March 4, 1924. 1,486,039

J. DE J. SANTOS

DENTAL IMPRESSION TRAY

Filed Dec. 5, 1923

Fig. 1.

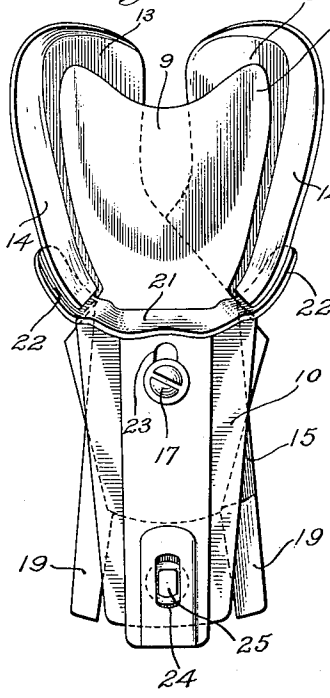


Fig. 2.

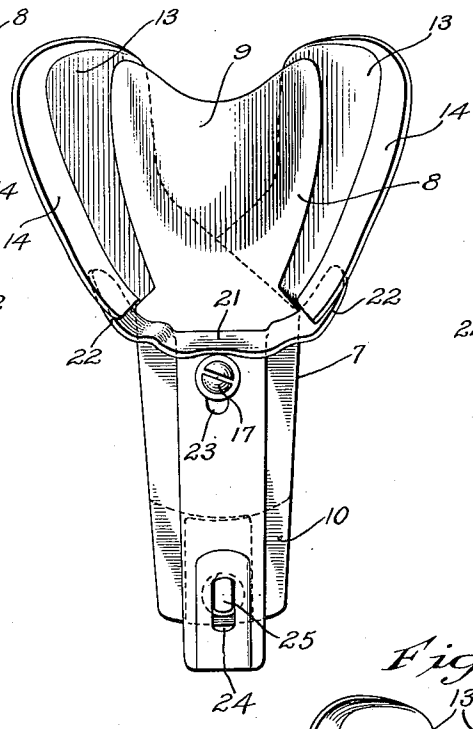


Fig. 3.

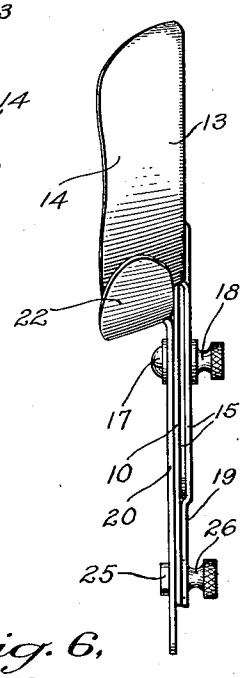


Fig. 4.

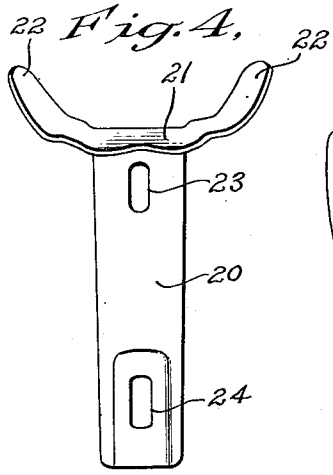


Fig. 5.

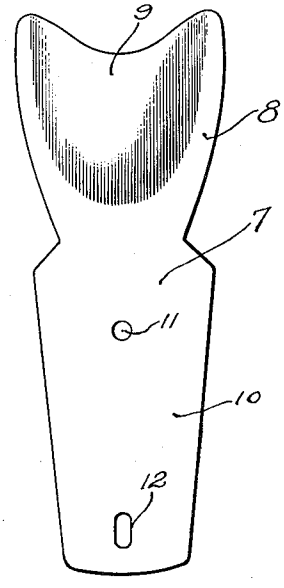
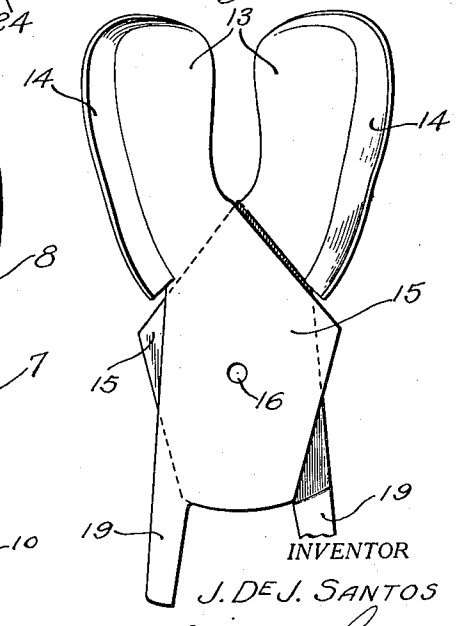


Fig. 6.



WITNESSES

E. A. Wilson

E. L. Mueller

INVENTOR

J. DE J. SANTOS

BY Munn & Co

ATTORNEYS

Patented Mar. 4, 1924. 1,486,039

UNITED STATES PATENT OFFICE.

