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2,404,683

DENTAL DEVICE

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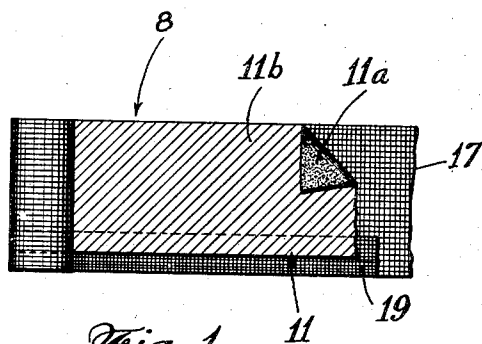


Fig. 1.

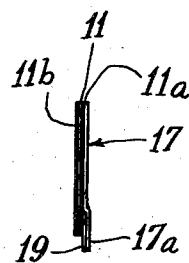


Fig. 2.

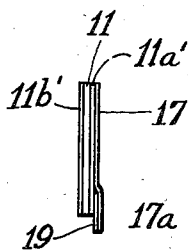


Fig. 4.

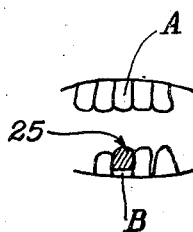


Fig. 3.

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DENTAL DEVICE

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4 Claims. (Cl. 232-19)

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This invention relates generally to dental devices. More particularly my invention is concerned with an improved construction for the type of devices used for aiding dentists in marking teeth in the mouth for the purpose of grinding or for other desired reasons.

One of the objects of my invention is to provide a novel marking device of the class described which shall be so constructed and arranged as to be easily and readily applied and maintained in position for effective use while permitting the dentist to grind teeth accurately and without interruption.

Another object of my invention is to provide a novel marking device of the class described which shall be relatively simple and inexpensive to manufacture, easy to use and which at the same time, shall represent a general improvement in the art.

Other objects of my invention will hereinafter be pointed out or will become evident from the following description.

In the accompanying drawing,

Fig. 1 is a plan view of a dental device constructed and arranged in accordance with my invention and having certain portions thereof broken away to disclose the construction thereof;

Fig. 2 is an end elevational view thereof;

Fig. 3 is a diagrammatic view showing the manner of application and use of my invention; and

Fig. 4 is an end elevational view, similar to Fig. 2, but illustrating a modified form of my invention.

In certain types of dental work, such as, for example, the making of crowns or inlays, it is necessary to grind the occlusal surface of the tooth which is to receive the same to provide space for the crown. It is also desirable that the layer of enamel to be removed for this purpose should be uniform. To accomplish this it has heretofore been the practice to employ a few layers of carbon paper of the type shown and described in the patent to F. W. Keith, No. 1,458,062, dated June 5, 1923. These sheets of carbon paper were held by the dentist with his fingers or with a tool while the patient closed his mouth, biting on the carbon paper to leave an imprint or mark on the tooth to be ground which served also as a gauge for the dentist in grinding. Usually this imprinting had to be repeated a number of times before the job was finished, necessitating the interruption of the grinding because the dentist was obliged to reinsert the carbon paper a number of times. Several disadvantages were noted in the above described method and procedure which the present invention is designed to overcome. One such disadvantage

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was in the fact that when the patient bit on the carbon paper it was usually cut through by the biting and mutilated, thus often giving inaccurate marking. Another disadvantage was found in the fact that the dentist lost time by constantly reintroducing the carbon paper into the mouth of the patient to get the necessary markings.

Referring now in detail to the drawing, I have shown, my improved dental device in the form of a strip 8 comprising a layer of textile material 11 having one of its surfaces 11a coated with adhesive substance and the opposite surface 11b coated with a layer of carbon or the like material capable of leaving a mark or imprint when brought into frictional contact with another surface. While the said strip 11 may be made of a single layer of textile or other suitable material having its opposite surfaces coated, as just described, it is understood that a laminated structure may also be employed in which the layer 11 may form the central layer and in which the coatings 11a and 11b may be on separate strips of material 11a' and 11b', as shown in Fig. 4 of the drawing.

