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J. E. PSAYLA
REGISTERING BITE TRAY

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Fig. 1.

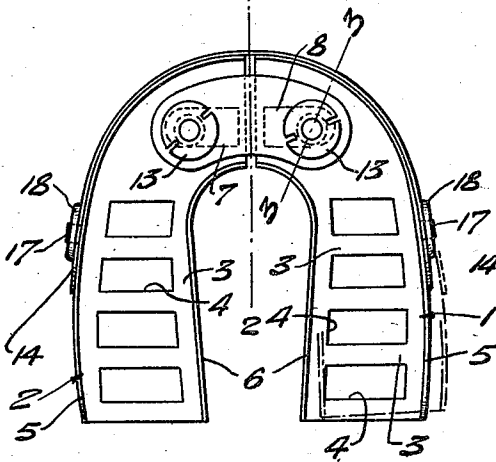


Fig. 2.

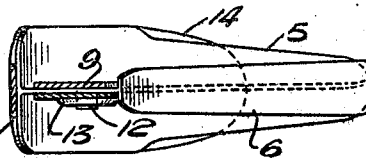


Fig. 3.

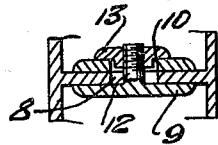


Fig. 5.

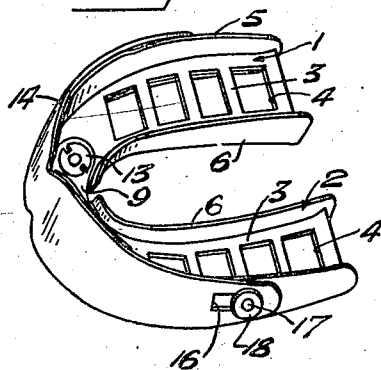
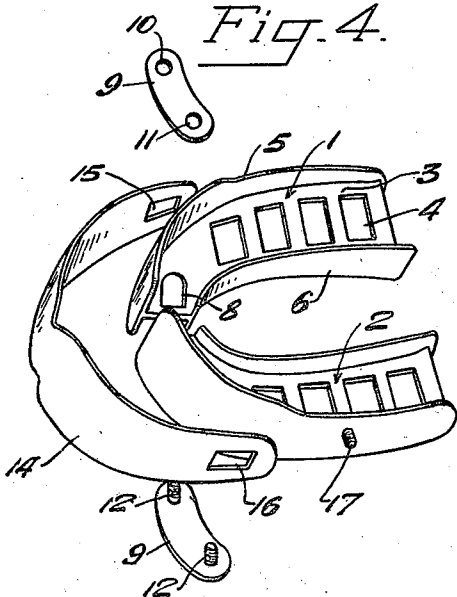


Fig. 4.



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REGISTERING BITE TRAY.

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This invention relates to registering bite trays and particularly to a tray of the class described, constructed for the purpose of recording the mandibular and maxillary relationship of the occlusal faces of the teeth, and provided with adjunctive means for enabling registration of the median line, corners of the mouth, normal lip-line, lip-high-line, lip-low line, and other data governing the determination of the length and width of the artificial teeth, and expression in their mounting.

The principal objects of the invention are to provide a tray adjustable for all sizes and shapes of arch, for taking the impression of the mandibular and maxillary bite, either separately or correlatively and to provide a chart carried by said tray and adjustably mounted thereupon so as to be accommodated to the changes of shape and size of the articulated arch members of the tray.

Other objects of the invention will appear as the following description of a preferred embodiment of the invention proceeds.

In the drawings:—

Figure 1 is a plan view of my improved registering bite tray.

Figure 2 is a section taken along the line 2—2 of Figure 1.

Figure 3 is a section taken along the line 3—3 of Figure 1.

Figure 4 is a perspective view of the tray showing several elements thereof in disassembled relation.

Figure 5 is a view similar to Figure 4 wherein the parts of the tray are shown assembled.

Referring now in detail to the several figures, the numerals 1 and 2 represent in general the side arch members, the same being similar in shape, each consisting of a flat septum 3, preferably perforated as indicated at 4, and bordered both on their inner and outer edges by flanges 5 and 6. As shown in the drawing, the external flange 5 is the higher, but this is a mere matter of choice or degree which is not material to the invention.

The arch side members are designed to be adjusted laterally of the median line of the tray, and to permit this adjustment they are formed at their anterior ends with laterally extending slots 7 and 8 and connected by a link 9 which is preferably formed with upper and lower arcuate plates, one of which is provided with pins 12 or other suitable fas-

tening means and the other apertured, as shown at 10 and 11 (Fig. 4) to receive said pins, the latter extending through the slots of the arch members and carrying the adjusting nuts 13.

