March 3, 1942. E. C. WEST 2,274,814

DENTAL DEVICE

Filed Feb. 10, 1940

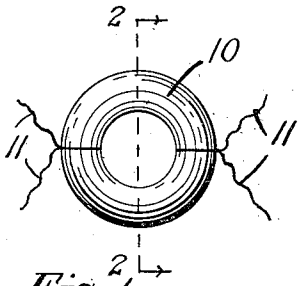


Fig. 1.

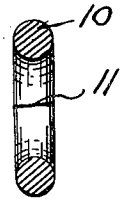


Fig. 2.

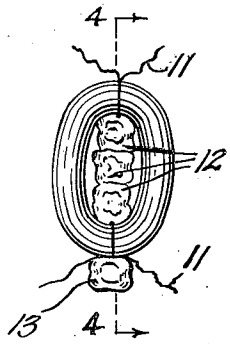


Fig. 3.

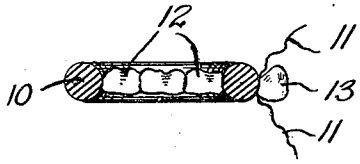


Fig. 4.

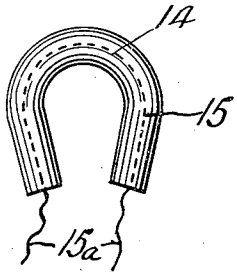


Fig. 5.

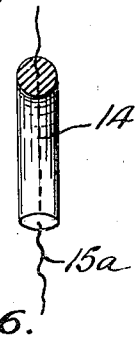


Fig. 6.

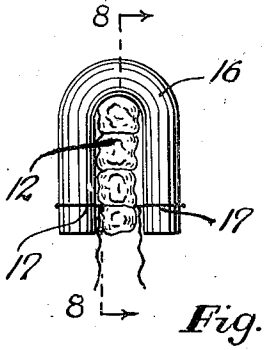


Fig. 7.

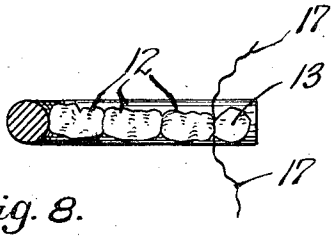


Fig. 8.

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DENTAL DEVICE

Earl Clay West, Mora, Minn.

Application February 10, 1940, Serial No. 318,290

2 Claims. (Cl. 32—33)

This invention relates to a dental appliance and particularly to such an appliance in the form of a circular or annular, U-shaped or elliptical roll or body of absorbent fibrous material adapted to be placed about one or more teeth.

In working upon the teeth of a patient it is often desirable in various dental operations to keep the tooth or teeth dry. This is often quite difficult due to the flow of saliva which is sometimes stimulated by dental work. Dentists have heretofore used straight pieces of absorbent material, such as cotton, which pieces are laid along the mouth channels at the sides of the teeth. These straight pieces are rather cumbersome and it is impossible to get them into the proper relation to the teeth to properly surround the teeth and effectively keep the teeth in the desired condition.

It is an object of this invention to provide a simple and efficient device comprising a substantially annular roll of compressed absorbent material, preferably of a fibrous nature, which can be easily and conveniently placed in position about one or more teeth and securely held in this position to keep the saliva away from the teeth so as to keep the teeth dry and in an efficient manner.

It is a further object of the invention to provide a formed roll of compressed absorbent fibrous material curved to extend about the end of a tooth and along the sides of the same and adjacent teeth and having ligatures thereon for securing the same in position.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawing in which like reference characters refer to similar parts throughout the several views and in which—

Fig. 1 is a plan view of one form of the device;

Fig. 2 is a vertical section taken on line 2—2 of Fig. 1;

Fig. 3 is a plan view of the device in operative position;

Fig. 4 is a vertical section taken on line 4—4 of Fig. 3 as indicated by the arrow;

Fig. 5 is a plan view of a modification;

Fig. 6 is a central vertical section of Fig. 5;

Fig. 7 is a plan view of a further modified form of the invention; and

Fig. 8 is a vertical section taken on line 8—8 of Fig. 7 as indicated by the arrows.

