

March 24, 1936.

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2,035,232

DENTAL IMPRESSION TRAY

Filed Aug. 23, 1935

Fig. 1

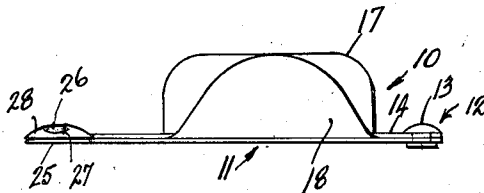
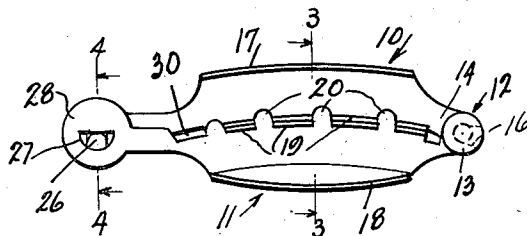


Fig. 2



16.3

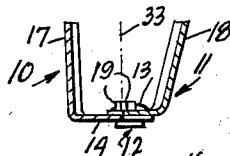
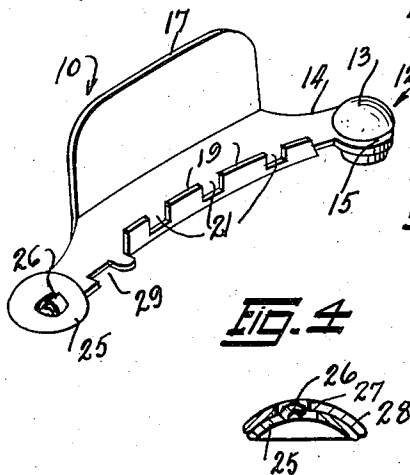


Fig. 6

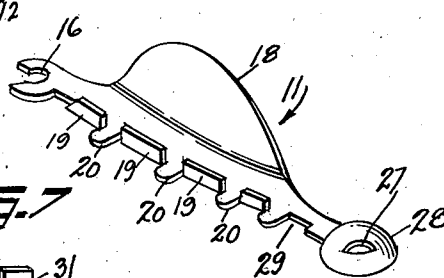
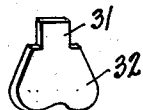


Fig. 7



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2,035,232

DENTAL IMPRESSION TRAY

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Application August 23, 1935, Serial No. 37,415

4 Claims. (Cl. 32—18)

This invention relates to dental impression trays and has for one of its objects the provision of a tray of this nature into which the plaster for taking the impression may be placed, and after the impression is taken and the plaster has set, the said tray and impression may be readily removed from the mouth of the patient without distorting the impression and without inconvenience to the patient and dentist.

Another object of the invention is the provision of a two-part tray one pivotally connected to the other, the said tray parts being provided with means for separating the mold carrying the impression into two halves, and being provided with further means for properly aligning the said tray parts so as to prevent distortion of the impression obtained.

A further object of the invention is to provide means for releasably interlocking the tray parts to prevent relative movement between the said parts while the impression is being taken.

A still further object of the invention is to make the said tray parts separable or removable with respect to each other when in an unlocked or unlatched state.

Yet another object of the invention is to provide means for unlatching or unlocking the said tray parts.

Another object is to produce a device of the character described in which the maximum simplicity of construction and operation is secured.

Other objects and advantages will appear as the nature of the improvements is better understood, the invention consisting substantially in the novel arrangement and co-relation of parts herein fully described and illustrated in the accompanying drawing, wherein similar reference characters are used to describe corresponding parts throughout the several views, and then finally pointed out and specifically defined and indicated in the appended claims.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, and the latter, therefore, is to be understood from an illustrative, rather than a respective standpoint.

The inventive idea involved is capable of receiving a variety of mechanical expressions, one of which, for the purpose of illustration, is shown in the accompanying drawing, in which

Figure 1 is a side view of my improved dental impression tray;

Figure 2 is a top plan view thereof;

Figure 3 is a sectional view taken on line 3—3 Fig. 2;

Figure 4 is a sectional view taken on line 4—4 Fig. 2;

Figure 5 is a perspective view of one of the tray sections;

Figure 6 is a perspective view of the other of the said tray sections and

Figure 7 is a perspective view of the tray separating key or tool.

