outer surface of the lock at least partly complements the inner surface of the said transverse passage.

7. A dental floss holder as defined in claim 1, characterized to include:

C. a thread cutter assembly comprising:

1. a base having:

a. flexible and resilient extensions,

2. a cutter blade fixed to the base; and further characterized in that a wall of the casing includes holes that receive said extensions.

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