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[54] **INTERSTICE DEVICE FOR DENTURE DOUBLE IMPRESSIONS**

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[51] **Int. Cl.** **A61c 9/00**

[58] **Field of Search** 32/17, 63, 19

[56] **References Cited**

UNITED STATES PATENTS

3,390,458 7/1968 Lytton 32/17

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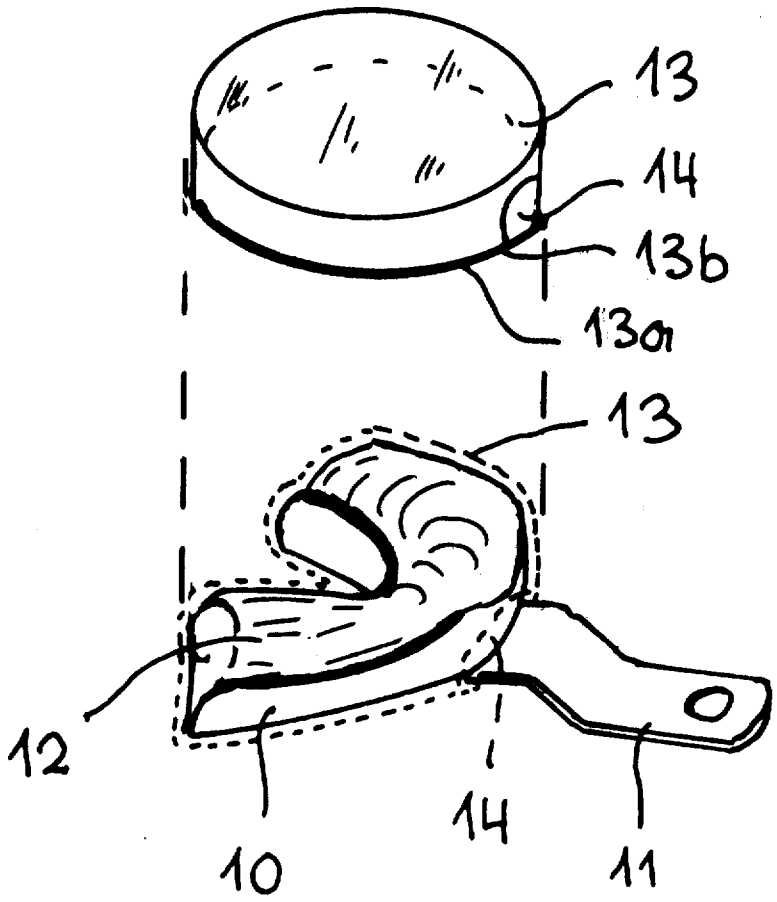
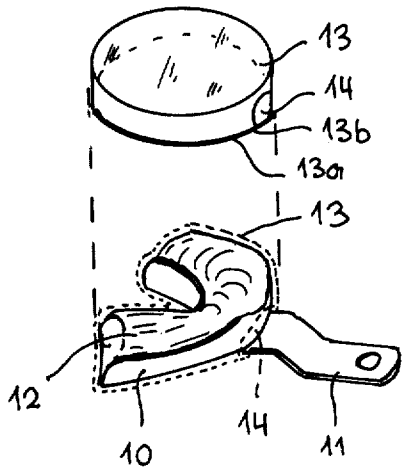
[57] **ABSTRACT**

A device for providing an interstice above a primary impression material on a dentist's impression tray prior to application of a secondary impression material in the taking of denture double impressions wherein a laminar or strip-shaped sheet member made of a plastic resilient material is placed over the primary impression material between the primary impression and the secondary impression.

8 Claims, 1 Drawing Figure

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INTERSTICE DEVICE FOR DENTURE DOUBLE IMPRESSIONS

The present invention generally relates to denture double impressions and more particularly to a device for providing an interstice above a primary impression material on a dentist's impression tray prior to application of a secondary impression material.

Heretofore, in the technique of taking impressions silicon materials have been used for taking combination or double impressions. In practice, the region from which an impression is to be taken is coated with an impression material and then an impression tray filled with another impression material is applied over the primary impression material so as to prevent the formation of bubbles or pockets within the impression. It is likewise known to combine a plaster impression with a silicon impression. In this known technique the denture from which an impression is desired is covered with an U-shaped wax strip and then the impression tray filled with plaster is introduced. The impression tray is removed before the plaster has fully solidified. The wax strip adheres to the plaster and is subsequently removed. The interstice is filled with silicon material and then the final impression is taken.

The development of silicon materials has shown that impression materials of this type may likewise be satisfactorily employed in the technique of taking double impressions. However, a disadvantage associated therewith is that excess material of the primary impression has to be cut away in order to provide the necessary space for the secondary impression material.

The present invention now provides a device for providing an interstice above a primary impression material on a dentist's impression tray prior to application of a secondary impression material when taking denture double impressions. The novel device allows to provide in a relatively simple manner an interstice above a primary impression material in thus avoiding the requirement of cutting away excess primary impression material for providing an interstice to apply the secondary impression material.

In accordance with the present invention, the proposed device is characterized by a laminar or strip shaped sheet member made of a resilient material and adapted to be attached over the primary impression material between the primary impression and the secondary impression.

