No. 883,055. PATENTED MAR. 24, 1908.

H. F. SMITH.

DENTAL IMPRESSION TRAY.

APPLICATION FILED JUNE 22, 1907.

Fig. 1.

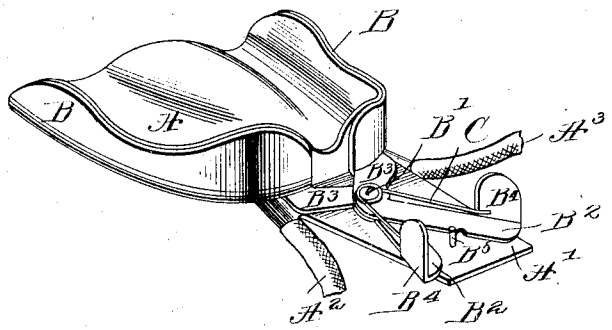


Fig. 2.

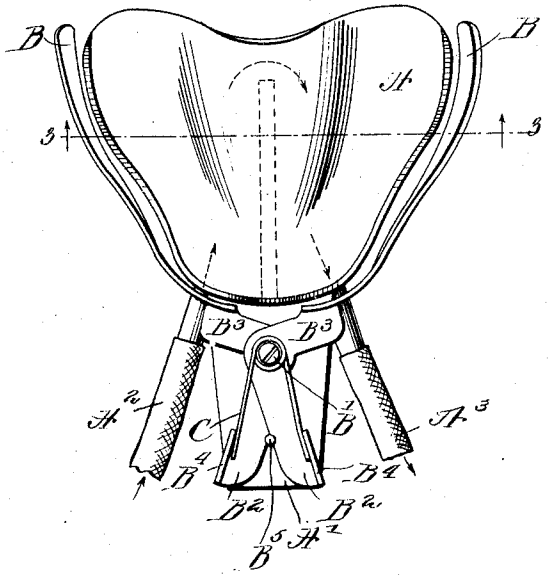
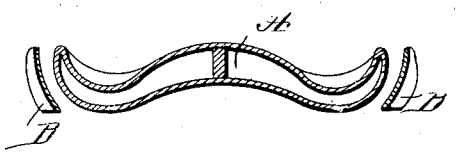


Fig. 3.



WITNESSES

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DENTAL IMPRESSION-TRAY.

No. 883,055. Specification of Letters Patent. Patented March 24, 1908.

Application filed June 22, 1907. Serial No. 380,313.

To all whom it may concern:

Be it known that I, HORACE F. SMITH, a citizen of the United States, and a resident of Seattle, in the county of King and State of Washington, have invented a new and useful Improvement in Impression-Trays, of which the following is a specification.

My invention is an improvement in impression trays for use by dentists in taking impressions; and the invention consists in certain novel constructions and combinations of parts as will be hereinafter described and claimed.

In the drawing Figure 1 is a perspective view of the tray with the guard or dilator plates closed against the sides of the tray. Fig. 2 is a top plan view of the tray with the guard plates spread laterally away from the sides of the tray, and Fig. 3 is a cross section on about line 3—3 of Fig. 2.

The tray A is provided at its front end with a plate A′ forming a handle and is made hollow so a current of air may be forced into one tube A^2 and escape through the other tube A^3 for cooling the impression which can be done usually in this way in the fraction of a minute. The handle plate A′ is preferably an extension of the bottom plate of the hollow tray.

In making the tray hollow a false bottom of tin or other sheet metal may be soldered at its edges to the edges of the tray proper as will be understood from the drawing.

The guard or dilator plates B prevent the cheeks from folding while taking the impression. These plates conform to the edge contour of the tray at the opposite sides thereof and fit close to and against the tray when closed as shown in Fig. 1 and may be spread laterally to the position shown in Fig. 2 to prevent the cheeks from folding while the impression is being taken. As shown the guard plates are pivoted at B′ are spring actuated at C to the closed position shown in Fig. 1 and are provided with the handles B^2 extended over the handle plate A′ of the tray in convenient position to be pressed toward each other to spread the guard plates to the position shown in Fig. 2. In pivoting the guard plates at B′ they are preferably provided with shanks B^3 which incline inwardly over the handle plate to the pivotal pin B′ and thence diverge and have the upturned portions B^4 forming finger holds, a pin B^5 on the handle plate and between the handle portions forming a stop to limit the motion of the handles, as shown in the drawings.

The spring C it will be noticed is coiled around the pivot pin B′ and presses at its ends against the parts B^4 on the handle portions thus operating to hold the dilator plates normally closed against the impression tray.

It will be noticed that the guard plates can be conveniently manipulated by the operator in handling the tray in taking the impression and that the guard plates will operate efficiently in controlling the cheeks and preventing interference with the operation of taking the impression.

Air or other cooling fluid may be supplied through a hose connected with the tube A^2, as shown in Fig. 1.

I claim:

1. An impression tray made hollow and having connections for the circulation through it of a cooling fluid and provided with a forwardly projecting handle plate, and the spring actuated guard or dilator plates separate from and conformed to and extending along side the tray and pivoted to the handle plate and having handle portions extending thereover whereby they may be operated to spread the dilator plates independent of the tray, substantially as and for the purposes set forth.

2. An impression tray provided with the pivoted guard or dilator plates independent of the tray and extending along its opposite sides and movable radially therefrom and normally spring actuated to closed position and adapted to be spread to prevent the cheeks from folding while taking the impression, substantially as set forth.

3. An impression tray provided with a projecting handle plate in combination with guard or dilator plates extending along side the tray and provided at their front ends with inwardly projecting handle portions a pivot upon the handle plate for said handle portions and having diverging portions extending over the handle plate and provided with upturned plates and a spring coiled around the pivot of the handle portions and bearing at its end against the upturned parts of said handle portions, substantially as described.

HORACE F. SMITH.

Witnesses:

PIERRE BARNES,

PETER HENRICH.