In Fig. 3 I have illustrated a method of use of the dental device of my invention. Assuming that it is desired to construct a crown for the tooth A in the upper jaw, it would be necessary to grind a uniform layer of enamel from the occlusal surface of the tooth A in order to allow for the added thickness of the material of the crown.

To properly gauge the amount and extent of such grinding I cut off from the continuous strip 8, shown in Fig. 1, a piece 25, of any desired size and place the same over the tooth B in the lower jaw, corresponding to the tooth A, with the adhesive surface 11a downwardly so that it will adhere and be retained in position with the carbon surface 11b uppermost. When the patient closes his jaws, an imprint from the carbon surface 11b will be left on the tooth A which will serve as a guide to the dentist for grinding. This may be repeated as many times as needed, without interrupting the grinding. While I have described the strip 11 as being of textile material because of the fact that it will not become torn or mutilated after the first imprint is made, it is understood that I do not limit myself to textile material because Cellophane, plastic, or other suitable material may be satisfactorily employed.

In order to protect the adhesive surface 11a until ready for use, I provide a layer 17 overlying the said surface 11a. The layer 17 is preferably of a textile material having an open

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weave, on the nature of cheese cloth which may be adhesively held in place and which may be removable for effective use of my dental device, in the customary manner known to the art in the manufacture of adhesive tape.

In order to facilitate the ready removal of the layer 17 it is preferably made wider than the strip 11 so that it will cover the adhesive surface of the said strip 11 and at the time overhang one longitudinal edge thereof.

Interposed between the layer 17 and the adhesive surface 11a of the strip 11 for a relatively short distance from the longitudinal edge of the said strip 11 from which the layer 17 overhangs is an auxiliary relatively narrower layer 19. This layer 19 is adhesively held by the said adhesive surface 11a and overhangs the said longitudinal edge of the strip 11 similarly to the layer 17. It is thus seen that a portion 17a of the layer 17 which overlies the layer 19 is free and unattached to the adhesive surface 11a.

Therefore, when it is desired to use my dental device it is merely necessary for the dentist to grasp the overhanging portion of the layer 19 between the fingers of one hand and with the fingers of the other hand to grasp the overhanging portion of the layer 17. By maintaining a grip on the layer 19 the layer 17 may be readily peeled off without contacting the carbon surface 11b.

While in the drawing I have shown my dental device made in the form of a continuous strip which may be manufactured and sold as a roll, my device may also be made and sold in the form of cut sheets of predetermined size.

It will be thus be seen that there is provided a device in which the objects of my invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments

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above set forth, it is understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

5 Having described my invention, what I claim and desire to secure by Letters Patent is:

1. As a new article of manufacture, a dental device of the class described, comprising a sheet of material, one surface thereof being coated with carbon or similar substance capable of leaving an imprint when brought into frictional contact with another surface, the opposite surface of said sheet being coated with adhesive substance capable of removably adhering to a tooth to be retained thereby and a removable layer of material adhesively overlying the said adhesive surface to protect the same until ready for use.

2. As a new article of manufacture, a dental device of the class described, comprising a sheet of material, one surface thereof being coated with carbon or similar substance capable of leaving an imprint when brought into frictional contact with another surface, the opposite surface of said sheet being coated with adhesive substance capable of adhering to a tooth to be removably retained thereby, a first removable layer overlying the said adhesive surface to protect the same, and a second removable layer interposed between said adhesive surface and said first removable layer, said second removable layer being narrower than said first removable layer.

3. A dental device according to claim 2 in which the said first and second removable layers are of open weave fabric.

35 4. A dental device according to claim 2 in which the said first and second removable layers have portions thereof extending beyond an edge of said sheet so that they may be grasped by the fingers of the hands and readily removed without contactively engaging the said carbon surface.

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