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H. L. WELKER

2,036,735

DENTAL IMPRESSION TRAY

Filed April 10, 1935

Fig. 1.

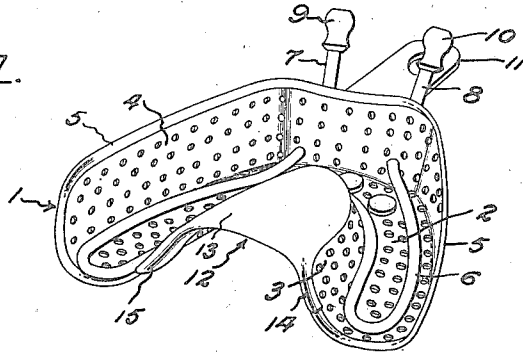


Fig. 2.

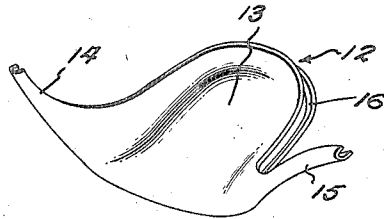


Fig. 3.

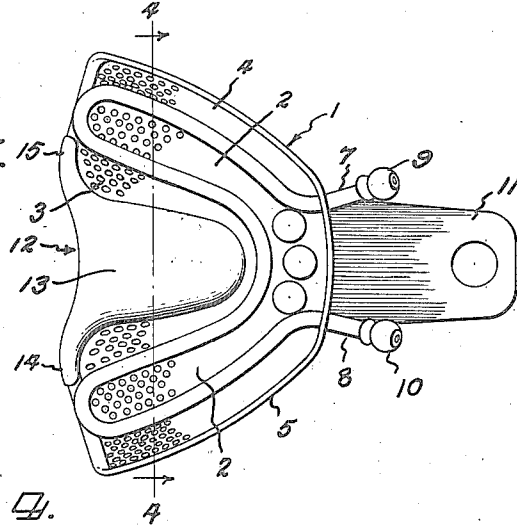
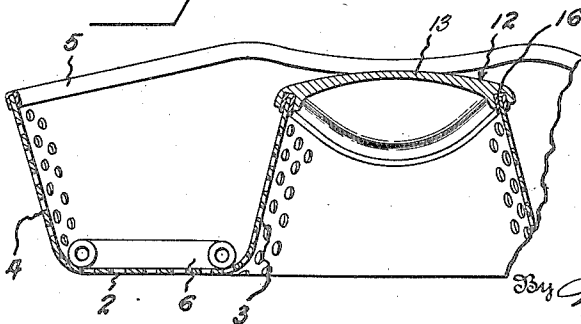


Fig. 4.



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DENTAL IMPRESSION TRAY

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2 Claims. (Cl. 32-17)

This invention relates to new and useful improvements in dental impression trays, such as are commonly employed for taking plaster impressions in the making of artificial teeth.

5 In this art, it is the usual practice to use separate impression trays for taking plaster impressions for the upper and lower sets of artificial teeth. It is the object of the present invention to provide a standard lower impression tray with
10 a detachable palate member which can be applied instantly to such tray to adapt it for use in taking upper impressions.

Other objects of the invention will become apparent as the detailed description thereof proceeds.

In the drawing:

Figure 1 is a perspective view of a preferred form of the present invention;

20 Figure 2 is a perspective view of the detachable member which forms an essential part of the combination illustrated in Figure 1;

Figure 3 is a plan view of the device shown in Figure 1; and

25 Figure 4 is a fragmentary section to an enlarged scale taken on the line 4-4 of Figure 3.

As shown in the drawing, the invention comprises an impression tray 1 of standard construction, and commonly used for taking a plaster impression in the making of lower sets of artificial
30 teeth. This tray 1 comprises a perforated trough shaped body 2 having inner and outer flanges 3 and 4 merging at their rear ends into the body 2. A stiffening rim 5 of channel cross section is secured detachably and by friction fit to the top
35 and end edges of the flanges 3 and 4.

The stiffening rim 5 forms a smooth inverted U-shaped channel member which seats over and covers the rough edges of the perforated flanges. The impression tray, as illustrated in the drawing, is of the water-cooled type in which a tube
40 6 extends around the bottom of the trough bounded by the side flanges of the tray, and is soldered thereto in the usual manner. The outer ends 7 and 8 of the tube 6, are provided with nipples
45 9 and 10, respectively, adapted to receive the ends of flexible tubing for conducting cooling liquid through the tubing within the tray. A handle 11 secured to the bottom wall of the tray facilitates the operation of holding the tray in position during the taking of an impression of the upper and
50 lower parts of the mouth of a patient.

As so far described, there is nothing novel about the impression tray, and the water-cooling tubing does not have any material effect on the essential part of the invention, designated herein

generally by the reference numeral 12. The part 12 is shaped in outline to conform to the curvature of the top and end edges of the inner flange 3 of the tray; and comprises a body 13 which
5 may be made of any suitable material, but preferably of stainless steel or other metal not subject to corrosion during the ordinary use of the instrument.

The body 13 terminates at its opposite ends in horns 14 and 15 which are curved to conform
10 to the curvature, in two dimensions, of the ends of the inner flange 3. The outer edge of the body 13 and the horns 14 and 15 are provided with a groove 16 which fits with friction tight fit over that part of the rim 3 which extends around the
15 top edge of the inner flange 3 and the ends thereof where they curve downwardly to merge with the bottom of the tray. This body 13 is shaped roughly to the curvature of the palate of the average size mouth, in which devices of this kind
20 are intended to be used.

It will be obvious from inspection of the drawing that the palate member 13 can be attached to, or detached from, the tray member 2, almost
25 instantly. There is nothing complicated or likely to get out of order about the invention; it is extremely simple and can be manufactured in quantity very easily and at low cost. Its use avoids the necessity of a dentist having to purchase separate trays for taking upper and lower impressions.
30 Obviously, the palate member 13 can be cast or stamped out in quantities which would enable it to be sold profitably at a very small fraction of the cost of the standard type impression tray.

While I have shown the invention as connected
35 up to well-known form of impression tray, it is to be understood that the invention is not to be considered as limited to use with this particular form, since it is obvious that changes in the construction of the impression tray would involve a
40 corresponding change in the structure of the correspondingly shaped palate member. The invention is therefore to be considered as limited only by the scope of the claims appended hereto.

What I claim is:

1. A dental impression tray comprising a dental
45 tray adapted to be employed in taking plastic impressions of the lower jaw, said tray comprising a substantially U-shaped base conforming in general contour to that of the gums in the average
50 human mouth and having flanges upstanding from its inner and outer edges, the inner flange of the tray having its edge shaped to define a lingual cavity, and a plate shaped to correspond to said lingual cavity and detachably connected
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to the edge thereof to adapt said tray for use in taking impressions of the palatal arch and upper jaw.

5 2. A dental impression tray comprising a dental tray adapted to be employed in taking plastic impressions of the lower jaw, said tray comprising a substantially U-shaped base conforming in general contour to that of the gums in the average human mouth and having flanges upstanding

from its inner and outer edges, the inner flange of the tray having its edge shaped to define a lingual cavity, and a plate shaped to correspond to said cavity and having its front edge grooved to seat with friction fit on the edge defining said lingual cavity to adapt said tray for use in taking impressions of the palatal arch and upper jaw. 5

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