JUAN DE JESUS SANTOS, OF NEW YORK, N. Y.

DENTAL IMPRESSION TRAY.

Application filed December 5, 1923. Serial No. 678,703.

To all whom it may concern:

Be it known that I, JUAN DE JESUS SANTOS, a citizen of Colombia, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Dental Impression Tray, of which the following is a full, clear, and exact description.

This invention relates to improvements in dental appliances, and has particular reference to a dental impression tray.

An object of the invention is to provide an improved impression tray of comparatively simple and inexpensive construction, the sections of which may be readily and quickly adjusted to conform to the contour of different sized mouths.

The above and other objects will appear more clearly from the following detail description, when taken in connection with the accompanying drawing, which illustrates a preferred embodiment of the inventive idea.

In the drawing—

Figure 1 is a plan view of the tray showing the sections in their contracted position;

Figure 2 is a similar view with the sections extended;

Figure 3 is an edge elevation;

Figure 4 is a plan view of the front section of the tray;

Figure 5 is a similar view of the base plate; and

Figure 6 is a similar view of the complemental side sections of the tray.

Referring more particularly to the accompanying drawing, the numeral 7 indicates a base plate formed at one end with a base section 8 having a dome portion 9 which conforms generally to the contour of the roof of the mouth when an impression of the upper jaw or teeth is being taken. The extension 10 of the base plate is provided adjacent the base section with an opening 11 and adjacent its outer extremity with an elongated slot 12 for a purpose which will appear in the course of the description.

The complemental side sections 13 include the flanges 14 which are insertable between the teeth and cheeks when adjusting the tray and securing an impression. The sections 13 further include the superposed plates 15, the upper one of which engages the under surface of the extension 10 of the base plate 7 when the sections are in operative position. Said plates 15 are provided centrally thereof with registering openings 16 designed to also register with the opening 11 in the extension 10 for the purpose of receiving the pivot member 17 in the form of a screw having a head 18 threaded thereon for securing various sections of the tray in adjusted positions. The plates 15 are provided at the ends thereof remote from the sections 13 with extensions 19, which project outwardly beyond the longitudinal edges of the extension 10 when the parts are in the position shown in Figure 1 and said extensions 19 are utilized as handles or grips for adjusting the sections after the tray has been inserted into the mouth, an inward movement of said sections having the function of swinging the sections outwardly toward the position shown in Figure 2 about the pivot 17.

Superimposed upon the extension 10 of the base plate and adjustable longitudinally thereof is the extension 20 of the front section 21. The extremities 22 of the front section 21 extend outwardly of and overlap the forward ends of the flanges 14 of the side sections so as to combine therewith to form a practically continuous tray into which a wax or any other suitable composition may be introduced for obtaining an impression. The extension 20 is provided adjacent the section 21 with an elongated slot 23 through which the pivot screw 17 extends and adjacent the outer end of said extension 20 the same is also provided with another slot 24 through which another fastening screw 25 extends. This screw 25 is also engaged in the slot 12 of the extension 10 and is provided with a head 26 utilized for further securing the sections in adjusted position.

With the extension 10 of the base section interposed between the plates 15 of the side section and the extension 20 of the front section and the parts in the contracted position shown in Figure 1, the tray may be inserted into a mouth utilizing the extensions of the various sections as a handle, after which the extensions 19 may be swung inwardly toward each other to expand the side sections to the proper position. The expansion of these side sections cause a slight outward and forward movement of the forward ends of the flanges 14 thereof and inasmuch as these forward ends of the flanges engage the extremities 22 of the front sec-

tion, it will be apparent that said front section will be forced forwardly toward the position shown in Figure 2. When the proper adjustment has been attained the heads 18 and 26 of the screws 17 and 25 may be tightened to secure the various sections in their adjusted positions following which an impression may be obtained in the usual well known manner.

What is claimed is:

1. In a dental impression tray, a base plate including an extension at one end, side sections including intermediate plates arraged in superimposed relation pivotally connected to said base plate and having extensions at adjacent ends projecting outwardly beyond the longitudinal edges of the extension of said base plate when the side sections are in contracted position, said extensions of the plates of said side sections forming handles for swinging the side sections about their pivotal connection with said base plate, and a front section superimposed upon the extension of said base plate and capable of longitudinal movement with respect to said plate when the extensions of said side sections are moved in one direction.

2. In a dental impression tray, a base plate including an extension at one end, side sections including intermediate plates arranged in superimposed relation pivotally connected to said base plate and having extensions at adjacent ends projecting outwardly beyond the longitudinal edges of the extension of said base plate when the side sections are in contracted position, said extensions of the plates of said side sections forming handles for swinging the side sections about their pivotal connection with said base plate, and a front section superimposed upon said extension of the base plate and movable longitudinally thereof, said front section having portions engaging and overlapping portions of said side sections and actuated by an outward movement of said side sections with respect to each other to move the front section longitudinally of said base plate in one direction.

JUAN DE JESUS SANTOS.