Dec. 20, 1932. N. MEURER 1,891,649

DENTAL IMPRESSION DEVICE

Filed May 31, 1932

FIG. 1

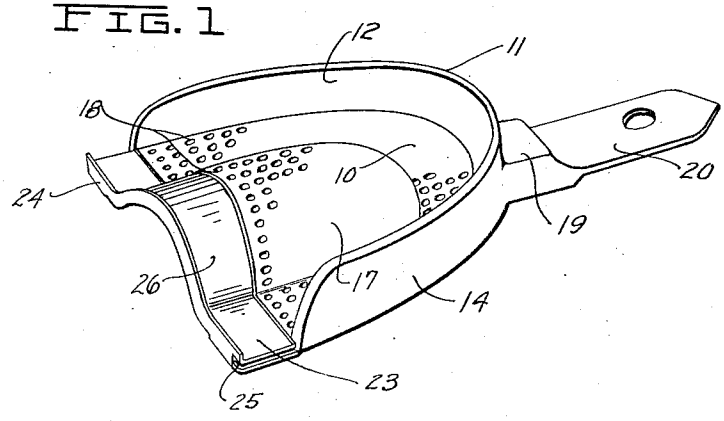


FIG. 2

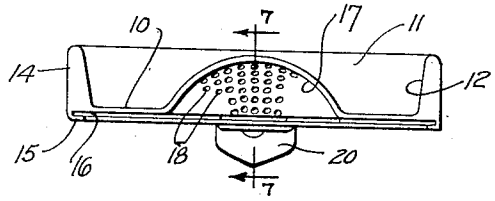


FIG. 3

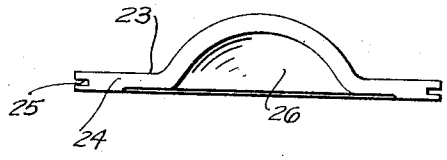


FIG. 4

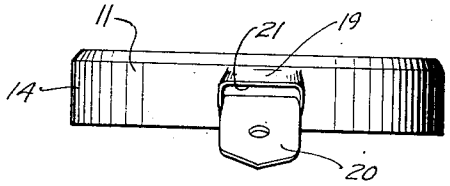


FIG. 6

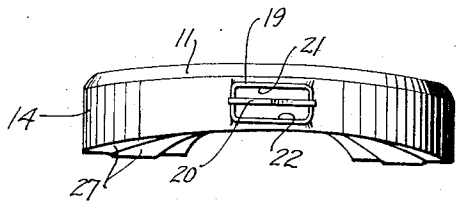


FIG. 5

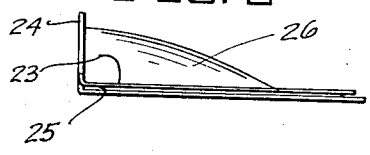
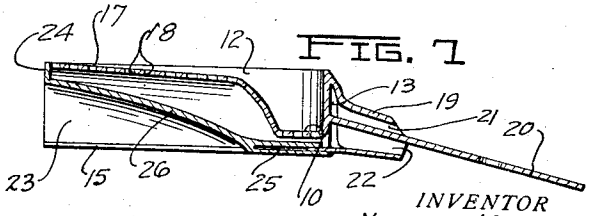


FIG. 7



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UNITED STATES PATENT OFFICE

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DENTAL IMPRESSION DEVICE

Application filed May 31, 1932. Serial No. 614,375.

My invention relates to a cooling jacket dental impression tray and is designed for taking impressions of the mouth with any plastic material that will soften or harden very quickly through change of temperature.

An object of the invention is to provide a combination whereby the base may be removable from the tray. A lower tray may be made without a palate, thus making the device adaptable for upper and lower jaw impressions.

Another object of the invention is to provide a cooling jacket whereby water may be injected into the space underneath the tray and around the lips of the tray so that the injected water freely circulates through the entire tray.

Still another object is to provide a simple structure that may be cheaply manufactured, efficient and convenient for the patient, and also easy for the dentist to operate.

Further advantages may be noted from the following specification and the accompanying illustrations, in which:

Figure 1 is a perspective view with the base projecting from the upper tray; Fig. 2 is a front elevation of the upper tray; Fig. 3 is a front elevation of the base of the upper tray with the palate; Fig. 4 is a rear elevation assembled; Fig. 5 is a side elevation of the base; Fig. 6 is a rear elevation similar to Fig. 4, but with the device tipped forward to show the palate corrugations of the base; Fig. 7 is a section taken on lines 7—7 of Fig. 2.

Referring to the drawing 10 is an upper impression tray with edge rim or flange 11 shaped as shown to conform to the contour of the mouth over the tongue and near the palate. The flange 11 tapers or curves at the ends into the tray 10 from the inner wall 12 of said flange, and a hollow chamber 13 is formed between the inner wall 12 and the outer wall 14 of the flange 11, which forms a cooling jacket.

The outer wall 14 is bent under at the base to form a second flange 15 at right angles to the flange 11 leaving a groove or slot 16 between the base of flange 11 and flange 15.

The tray 10 has a bulge 17 which conforms to the shape of the mouth and which gradually merges into the said tray 10, and the bottom of the tray 10 and bulge 17 have a plurality of perforations 18 over their entire surface. Projecting from the outer end of flange 11 is a neck 19 with a handle 20 projecting through the middle thereof and forming upper and lower openings or passages 21 and 22 respectively.

A base or removable bottom 23 flanged at 24 and slotted at 25 with bulge 26, slides within the slot or groove 16 in the upper tray 10, thus forming a water jacket. The water is injected by a syringe into the opening or passage 21 over the handle 20, and circulates freely through the hollow chamber 13 and between tray 10 and base 23, and to empty the chamber the water is released through the opening or passage 22 below the handle 20.

The base 23 can be removed thus permitting the cleansing of the tray 10 easily because of the perforations 18 in the bottom of tray 10, and insuring sanitary conditions in the use of the tray.

The bottom surface of the base 23 is slightly corrugated as shown at 27.

I claim:

1. A dental impression device comprising a tray having double side walls spaced apart and extending around the edge of the tray bottom, and a removable base slidable between said walls and spaced under the bottom of the tray to form a cooling chamber.

2. A dental impression device as in claim 1, the side walls of the tray comprising inner and outer flanges with the outer flange depending below the bottom of the tray and provided with means to support the removable base when inserted.

3. A dental impression device as in claim 1, the base and walls having a sliding tongue and groove engagement with each other.

4. A dental impression device as in claim 1, the side walls of the tray being hollow and provided with a neck having inlet and outlet passages therein.

In testimony whereof, I do affix my signature.

NICOLAUS MEURER.