No. 785,992. PATENTED MAR. 28, 1905.

G. H. WHITELEY.

SHADE GUIDE FOR ARTIFICIAL TEETH.

APPLICATION FILED OCT. 26, 1904.

Fig. 1.

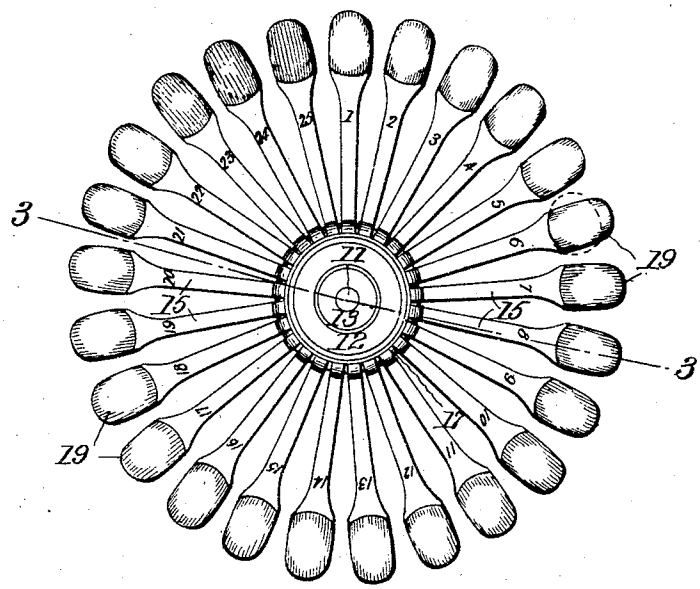


Fig. 2.

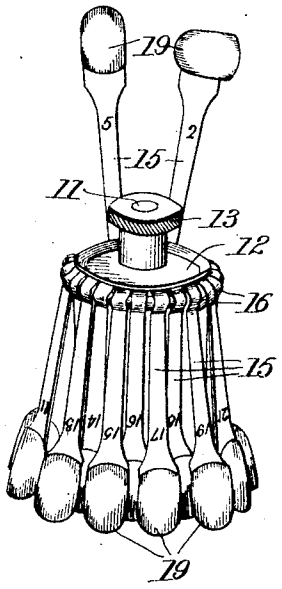


Fig. 3.

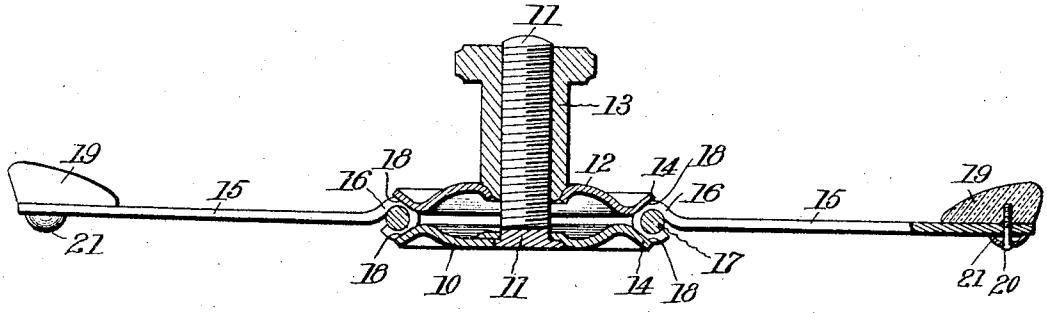
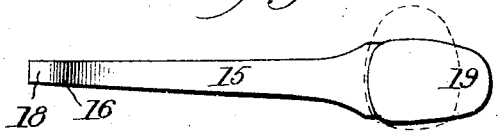


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE H. WHITELEY, OF YORK, PENNSYLVANIA, ASSIGNOR TO DENTISTS' SUPPLY COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

SHADE-GUIDE FOR ARTIFICIAL TEETH.

SPECIFICATION forming part of Letters Patent No. 785,992, dated March 28, 1905.

Application filed October 26, 1904. Serial No. 230,106.

To all whom it may concern:

Be it known that I, GEORGE H. WHITELEY, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented new and useful Improvements in Shade-Guides for Artificial Teeth, of which the following is a specification.

This invention relates to devices for supporting a plurality of sample artificial teeth which are of varying shades, said devices being known as "dental shade-guides" and being employed by dentists to enable them to readily contrast or compare artificial teeth of varying shades with the natural teeth of their patients. These devices facilitate the selection of a particular shade of artificial teeth to match the natural teeth of the patient, so that a tooth which is to be located by means of artificial dentures or pivots or bridgework may match as accurately as possible the shade of the adjacent natural tooth or teeth.

One of the objects of my invention is to provide a device of this character which will support or carry a large number of the sample artificial teeth in as small a compass as possible.

Another object of the invention is to provide a folding shade-guide which can be conveniently carried or placed in a cabinet and by means of which the different samples may be individually turned to different positions relatively to their supports, so as to enable the said samples to be readily placed alongside of a natural tooth.

A further object of the invention is to provide a device of this character which will enable the selected sample to be placed and retained in a distinctive position relatively to the other samples, so that it can be either manipulated alongside of a natural tooth or be conveniently referred to without having to repeat the matching operation.