It is apparent that, not only may the side arch members be adjusted laterally to any extent within the range permitted by the slots 7 and 8 to expand the span of the arch, but they may, at the same time, be rotated with respect to one or both of the pins 12 so as to further modify the shape of the arch, thus adapting a single tray to practically all cases and conditions encountered in the fitting of dentures.

The tray is provided on the anterior portions of the external flanges 5 with a chart 14 of celluloid or other suitable material which overlies the point of separation between the side arch members and conforming to the shape of the arch, regardless of the relative positions of adjustment of the side arch members. In order to permit the chart to accommodate itself to the various shapes which the tray may assume, it is provided adjacent its ends with slots 15 and 16 through which project means, such as threaded pins 17, secured to said arch members, nuts 18 being provided which may be tightened for holding the chart in place.

In taking the bite with my improved bite tray, the nuts 13 are first loosened and the side arch members are adjusted to suit the individual case. When this has been done the nuts are tightened and the impression or bite-wax is distributed on either or both of the mandibular or maxillary surfaces of the septum 3, and depressed into the perforations 4 thus firmly holding the bite-wax in place. The tray is then inserted into the patient's mouth and the bite taken in the usual manner. In using the chart in connection with the bite tray, the nuts 18 should be loosened at the same time as the nuts 13 so as to permit the chart to accommodate itself to the change of shape assumed by the bite tray. When the nuts 18 are tightened the chart retains the shape of the tray, as hereinbefore stated. While the impression of the bite is being taken the operator may, with a pencil inserted between the patient's lips, mark on the chart the median line, the corners of the mouth, the high, low and normal lip-line and any other data which may assist him in determining the length and width of the teeth to be used in the denture,

or any other factor which may be of assistance in giving expression to the mounting of the teeth. If the chart be made of celluloid the data registered thereupon may be 5 erased at the time of sterilization, and the chart may be used repeatedly, but the invention also contemplates the use of a material for the chart which, while sufficiently water-proof to last efficiently through a single op- 10 eration, is of such low cost that it may be discarded and a new chart used for each operation.

While I have described what I consider to be a preferred and practical embodiment of 15 my invention it is to be understood that the disclosed structure is to be considered illustrative only and not limitative in character.

Having described my invention what I claim as new and desire to secure by Letters 20 Patent, is:—

1. A bite tray, comprising a pair of arcuate members each having a substantially flat septum, and a link pivotally connected 25 adjacent each of its ends to one of said arcuate members adjacent an end of the latter on axes at right angles to the lengths of the septums of said members.

2. A bite tray including articulated members having an end of each in juxtaposition 30 to form an arch each member comprising a septum, and flanges projecting on both sides thereof forming upper and lower wax receiving channels, and an intermediate link to which said members are pivotally con- 35 nected at separate points to swing on axes substantially at right angles to their septums.

3. A bite tray including articulated members having an end of each in juxtaposition 40 to form an arch, each comprising a septum and flanges projecting on both sides thereof forming upper and lower wax receiving channels, said septum being provided with open perforations, and an inter- 45 mediate link to which said members are pivotally connected at separate points to swing

independently of one another on axes at right angles to their septums.

4. A bite tray including side members having an end of each in juxtaposition to 50 form an arch and each including a septum, and flanges projecting on both sides of said septum forming upper and lower wax receiving channels, and an intermediate link to which said members are connected by 55 pin and slot connections at separate points.

5. A bite tray including a member comprising a septum, having an external flange on the anterior side thereof, and a chart 60 carried by said flange.

6. A bite tray including articulated members, each member comprising a septum having external flanges, means for adjustably 65 connecting said members relatively, laterally and pivotally and a chart carried by said members, conforming to said flanges and overlying the line of separation between 60 said members.

7. A bite tray comprising side members having arched flanges, said members being 70 adjustably connected so that the degree of curvature of the arch formed by said members may be varied, a chart carried by said flanges and overlying their line of division, and means securing said chart to said mem- 75 bers, said means permitting the chart to accommodate itself to changes in curvature of said arch.

8. A bite tray comprising side members having arched flanges, said side members 80 being adjustably connected to permit variation of the degree of curvature of the arch formed by said members, a chart carried by said flanges and overlying their line of division, and pin and slot connections between 85 said chart and said members whereby the chart may accommodate itself to changes in curvature of said arch.

In testimony whereof I have hereunto set my hand.

JOSEPH E. PSAYLA.