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3,534,475

ATTACHMENT FOR DENTAL IMPRESSION TRAY

Filed Aug. 27, 1969

FIG. 1

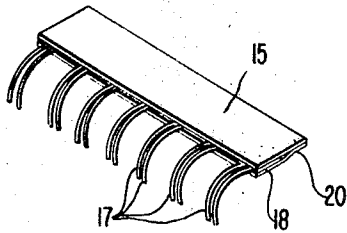


FIG. 2

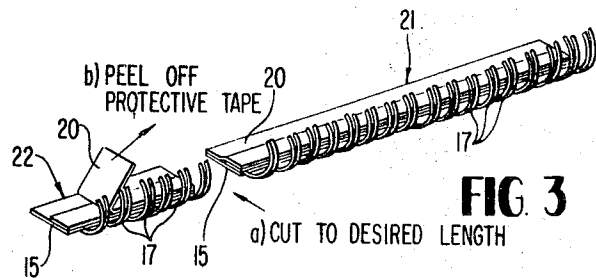
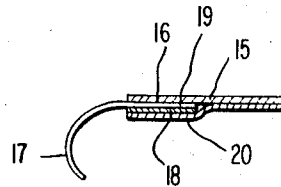


FIG. 4

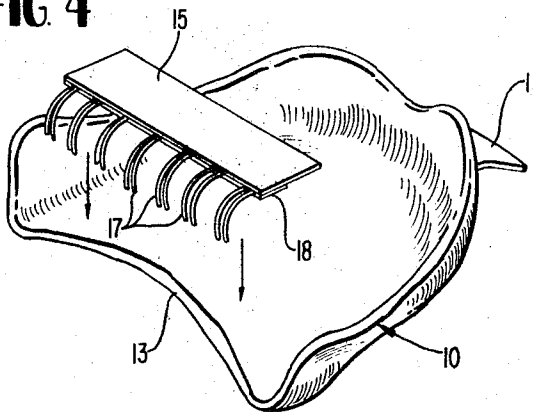


FIG. 5

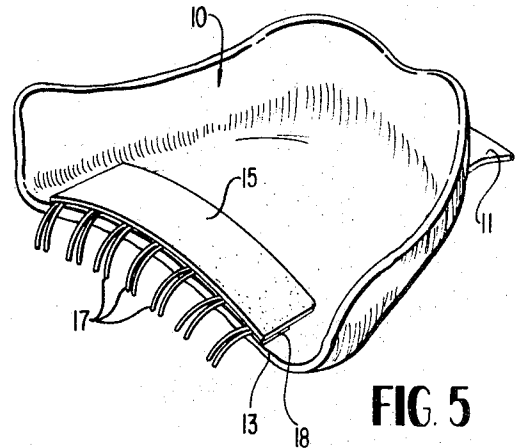


FIG. 6

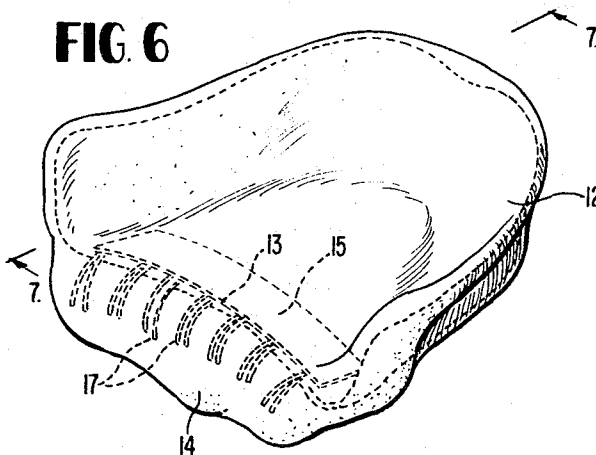
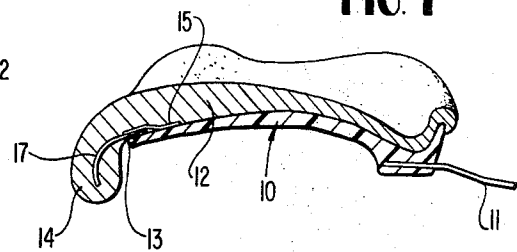


FIG. 7



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ATTACHMENT FOR DENTAL IMPRESSION TRAY

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7 Claims

ABSTRACT OF THE DISCLOSURE

An attachment for a dental impression tray which supports excess molding material at the rear edge of the tray and prevents the material from breaking off and entering the throat of the patient. The attachment has claw-like elements which become embedded in the molding material.

In the making of artificial dentures, a first rough impression is made from plaster of Paris and from this impression a final impression tray is produced from plastic-like material which fits the mouth of the individual patient.

In the making of the final dental impression using the final impression tray and a well-known molding gum-like material, a serious problem arises. As the patient bites into the molding material on the tray, a certain excess amount oozes over the rear edge of the tray and can easily separate from the main mass and enter the patient's throat, causing gagging and choking and even vomiting. This obviously greatly disturbs the patient and can spoil the entire molding procedure.

The present invention deals with this problem through the provision of a simple attachment adhesively mounted on the rear edge portion of the final impression tray and having claw-like elements which overhang the rear edge of the tray and support the molding material by becoming embedded therein as the material tends to flow from the rear edge of the tray. The attachment prevents the molding material from entering the throat of the patient very effectively. It is highly economical, sanitary and can be supplied to dentists in rather long sections which can be quickly cut to length and applied to the tray at the time of use when deemed necessary.

