March 22, 1960 V. S. ROUBIAN 2,929,143

DENTURE ADJUSTMENT DEVICE

Filed Sept. 12, 1955

FIG. 1.

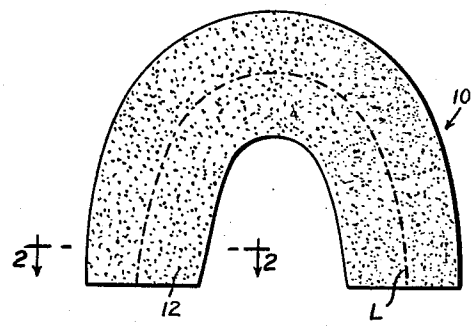


FIG. 2.

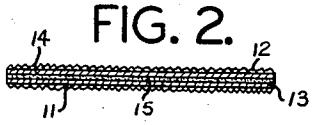
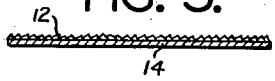


FIG. 3.



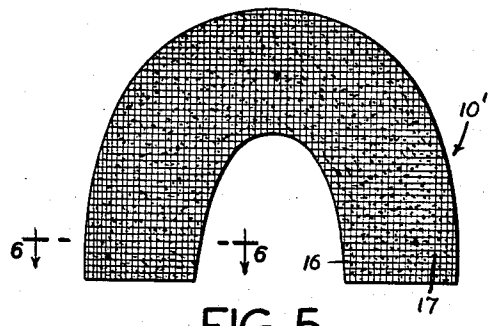


FIG. 5.

FIG. 4.

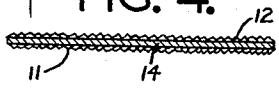
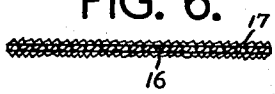


FIG. 6.



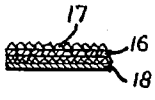


FIG. 7.

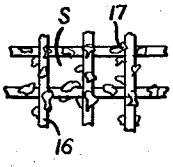


FIG. 8.

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DENTURE ADJUSTMENT DEVICE

Vahe S. Roubian, Manhasset, N.Y.

Application September 12, 1955, Serial No. 533,647

1 Claim. (Cl. 32—1)

This invention relates to the art of denture, both natural and artificial, adjustment devices and it particularly concerns a novel device for grinding or abrading the chewing or biting surfaces of both natural and artificial teeth.

The present practice is to mark the high spots or areas of the coacting surfaces of both natural and artificial teeth and then to grind down these high spots or areas until an optimum level or relationship is attained. This may call for several steps in the process of attaining optimum results, since there is always the danger of grinding too much away and then leaving low spots or areas. The common practice to achieve this result is to place a sheet of marking paper between the upper and lower sets of teeth and the patient is requested to bear down upon it. The high spots will become marked and the low spots will not. The marked spots will now be ground down slightly, to avoid overdoing it, and again marking paper is placed between the teeth to determine whether any high spots still remain. This process or procedure is repeated time and again until the desired result is attained.

I have invented a novel denture adjustment device which does not require repeated marking of the teeth in order to determine the presence and location of high spots. The present invention employs an abrasive paper or cloth in the general U-shape of a set of teeth. The abrasive sheet may have a single abrasive surface or two abrasive surfaces. Abrasives of different grit numbers may be used. The abrasive material may be fabricated from an abrasive type of hardware cloth or mesh. In use the abrasive member is placed between the teeth whose bite is to be adjusted and the teeth are ground together until the abrasive removes all the high points and the bite is equalized.

It is therefore a principal object of the invention to provide a denture adjusting device in the form of a flat U-shaped abrasive sheet.

It is a further object to provide a flat U-shaped abrasive device having one or two abrasive surfaces for adjusting the bite of a denture.

It is a further object to provide a means for adjusting the bite of a denture while the teeth are closed and being moved in a grinding motion.

Other and further objects and advantages will become apparent from the following description taken together with the drawing, wherein:

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

Fig. 2 is a sectional view taken on lines 2—2 of Fig. 1.

Figs. 3 and 4 views correspond to Fig. 2 and show modifications of the invention.

Fig. 5 is a plan view of another modification of the invention.

Fig. 6 is a sectional view taken on lines 4—4 of Fig. 4.

Fig. 7 is a fragmentary view corresponding to Fig. 6 showing another modification of the invention.

Fig. 8 is a fragmentary view on an enlarged scale of the embodiment of Fig. 5.

In Figs. 1 and 2 are shown a flat U-shaped member **10** which has two layers **11**, **12** of abrasive material such as quartz, emery ground glass, garnet, aluminum oxide, Carborundum or the like disposed on opposite sides thereof. The layers are bonded to flexible paper or cloth supports **13**, **14** which are cemented together by an adhesive layer **15**.

In Fig. 3 the device is shown formed with a single layer **12** of abrasive material bonded to support **14**. The exposed surface of the support sheet is free of abrasive.

In Fig. 4 the abrasive layers **11**, **12** are bonded to the single support sheet **14**.

In Figs. 5, 6, 7, 8 the flat U-shaped device **10'** is formed from a mesh material **16** which can be woven with cotton, plastic or other filamentary material coated with abrasive particles **17** such as emery or the like. The mesh has about 25 filaments to the inch, so that there are about 25 spaces S per inch in each direction.

In use as above mentioned, the abrasive member with one or two abrasive surfaces as required is placed between the teeth of a patient with the central line L of the U-shaped member centrally disposed on the corresponding central line of the teeth to be ground. The patient then grinds his teeth in a firm side to side or circular movement as required until the bite is equalized by removal of the undesired high points. If desired the patient can be provided with abrasive members having abrasive surfaces of different degrees of coarseness. Initially the patient will use the coarser abrasive and then change to finer abrasives as the grinding procedure requires. Since the abrasive is carried by a somewhat flexible support it will conform to the uneven surfaces and effectively abrade the high points while the patient's jaws are tightly closed. Of course if the denture or teeth to be abraded are mounted in a jig external of the patient's mouth, the same or similar grinding motion will accomplish adjustment of the chewing surfaces of the teeth as required.

The flexible mesh material shown in Figs. 5–8 provides the advantage that as the abrasive particles and the particles of tooth material become loosened they enter the interstices S between the filaments **16** so as to leave the abrading surfaces of the material clear for effective and efficient grinding action. The mesh material **16** may be provided with a plain paper or fiber backing **18** as shown in Fig. 7 so that only one chewing surface of the opposed teeth is ground when the abrasive device is in use. This layer may be a pressure sensitive masking tape which can be removed if desired.

Of course the denture adjustment device may be used for natural or artificial teeth. In any case the abrasive selected must have sufficient hardness to abrade the chewing surfaces with maximum speed.

It will be apparent to the denture adjustment device herein disclosed effectively accomplishes its objectives in a simple and economical manner. The device is low in cost and sanitary. Use of the device requires no special tools and skill as are required in prior known denture adjustment procedures.

Although a limited number of embodiments of the invention are disclosed these have been shown by way of illustration rather than in a limiting sense. Many changes are possible without departing from the invention as defined by the scope of the appended claim.

What is claimed and desired to protect by Letters Patent of the United States is:

A method of determining the presence and location of

high spots on the coacting surfaces of upper and lower sets of natural and artificial teeth and eliminating said high spots, comprising the steps of placing abrasive sheet material between the upper and lower teeth and abrading the teeth against said material until any high spots between them are ground down.

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