

Nov. 24, 1931.

E. W. BYARS

1,833,671

DENTAL DEVICE

Filed Dec. 5, 1930

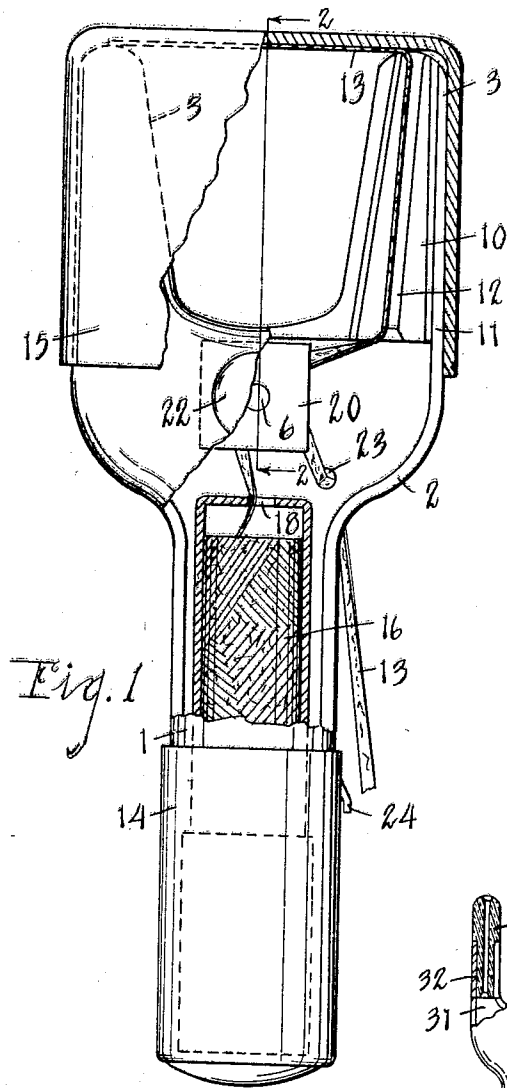


Fig. 1

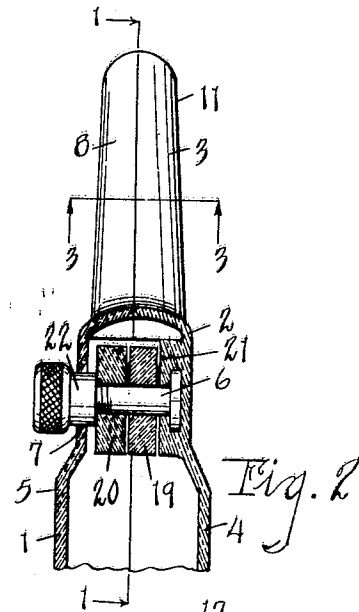


Fig. 2

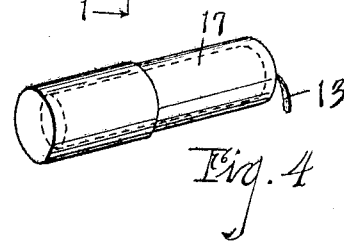


Fig. 4

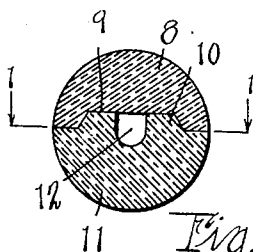


Fig. 3

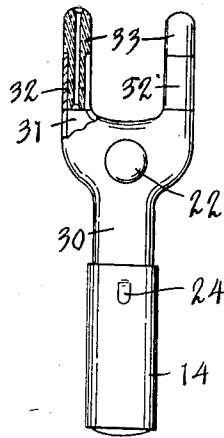


Fig. 6

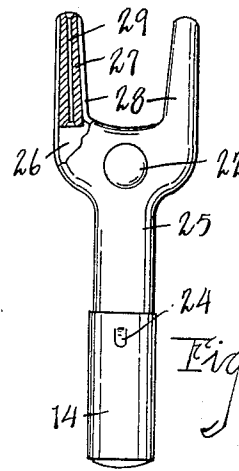


Fig. 5

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DENTAL DEVICE

Application filed December 5, 1930. Serial No. 500,211.

The main object of this invention is to provide a dental device adapted to contain or house a spool or skein of dental floss and to effectively support a section of the floss for use.

A further object is to provide a device having these advantages which is very economical in its parts and at the same time is attractive in appearance.

Objects pertaining to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, in which:

Fig. 1 is a side elevation of my dental device, parts being broken away to show structural details thereof, partially sectioned on line 1—1 of Figs. 2 and 3.

Fig. 2 is a detail view mainly in section on line 2—2 of Fig. 1, the cap being removed.

Fig. 3 is a detail section on line 3—3 of Fig. 2.

Fig. 4 is a perspective view of a carton or container for the spool of dental floss.

Fig. 5 is a side elevation partially in section of a modified form or embodiment of my invention as formed of metal.

Fig. 6 is a side elevation partially in section of a slightly modified form or embodiment of my invention when formed of metal.

My improved dental device comprises a container consisting of a tubular cylindrical body portion 1 and a flattened head portion 2 having spaced arms or forks 3. This container is formed of longitudinally split sections, the embodiment shown in Figs. 1, 2 and 3 being molded from some non-metallic material such as bakelite. These sections are designated generally by the numerals 4 and 5.

The section 4 has a post or stud 6 secured to the head portion thereof to project centrally of a hole 7 formed in the section 5. The arm portions 8 of the section 5 have longitudinal channels 9 therein adapted to receive the central longitudinal rib portions 10 of the arm portions 11 of the section 4. These rib portions 10 have central longitudinal grooves 12 therein forming passages for the

floss or thread designated by the numeral 13 from the interior of the head to the ends of the arms. The thread is rove outwardly through one arm and inwardly through the other.