Referring now to the drawing in detail, 10 indicates the lower tray section and 11 the upper section. The lower tray section 10 is provided at one end thereof with a pivot stud 12 the upper head 13 of which is spaced from the base 14 of said tray section as shown at 15 Fig. 5 to receive the slotted end 16 of the upper tray section 11.

The tray section 10 is provided with an outer substantially high wall 17 which is slightly curved or arcuate to conform to the outer contour of the gums and the tray section 11 is provided with a similar wall 18 so formed as to conform to the inner contour of the gums. Each of the tray sections is provided with inner upstanding, spaced-apart projections 19, and the tray section 11 has horizontal extensions 20 which are adapted to enter and fit into cutouts 21 in the tray section 10 for properly aligning the said tray sections with respect to each other and to prevent relative longitudinal movement between the said sections when in locked or latched position.

The locking or latching means for the said sections may comprise a somewhat dish-shaped outer end or disk 25 on the lower tray section 10 from which is punched a lip 26 adapted to snap into an opening 27 in a dish-shaped end 28 at the outer end of the tray section 11. The tray sections 10 and 11 are each provided with a recess 29 near the outer ends of their respective bases (see Figs. 5 and 6) which form a slot 30 (see Fig. 2) when in latched position to receive the end 31 of a key or tool 32 for unlatching the said tray sections for removing same from the mouth of the patient.

In practice the two tray sections 10 and 11 are assembled and latched and the plaster while loose and wet is placed between the walls 17 and 18 of the tray and the tray is inserted into the mouth of the patient and pressed over the teeth operated upon. When the said mixture is sufficiently set or hardened the two tray sections are unlatched by inserting the end 31 of key 32 into slot 30 (Fig. 2), and twisting same, thus

slightly spreading the tray sections at that end, and causing a pivoted movement between the said tray sections, the projections 19 causing the plaster to part or sever along a line 33 (see Fig. 3). When thus parted the tray section 11 with its half of the plaster mold is free to be withdrawn from the pivot pin or stud 12 after which the tray section 17 with the other half of the mold is removed from the mouth of the patient. The tray is then again assembled and latched and is ready to be sent to the dental mechanic so that he may perform whatever is necessary.

From the foregoing it will be seen that I have provided a simple yet efficient dental impression tray which may be readily inserted and withdrawn from the mouth of a patient without inconvenience either to the patient or dentist and without distorting or ruining the impression obtained which so often happens when using the present-day dental impression trays.

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

1. A dental impression mold tray, comprising a pair of tray sections, a pin rising from an end of one tray section and having a head at its upper end, the corresponding end of the other tray section being slotted to provide forks engaged about the pin under the head thereof to pivotally and separately connect the tray sections to each other at one end, concavo-convex finger engaging disks at the other ends of the tray sections fitting one within the other when the tray sections are disposed in tray forming relation to each other, one disk having an opening formed therein and the other carrying a latch for engaging in the opening of the other disk to releasably secure the tray sections against movement away from each other, and combined tray section aligning and impression mold separating means intermediate the said ends and holding the tray forming sections against sliding movements longitudinally of each other when secured.

2. A dental impression mold tray, comprising a pair of tray sections pivotally and separably connected to each other at one end, means for releasably latching the said tray sections at the opposite end, spaced-apart vertical projections rising from adjoining side edges of the tray sections, and horizontal tongues projecting from one of the said tray sections between the projections thereof and adapted to fit between the projections of the other of said tray sections to hold the tray sections against sliding movement longitudinally of each other when secured.

3. A dental impression tray, comprising a tray section, a pivot post at one end thereof, a latch portion at the opposite end thereof, a vertical wall at the outer side edge of the said section, spaced apart vertical projections at the inner side edge thereof, a second tray section, a slotted end on the said second tray section for engagement with the pivot post, a latch portion at the opposite end, the said latch portion being complementary to the latch portion of the first mentioned tray section, a vertical wall at the outer side edge of the said second tray section intermediate its ends, spaced apart vertical projections at the inner side edge thereof, and horizontal projections at the said inner edge adapted to fit between the vertical projections of the first mentioned tray section.

4. A dental impression mold tray, comprising a pair of tray sections pivotally and separably connected to each other at one end, means at their other ends for releasably latching the said tray sections and securing the tray sections in side by side relation to each other, upstanding projections along adjoining inner side edges of the tray sections, and tongues extending horizontally from one tray section between the projections thereof for engaging between the projections of the other section and preventing longitudinal movement of the sections relative to each other when secured.

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