BRIEF DESCRIPTION OF DRAWING FIGURES

FIG. 1 is a perspective view of a dental impression tray attachment embodying the invention.

FIG. 2 is an enlarged transverse sectional view through the attachment.

FIG. 3 is a perspective view showing the attachment in the form of a long strip cut off in sections of desired length.

FIG. 4 is an exploded perspective view of the impression tray and attachment.

FIG. 5 is a perspective view of the tray and attachment in assembled relationship.

FIG. 6 is a perspective view of the tray and attachment with molding gum thereon.

FIG. 7 is a vertical section taken on line 7—7 of FIG. 6.

DETAILED DESCRIPTION

Referring to the drawings in detail, wherein like numerals designate like parts, the numeral 10 designates a dental impression tray formed of conventional plastic-like material and having a handle extension 11 embedded therein. The tray 10 is produced from a first rough impression of the patient's mouth made from plaster of Paris. The tray 10 is thus molded to fit the mouth of the individual patient quite accurately for the taking of the final dental impression from which a stone-like casting is made for mounting up the artificial teeth.

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Referring to FIGS. 6 and 7 of the drawings, a well known gum-like molding material 12 is employed with the tray 10 for making the final impression and when the patient bites, excess molding material will flow or ooze over the rear edge 13 of the tray in a mass shown at 14 in FIGS. 6 and 7. It requires up to three minutes for this material to harden in the patient's mouth, and during this time interference with the tongue or other reaction may cause the mass 14 to break off from the main body of molding material and enter the patient's throat causing choking and gagging and sometimes spoiling the molding procedure as well as frightening the patient.

The invention proper which has as its sole aim the overcoming of this annoying problem comprises a body portion or strip 15 of flexible material or tape coated on its lower side 16 with a pressure sensitive adhesive. Evenly spaced rearwardly projecting curved claw-like elements 17, preferably in pairs, are secured to the lower face of the strip 15 and may be covered by a second adhesively coated strip 18 of lesser width than the strip 15, FIG. 2. The straight portions 19 of the claw-like elements are thus sandwiched between the adhesive strips 15 and 18 and are securely held in place while extending rearwardly of the attachment in a uniform projecting manner. The lower side of the assembly is temporarily covered by a sanitary masking strip or tape 20 which may be peeled off at the time of usage of the attachment.

Referring to FIG. 3, the attachment may be produced in long sections within any practical limits as indicated at 21 and the long section may be cut to any desired use length with a scissors as indicated by the numeral 22. When the attachment is to be utilized with the tray 10, a section is cut to length and the masking tape 20 is peeled off as in FIG. 3 and the under surfaces of the adhesive coated strips or tapes 15 and 18 are simply pressed down onto the rear edge portion of the tray 10 and will adhere thereto, as shown in FIGS. 4 and 5. The claw-like elements, which may be formed of nylon or like material, project rearwardly and downwardly from the rear edge 13. When the flowable material 14 passes rearwardly from the tray, FIG. 7, it will flow over the elements 17 which embed themselves in the material while it is in a semi-solid state. The elements 17 will effectively support the material while it is hardening and prevent the portion 14 from separating from the main mass 12 and entering the patient's throat. After hardening, the attachment becomes a permanent part of the molded unit.

Instead of the two adhesive strips 15 and 18, above-described, the elements 17 may in some cases be molded into a single strip having a thickened rear portion and the bottom surface of the single strip will then be adhesive coated with a pressure sensitive adhesive and covered by a temporary masking tape. The end result is exactly the same in either case. The attachment may be packaged for use by dentists so as to provide an adequate supply for the dental office. The various features and advantages of the invention should be readily apparent to those skilled in the art without the need for further description.

What is claimed is:

1. A dental impression tray comprising in combination a tray body portion having a rear edge adapted to enter the mouth of the patient for making a dental impression from a flowable molding material placed on the tray, a strip element secured to the tray body portion adjacent said rear edge, and rearwardly and downwardly projecting claw-like elements anchored to the strip element and overhanging said rear edge and supporting excess flowable molding material by becoming embedded therein as such material oozes over said rear edge.

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2. The structure of claim 1, and said strip element is an adhesive coated element adhesively secured to the tray body portion.

3. The structure of claim 2, and said strip element includes a pair of adhesive coated layers in opposing relationship and terminal end portions of the claw-like elements sandwiched and secured between the layers.

4. An attachment for a dental impression tray to arrest the rearward flow of semi-solid molding material so that such material will not enter the throat of the patient, said attachment comprising a flexible strip body portion having its underside coated with a pressure sensitive adhesive, a masking strip secured to and temporarily protecting said adhesive coated underside of the strip body portion, and multiple curved laterally spaced claw-like elements anchored to the strip body portion along one longitudinal edge thereof and projecting in a uniform manner beyond said one longitudinal edge and below said underside.

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5. The structure of claim 4, and said strip body portion and masking strip with said claw-like elements formed in an indefinite length adapted to be cut off in desired use lengths by the user of the attachment.

6. The structure of claim 4, and said claw-like elements being relatively stiff resilient elements having straight shanks adhered to the adhesive coated underside of the strip body portion.

7. The structure of claim 6, and said claw-like elements formed of nylon.

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