In the embodiment illustrated the sections are detachably held in assembled relation by means of the cap 14 which is sleeved upon the ends of the handle or body portion 1. I also preferably provide a cap 15 which is adapted to slip over the arms, protecting the arms and passages therein and also that portion of the dental floss extending between the arms.

The skein of dental floss indicated at 16 is preferably placed in a carton or capsule-like container 17 arranged within the body portion of the device as shown in Fig. 1. The container has a hole 18 in one end through which the dental floss is passed. This container serves to protect the dental floss from dust which might enter through the joint between the sections, particularly where the device is carried in a pocket.

To tension the thread I arrange a pair of tension disks 19 and 20 on the stud 6, the thread being passed between these disks and between the disk and the face of the internal enlargement 21 on the member 4 which constitutes a friction member. The tension adjusting nut 22 is threaded on the studs it being disposed through the hole 7 so that the desired friction or tension is applied to the thread to hold it in its adjusted position for use. These tension or friction disks are preferably non-circular so that they do not rotate on the stud, the upper edges of the disk being so arranged in relation to the wall of the head as to prevent rotation, see Fig. 1. Where the disks are permitted to rotate there is a tendency for such rotation to work the thread from between them.

The thread from the skein is passed between one pair of friction surfaces and over the stud, out through one of the arms, across to the other, inwardly through the other arm and between the other friction surfaces, preferably above the stud, and out through a hole 23. A thread cutter 24 is provided on the member 14 so that the used floss can be readily severed, at the same time leaving a free end of

substantial length for convenient grasping.

With the parts thus arranged the thread or floss can be readily adjusted to present a fresh portion for use and it is held with sufficient friction or tension for general use. However, if it is desired to place considerable stress on the floss or such as would be likely to displace it, the finger can be placed on the projecting end.

10 In the modification shown in Fig. 5 the sections 25 and 26 are formed as sheet metal stampings, tubes 27 being inserted in the arms 28 of the holder to provide the thread passages 29.

15 In the modification shown in Fig. 6 the parts are made of sheet metal stampings 30 and 31, the arms 32 being adapted to receive tips 33 of bakelite or other non-metallic material. Tension disks are provided and function as described. Therefore, they are not illustrated.

I have not attempted to illustrate or describe certain other embodiments or adaptations as it is believed that this disclosure will enable those skilled in the art to embody or adapt my improvements as may be desired.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

30 1. In a dental device, the combination of a container comprising a cylindrical tubular body portion adapted as a handle and a chambered head portion having spaced tubular arms, said container being formed of complementary longitudinal sections, a cap removably engaging the inner end of said container for retaining the sections in assembled relation, the body portion of said container being adapted to receive a spool, a stud within said head, tension disks arranged on said stud within the head and adapted to receive the thread between them, said head having a hole adjacent the tension disks through which the thread may be passed, and a tension adjusting member threaded upon said stud to coact with said disks.

2. In a dental device, the combination of a container comprising a cylindrical tubular body portion adapted as a handle and a chambered head portion having spaced tubular arms, said container being formed of complementary longitudinal sections, tension disks arranged on said stud within the head and adapted to receive the thread between them, said head having a hole adjacent the tension disks through which the thread may be passed, and a tension adjusting member threaded upon said stud to coact with said disks.

3. In a dental device, the combination of a container comprising a cylindrical tubular body portion adapted as a handle and a chambered head portion having spaced tubular arms, said container being formed of complementary longitudinal sections, a cap

removably sleeved upon the inner end of said container for retaining the sections in assembled relation, the body portion of said container being adapted to receive a spool, and a thread tensioning means within said head, said head having a hole adjacent the tensioning means through which the thread may be passed.

4. In a dental device, the combination of a container comprising a cylindrical tubular body portion adapted as a handle and a chambered head portion having spaced tubular arms, said container being formed of complementary longitudinal sections, tubes arranged within said arms, means for retaining the sections in assembled relation, the body portion of said container being adapted to receive a spool, and a thread tensioning means within said head, said head having a hole adjacent the tensioning means through which the thread may be passed.

5. In a dental device, the combination of a container comprising a cylindrical tubular body portion adapted as a handle and a chambered head portion having spaced tubular arms, said container being formed of complementary sections, one of the head portions having a hole in the side thereof and the other a stud alined with said hole, a tensioning disk nonrotatably supported by said stud, a tension adjusting member coacting with said tension disks, one of said head members having a hole therein through which the thread may be passed so that the thread may be disposed through the arms and between said disks with its free end through said hole.

6. In a dental device, the combination of a container adapted to receive a spool and having spaced tubular arms through which a thread may be passed, tension disks arranged side by side within said container between the spool receiving portion thereof and the said arms, and adjustable means for regulating the tension of said disks.

7. In a dental device, the combination of a container adapted to receive a spool and having spaced tubular arms, tension disks disposed between the spool container and the arms, and means externally of the container for regulating the tension of the tension disks.

8. In a dental device, the combination of a container comprising a tubular body portion adapted as a handle, and a chambered head portion having spaced tubular arms, said container being formed of complementary longitudinal sections, a cap removably sleeved upon the inner end of the container for retaining the sections in assembled relation, the cap being provided with a thread cutter.

9. In a dental device, the combination of a container comprising a tubular body portion adapted as a handle, and a chambered head portion having spaced tubular arms, said container being formed of complementary

tary longitudinal sections, and a cap removably sleeved upon the inner end of the container for retaining the sections in assembled relation.

In witness whereof I have hereunto set my hand.

EDGAR W. BYARS.

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