Other objects of the invention will appear hereinafter.

To these ends the invention consists in the construction substantially as hereinafter described and claimed.

Of the accompanying drawings, Figure 1 is a plan view of my device with the arms all set in radial positions. Fig. 2 is a perspective view of the device folded, but with two of the arms extended to a selected position. Fig. 3 represents an enlarged section on line 3 3 of Fig. 1. Fig. 4 represents a plan view of one of the arms and a sample tooth carried thereby detached from the central support.

Similar reference characters indicate the same or similar parts throughout the several views.

A lower disk 10 (see Fig. 3) is provided with a central stud or screw 11, said stud or screw being fixed to the disk 10 so as to be rigid relatively thereto. Loosely mounted upon the said stud or screw is an upper disk 12, and a nut 13 is fitted to the threaded portion of the central stud, the lower end of said nut bearing upon the portion of the upper disk surrounding the stud 11, whereby said nut may be employed to clamp the disks toward each other through the medium of said central stud or screw. The peripheral edges of the disks 10 and 12 are inclined so as to form outwardly-flaring jaws 14, adapted to grip the arms, as hereinafter described.

A plurality of arms 15 have their inner ends bent to form eyes 16, and the eyes of all the arms are mounted upon a ring 17, said ring having an inner diameter slightly less than the diameter of the two disks, so that said ring and the arms will fit between the jaws 14, substantially as represented in Fig. 3. The portions of the eyes 16 which are in contact with the jaws 14 when said arms are extended, as shown in Fig. 3 are flattened, as at 18, to preserve said arms in the outwardly-extended positions shown in Fig. 3, when the two disks are clamped together. It will be obvious that by loosening the nut sufficiently the disks will separate, so as to permit the arms to be turned either downwardly or upwardly, as indicated in Fig. 2. Of course all of the arms may be turned downwardly, so as to form a compact bunch when the device is not to be used, or one or more of the arms

may be turned upwardly, so as to definitely indicate a selected tooth borne by said arm or arms.

Each sample tooth 19 is pivotally mounted upon an arm 15, as by a pin 20, fastened in the tooth and projecting therefrom through an opening in the outer end of the arm, a cup-shaped spring-washer 21 being secured to the projecting end of the pin and bearing against the under side of the arm, so as to frictionally hold the pivoted tooth in any position to which it may be turned.

I have not attempted to indicate in the drawings the various shades of the different samples of teeth. Preferably they will be gradually shaded from a light color to a dark one successively around the circle, and the arms will have designating characters, as indicated in Fig. 1, said characters being preferably numerals stamped in the metal of the arms, and of course said arms form also convenient means for displaying any other characters, such as a trade-mark or other sign.

Preferably the upper end of the screw 11 is spread or headed down to prevent the nut from being entirely separated from the screw.

A convenient way of spreading the arms from the folded position will be to press the guide upon a flat surface, so that the arms will extend in a uniform plane, and then the thumb-nut will be turned down so that the jaws 14 of the disks will engage the flattened portions 18 of the eyes 16, and thereby rigidly hold the arms distended. When the device is in this latter condition, the dentist may readily determine the exact shade wanted by placing any one of the sample teeth adjacent to the natural tooth of the patient which it is desired shall be matched and then gradually rotate the series until the best matching sample is found. The number or other designating character borne by the arm of this sample will determine what tooth is to be selected from the stock or to be ordered for use, and, if desired, the arm bearing the selected sample may be left in a position to distinguish it easily from the others by loosening the nut and turning the arm of the selected tooth in one direction and turning all the other arms in the opposite direction. If the dentist is not certain as to which shade he wishes to use, he may leave two or more of the arms turned upward by themselves and then later compare the samples of these arms with the natural tooth. An arrangement for such use is indicated in Fig. 2. When any one of the arms is left projected from the others, the sample pivoted to that arm can be turned as indicated in dotted lines in Figs. 1 and 4, so as to enable the dentist to place it in any position that he wishes relatively to the natural tooth and to determine whether that sample is an appropriate one.

Having now described my invention, what I claim is—

1. A shade-guide for artificial teeth comprising a central support, and a plurality of radial arms having teeth at their outer ends and having different designating characters.

2. A shade-guide for artificial teeth comprising a central support, a plurality of radial arms, and teeth rotatably mounted upon said arms.

3. A shade-guide for artificial teeth comprising a central support and a plurality of radial arms having teeth at their outer ends and having different designating characters, the said arms being hingedly connected with said central support whereby they may be turned in different directions relatively to said support.

4. A folding shade-guide for artificial teeth comprising a pair of disks, a threaded central stud connected with one of the disks and passing freely through the other, a nut on said threaded stud and adapted to clamp the disks toward each other, a ring between the outer peripheries of the disks, and a plurality of tooth-carrying arms mounted on said ring.

5. A folding shade-guide for artificial teeth comprising a pair of disks, a threaded central stud connected with one of the disks and passing freely through the other, a nut on said threaded stud and adapted to clamp the disks toward each other, the outer edges of the disks being inclined to form jaws, a ring between said jaws, a plurality of arms mounted on said ring and having flattened portions adapted to be engaged by said jaws, and sample teeth carried by said arms.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

GEORGE H. WHITELEY.

Witnesses:

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N. R. CROSS.