April 5, 1927. C. B. BOWLING ET AL. 1,623,231

FLOSS HOLDER

Filed May 2, 1925

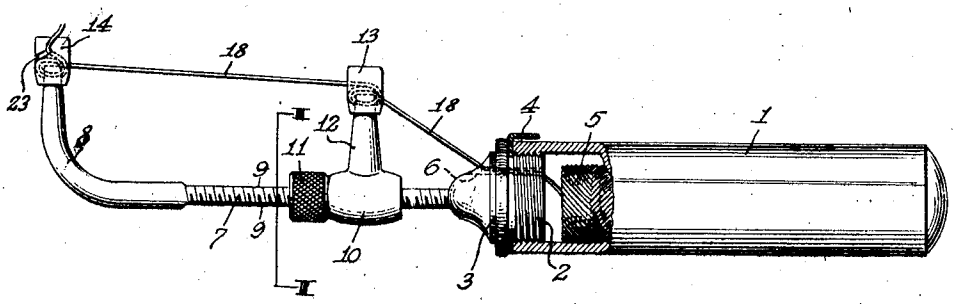


Fig. 1.

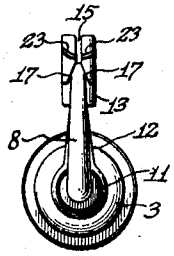


Fig. 2.

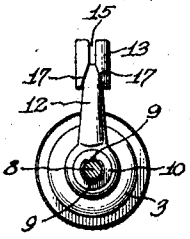


Fig. 3.

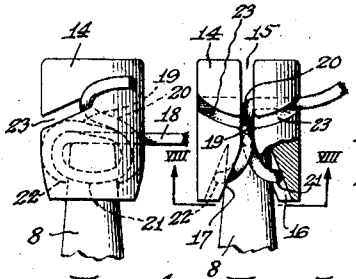


Fig. 4. Fig. 5. Fig. 6. Fig. 7.

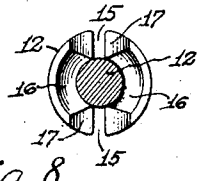


Fig. 8.

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Patented Apr. 5, 1927. 1,623,231

UNITED STATES PATENT OFFICE.

CLARENCE B. BOWLING AND HUBERT BULMAN, OF DETROIT, MICHIGAN.

FLOSS HOLDER.

Application filed May 2, 1925. Serial No. 27,371.

This invention relates to a dental floss holder and our invention aims to provide a holder of the bow type by which a piece of floss or other material may be held in a taut condition and easily manipulated relative to the teeth. Ordinarily dental floss is rather difficult to hold because of its slippery nature and when the floss is used in connection with a holder there must be a positive and reliable anchorage for portions of the floss in order that it may be drawn taut across the bow of the holder. If the floss is not firmly held in a taut condition the user becomes discouraged and eventually discards the holder, whereas if the floss is firmly held the holder can be easily used to an advantage for cleaning teeth.

Our device will be hereinafter specifically described and then claimed, and reference will now be had to the drawing, wherein

Figure 1 is a side elevation of the floss holder, partly broken away and partly in section;

Fig. 2 is a view of the outer end of the floss holder;

Fig. 3 is a cross sectional view taken on the line III—III of Fig. 1;

Fig. 4 is an enlarged side elevation of the outer head of the floss holder;

Fig. 5 is a front elevation of the same partly broken away and partly in section;

Fig. 6 is a similar view of the inner head of the floss holder;

Fig. 7 is a side elevation of the same, and

Fig. 8 is a horizontal sectional view taken on the line VIII—VIII of Fig. 5.

The reference numeral 1 denotes a hollow cylindrical barrel or container which serves as a handle and detachably mounted in the outer end of the container is a screw portion 2 of a cap 3. Between the cap 3 and the end of the container 1 is a cutting device 4 for severing a piece of floss.

In the hollow handle or container 1 is placed a spool of floss 5 and the cap 3 has an opening 6 so that one end of the floss may extend through the cap and be used in connection with the floss holder or severed at the cutting device 4 for use independently of the holder.

Mounted in the cap 3 is the inner exteriorly screw-threaded end 7 of a bow 8 and the inner end of the bow has longitudinally disposed facets 9 adapted to prevent rotation of a sleeve 10 slidably mounted on the bow and adapted to be shifted thereon is a knurled nut 11 in screwthreaded engagement with the inner end of the bow. The sleeve 10 has an arm 12 disposed at substantially a right angle to the axis of the sleeve and on the outer end of said arm is an inner head 13 adapted to cooperate with an outer head 14 on the bow for holding the withdrawn end of the piece of floss.

Considering the construction of the inner head 13, it has a deep vertical longitudinal slot 15 in its upper end and the lower end of said head is provided with side wedge shaped slots 16 at the arm 12, said arm being tapered so that the upper end thereof may form the inner walls of the slots 16. Entrance to these slots is had through front and rear inverted V-shaped openings 17 in the lower end of the head 13 and the side slots 16 are therefore somewhat curved about the arm 12.

The protruding end of the piece of floss is designated 18 and it is carried forwardly from the cap 3 and through the slot 15 to the forward side of the head 13. It is then carried downwardly and wedged into one of the side slots 16, as at 21, and brought forwardly through the slot 15, as at 19. Again, the piece of floss 18 is carried downwardly and wedged into the other side slot 16, as at 22, to be brought upwardly and again through the slot 15, as at 20.

The piece of floss 18 is then carried forwardly to the outer head 14, which is somewhat similar to the inner head 13. The outer head 14 has the vertical slot 15, the side slots 16 and the front and rear openings 17. In addition to these the front side of the head 14 has angularly disposed slots 23, and after the end of the floss is wound into engagement with the head 14, in a manner similar to the winding of head 13, the end of the piece of floss is carried into either of the angularly disposed slots 23.

After the floss has been attached to the heads 13 and 14 the nut 11 is adjusted to shift the sleeve 10 towards the cap 3, thus moving the inner head 13 away from the outer head 14 to draw the outer end of the floss taut between the heads.

It is by virtue of the under cut deep wedge-shaped slots 16 of the inner and outer heads that the floss is positively anchored and by repeatedly carrying the floss through the vertical slot 15 of each head portions of

the floss are placed in frictional engagement and there can be no slippage of the floss in the heads when being drawn taut or when being used between the teeth.

It is thought that the utility of our device will be apparent without further description, and we reserve the right to make such changes as are permissible by the appended claim.

What we claim is:—

In a floss holder having a bow provided with an outer head, and a sleeve adjustable on said bow and supporting an inner head, said inner and outer heads having vertical longitudinal slots, side bottom slots, and front and rear openings, the slots and openings adapted to receive a piece of floss to be drawn taut by adjustment of said sleeve on said bow, said outer head having angularly disposed slots either of which is adapted to receive the outer end of the floss.

In testimony whereof we affix our signatures.

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