Referring to the drawing, in Figs. 1 and 2 a member 10 is shown which is of substantially circular or annular shape, the same being formed of absorbent fibrous material preferably in a compressed condition. While various materials might be used, in practice it has been found very suitable to make the member 10 of cotton. The member 10 in radial cross section has the form of a closed figure preferably of cylindrical form. Ligatures 11 are secured to member 10 at spaced points thereon and while these might take different forms, in the embodiment of the invention illustrated they are shown as made of small strings or threads. These will have considerable tensile strength.

In operation, the member 10 will be placed about one or more teeth as shown in Fig. 3 and if necessary the member may be flattened or elongated to closely surround the teeth 12. The material will be such that some slight stretching is possible. As shown in Fig. 4, member 10 will be placed down around or placed in position about the teeth so as to extend along the sides of the teeth and about the end or the front and back of the endmost teeth. Usually the outer ends of the endmost teeth will be closely engaged by the device. The device can be positioned along the sides of the teeth to give the best results and at the desired distance from the teeth. The ligatures 11 are used to hold the device in place. These can be pressed in between adjacent teeth 13 or wrapped or tied about adjacent teeth so that member 10 is held nicely in position. The said member may also be held in place by dental matrices or clamps used in certain dental work. In some cases the patient might hold the device in place with his finger. The devices or rolls are equally useful with both upper and lower teeth but are especially valuable for work in the lower molar regions. They are of particular value for keeping teeth dry for cementing orthodontia bands.

In Figs. 5 and 6 a similar form of the invention is shown, comprising a member 14 of U-shape or horseshoe shape. Member 14 will also be made of a body of absorbent fibrous material preferably somewhat compressed and of substantially circular form in cross section. A small string or thread 15 extends substantially centrally through member 14 and projects at the free ends thereof to form ligatures 15a.

The device may also be made of the member 16 shown in Fig. 7, which is more nearly of U-shape. Ligatures 17 may be secured about the device adjacent the free ends thereof.

In operation, the use of the devices shown in Figs. 5 and 7 is substantially the same. The

member 14 or 16 is placed in position with the inside of its bight portion engaging one end of the teeth and the leg portions or the portions having the free ends then extend along each side of the teeth. The ligatures 15a or 17 may be used to secure the device in place as desired. These ligatures may be held by wedging the same in between teeth or they may be tied about the teeth, whichever is the most convenient.

From the above description it will be seen that I have produced a very simple, convenient and efficient dental device. The devices can be produced all ready for use and marketed in suitable containers. It is a simple and easy matter to place them about one or more teeth. With the formed rolls so placed about the teeth, the teeth are effectively protected from saliva or moisture and work can be done upon the teeth with much more leisure and assurance. Specific uses for the device include its use in placing dental fillings and its use in keeping saliva from freshly extracted teeth until a normal blood clot has formed. It is well adapted for the latter use. It is also of high utility in keeping the tooth or teeth dry in cementing bridgework. It is also quite valuable in working on the lower teeth to keep gum line cavities dry for treatment or for filling operations. The rolls are of convenient size and can be easily and quickly placed in position. They surround the teeth in a way to effectively protect them from saliva. While the material from which the device is made is absorbent, the compressed condition of the same acts to keep the moisture away from the teeth for a long period. The use of the devices enables the dentist to work with more speed and to have less difficulty in keeping the teeth in the desired condition. The device can be marketed at a reasonable price. The same has been amply demonstrated in actual practice and found to be very successful and efficient.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts, without departing from the scope of applicant's invention, which generally stated, consists in a device capable of carrying out the objects above set forth, in the parts and combinations of parts disclosed and defined in the appended claims.

What is claimed is:

1. A device constructed and arranged to be placed about one or more teeth to keep the same dry, comprising a member formed of compressed absorbent fibrous material, said member being substantially circular in cross section and curved to fit about the end of one tooth and along the side of the same and adjacent teeth, said member having secured thereto at spaced points a plurality of ligatures comprising strands of small strings or threads extending therefrom and constructed and arranged to be placed between and around the teeth to hold said device in place, said device being constructed and arranged to act as a dam to keep moisture or saliva away from said teeth.

2. A device for dental use comprising a continuous substantially annular member of compressed fibrous material, said member being in the shape of a closed substantially circular figure in radial cross section and constructed and arranged to be placed around one or more teeth so as to completely surround the same and form a compact continuous dam for keeping the saliva away from said teeth and keeping the same dry.

EARL CLAY WEST.