March 8, 1949. J. TURENCHALK ET AL 2,463,660

DENTAL FLOSS HOLDER

Original Filed Aug. 30, 1943

Fig. 1.

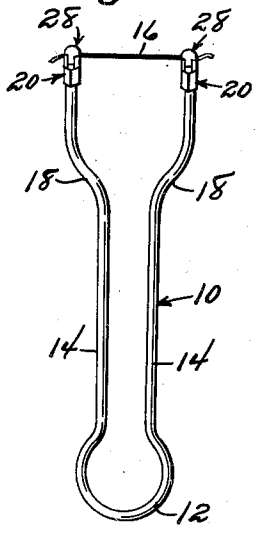


Fig. 2.

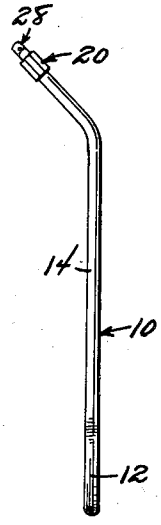


Fig. 3.

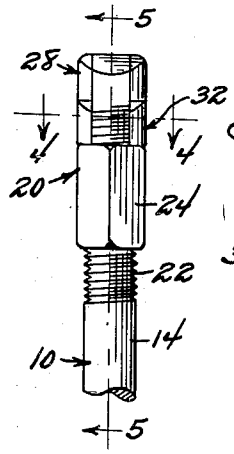


Fig. 4.

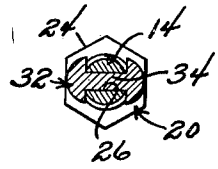


Fig. 5.

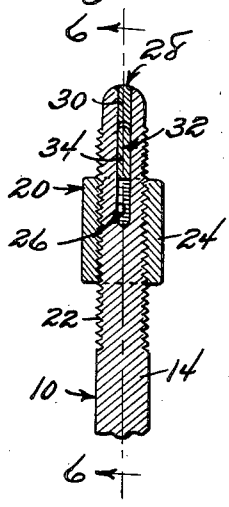


Fig. 6.

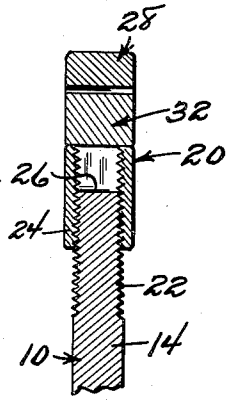


Fig. 7.

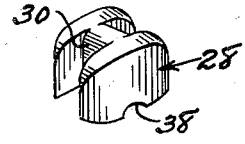
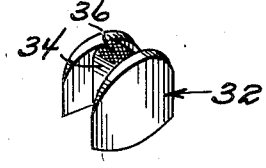


Fig. 8.



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DENTAL FLOSS HOLDER

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1 Claim. (Cl. 132—91)

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The invention, in its broad aspect, has reference to improvements in dental floss devices and has among its objects and advantages the provision of an improved dental floss holder, wherein novel means are incorporated for maintaining the dental floss in taut condition, in addition to securely clamping the dental floss. My present application is a division of my Patent 2,384,712, issued Sept. 11, 1945, on a Dental floss holder.

In the accompanying drawing:

Figure 1 is a view of an embodiment of the invention.

Figure 2 is a view rotated 90 degrees.

Figure 3 is an enlarged view of one of the clamping members.

Figure 4 is a sectional view on the line 4—4 of Figure 3.

Figure 5 is a sectional view on the line 5—5 of Figure 3.

Figure 6 is a sectional view on the line 6—6 of Figure 5.

Figure 7 is a perspective view of fixed clamp part, and

Figure 8 is a perspective view of the moveable clamp part.

Referring more in detail to the drawing, the reference numeral 10 designates a holder comprising a piece of spring wire bent back upon itself to provide a loop 12 and arms 14 which are held in parallel relationship by the dental floss 16. The arms 14, in the absence of the floss 16, diverge so that the floss 16 is placed under the necessary tension when clamped in accordance with Figure 1. The arms 14 are of a sufficient length to provide a handle. In spacing the arms 14 closer than the maximum diameter of the loop 12, there is provided an arrangement wherein a good grip may be had on the handle structure. The upper ends of the arms 14 diverge at 18 and then continue in parallelism up to the floss 16. When viewed according to Figure 2, the arms 14 are bent in the regions of their diverging zones to positions at an angle of about 45 degrees to the remainder of the holder.

This arrangement permits the floss 16 to be manipulated in all accessible places.

Each leg 14 is provided with a floss clamp 20. The two clamps are of identical construction and each leg 14 is provided with external threads 22 for the reception of a hexagonal sleeve nut 24 and a longitudinal slot 26 extending through the upper end of the leg.

A clamp head 28 is provided with a web 30 as in Figure 7 which is receivable in the slot 26 and the clamp head is fixedly connected with the leg 14

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by means of spot welding or the like. A clamp head 32 as in Figure 8 is moved into clamping engagement with the clamp head 28 by the nut 24. The clamp head 32 is similar in formation with the clamp head 28 with the exception that its web 34 is slidably mounted in the slot 26.

The nut 24 abuts the clamp head 32 to secure the floss 16 between the roughened upper surface 36 of the web 34 and a concave recess 38 formed in the lower surface of the clamp head 28 at the medial point thereof. Thus, the floss may be clamped securely between the roughened surface 36 of the web 34 and the concave recess 38 through rotation of the sleeve nut 24.

The web 34 restrains the clamp head 32 from rotation when the sleeve nut 24 is rotated, in addition to holding the roughened surface in parallelism with the recess 38, the latter being curved to embrace a considerable margin of the dental floss 16, and the recess 38 is curved in conformity with the roughened surface 36.

All the parts of the clamp structure, as well as the holder in general, are characterized by rounded corners and smooth surfaces. The floss 16 may be easily threaded through the slots 26 and made secure through tightening the nut 24. The tension of the holder maintains the floss under a necessary degree of tautness, and the floss is securely clamped against accidental slipping and eliminates the necessity of tieing knots in the floss for co-action with hooks and other types of abutments. Thus, the floss 16 need not be accurately knotted at pre-determined intervals since the floss may be securely clamped in any position.

Without further elaboration, the foregoing will so fully explain the invention that those skilled in the art may by applying current knowledge readily adapt the same for use under various conditions of service.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

A dental floss holder comprising a bent wire handle, having spaced legs, elongated slots in the legs extending through the ends thereof, the legs being threaded at the ends thereof, a first substantially H-shaped clamp part including two parallel side portions and a web formed integral with said side portions and fixedly connected to the leg at the end thereof, a second substantially H-shaped clamp part including two parallel side portions and a web formed integral with said side portions and slidably mounted in said slot, the lower edge of each side portion of said first clamp

part being concave in cross section and a concave recess is formed on the lower surface of the web of said first clamp part and said recess extends outwardly through the summit of the concavity in the lower edge of each side portion thereof, the upper edge of each side portion of said second clamp part being convex in cross section and the upper surface of the web of said second clamp part being roughened and convex in cross section and a sleeve nut on the threaded end of said leg for forcing the second clamp part into clamping engagement with floss between the first clamping part and the second clamping part, so that the concave end of each side portion of the second clamp part will engage the concave lower edge of each side portion of the first clamp part so that

the convex roughened upper surface of the web of the second clamp part will enter the concave lower surface of the web of the first clamp part, the roughened surface of the last web facilitating the holding of the floss.

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HARRY TURENCHALK.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,384,712	Turenchalk et al.	Sept. 11, 1945