According to another feature of the present invention the device may be characterized by a spacer hood of a resilient material adapted to be stretched over the primary impression material. The base of the spacer hood may be of a square, a circular or a rectangular configuration and the hood may be provided with a peripheral edge portion and a reinforced peripheral bead to ensure a positive and tight fit of the spacer hood on the primary impression material.

The risk of a spacer member in the form of a spacer hood slipping off the impression tray despite of the bead provided at its lower peripheral edge is avoided, in accordance with another feature of the present invention, by the fact that the spacer hood may be provided, adjacent its peripheral edge portion, with an opening through which the handhold of the impression tray may be inserted to prevent the spacer hood from becoming disengaged from the impression tray. This positively avoids any troublesome consequences such as swallowing up of the spacer member or fits of choking which might be caused thereby and the like.

The spacer hood is tightly stretched over the impression tray and allows perfect impressions to be taken because of its resilient nature whereby the impression material cannot enter into the interocclusal clearances. Another advantage which results from the usage of a spacer hood is that moisture and particularly moisture caused by saliva is prevented from attacking the primary impression material. Therefore it is no longer required to wait for the primary impression material to harden before the secondary impression material is applied. Any subsequent cutting away of interfacing profiles is likewise no longer necessary.

In the following, the invention will be described more in detail with reference to the sole FIGURE of the appended drawing illustrating an embodiment of the present invention.

In the drawing, the reference numeral **10** shows a conventional impression tray having a grip-shaped handhold **11**. On the impression tray **10** is provided an impression material **12** for taking a primary impression. The impression tray **10** with the primary impression material **12** thereon is covered by means of a spacer hood **13** made of a resilient material and having a suitable thickness allowing perfect impressions to be taken. The spacer hood **13** preferably is made of a soft resilient rubber. The spacer hood **13** is provided with a peripheral edge portion **13***a*. The dimensions of the spacer hood **13** are selected so that the spacer hood **13** envelopes the impression tray **10** with the impression material **12** thereon on all sides. A resilient peripheral bead **13***b* assures a tight and positive fit of the spacer hood **13** so that the latter adapts itself to the curvature of the impression tray **10** and the configuration of the impression material **12**. The peripheral edge portion **13***a* of the spacer hood **13** is provided with an opening **14** through which the handhold **11** of the impression tray **10** may be inserted in thus securing the spacer hood on the impression tray. The base area of the spacer hood **13** may be square, circular or rectangular or of any other suitable configuration adapted to provide a tight fit of the spacer hood **13** on the impression tray and the impression material thereon.

Application and use of the spacer hood **13** are as follows: After the impression material **12** has been applied to the impression tray **10** the spacer hood is stretched over the impression material and the tray. Then the impression tray **10** is inserted into the mouth of a patient and the patient is asked to close his mouth in biting on the impression material. The impression tray is then taken out of the mouth of the patient and the spacer hood of preformed resilient rubber is removed. The secondary impression material is applied and the impression tray again introduced into the mouth of the patient so that the second impression may be taken.

Instead of using a preformed spacer hood the interstice required for applying the secondary impression material may also be provided by insertion of a laminar or stripshaped sheet member made of a resilient material such as rubber or of a web.

What is claimed is:

1. A method of taking dental double impressions comprising the steps of filling a dental impression tray with a primary impression material and forming said primary impression material as a mass defining an impression surface against which teeth may be pressed,

covering said primary impression material by placing over said impression surface a laminar sheet of resilient strip material, forming primary dental impressions in said primary impression material by pressing teeth against said resilient strip material so that impressions are formed thereby in said primary impression material, removing said sheet material from said primary impression material, recovering said primary impression material by placing secondary impression material thereover, and forming secondary dental impressions by pressing teeth against said secondary impression material.

2. A device for taking dental double impressions comprising in combination, a dental impression tray, a primary impression material placed upon said tray and formed thereon as a mass of material adapted to have a dental impression made therein by having teeth pressed thereinto, said mass defining an impression surface thereof against which said teeth may be pressed, a laminar sheet of resilient strip material arranged over said primary impression material to cover said impression surface, and secondary impression material adapted to have a secondary impression of said teeth formed therein, said secondary impression material adapted to be placed over said impression surface of said primary impression material after a primary impression of said teeth has been made in said primary impression material by pressing said teeth against said resilient sheet material and after said sheet material has been removed from over said primary impression material.

3. A device according to claim 2 wherein said resilient strip material consists of a spacer hood adapted to be stretched over said primary impression material.

4. A device according to claim 3 wherein said spacer hood is provided with a reinforced resilient peripheral bead.

5. A device according to claim 4 wherein said spacer hood is provided with a resilient peripheral edge portion having an opening therethrough, said dental impression tray including a hand hold, said opening being adapted to have inserted therethrough said hand hold to prevent said spacer hood from becoming disengaged from said impression tray.

6. A device according to claim 5 wherein said spacer hood is of a square configuration.

7. A device according to claim 5 wherein said spacer hood is of a circular configuration.

8. A device aaccording to claim 5 wherein said spacer hood is of a rectangular configuration. .

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