A spoon-like tool or dental tray adapted to receive material for taking an impression of a toothless upper jaw and to be inserted into the mouth of a patient is provided with raised portions in the surface contacting the jaw, and with apertures through which some of the impression material may be extruded. In this, the raised portions in the contacting surface engaging the jaw surface disposed within the alveolar ridge and acting as distance holders prevent flattening of some portions of the relatively soft alveolar ridge, so-called "tuber maxilaris" when the impression material is pressed thereagainst with the aid of the spoon-like tool, while the material extruded through the apertures acts as an anchorage preventing adhering of the impression material to the jaw and dislodgement from the spoon-like tool upon removal out of the patient's mouth. The terminology "spool-like tool" as used herein is used synonymously with the terminology "dental tray."

4 Claims, 2 Drawing Figures
1 TOOL FOR TAKING IMPRESSIONS OF TOOTHLESS JAWS

BACKGROUND OF THE INVENTION

1. Field of Invention

The invention relates to a tool for taking an impression of a toothless upper jaw used by dentist in providing casts of artificial teeth. Such tools consist of a spoon-like tool hereinafter termed "impression spoon" receiving impression material, and being adapted to be inserted into a patient's mouth and urged against the jaw.

2. Description of the Prior Art

In practice it has been experienced that such impression spoons may, in case of a defined tuber maxillaris, or other projecting portions in the alveolar ridge, be deformed area-like by the impression material against the impression spoon, resulting in a first source of error for the individual impression to be taken. In addition, when removing the impression spoon out the patient's mouth after the impression has been made, the impression material may peel-off from the impression spoon in case it sticks to the jaw as a result of being tightly pressed thereagainst.

Therefore, it is a main object of this invention to provide an improved tool of the described type avoiding the above mentioned prior art deficiencies and providing an exact natural impression of the jaw across its total extent.

Another object of the invention is to provide an impression spoon which, after an impression has been made, avoids a separation between the impression material and the impression spoon when the latter is removed out of the patient's mouth.

In accordance with the foregoing objects the invention provides an impression spoon including raised portions provided in its surface contacting the jaw. Such raised portions prevent that the jaw is pressed against the surface of the impression spoon at certain locations and is flattened or indented while simultaneously the impression material is squeezed away, thereby allowing to provide an exact natural impression of the jaw's natural shape. The spot-like indentations caused by the raised portions at the corresponding locations may easily be corrected.

According to another advantageous feature the invention provides that the raised portions are formed by ribs extending transversely with respect to the alveolar ridge. This assures that over a zone corresponding to the width of the ribs a desired distance is maintained between the impression spoon and the alveolar ridge. In accordance with a preferred embodiment the invention provides that an aperture in form of an elongated opening is arranged at either side of each raised portion, and in addition, it is useful to provide a depression in the underside of the spoon between the pair of openings in the zone of the raised portions. This allows that the impression material, when tightly pressed against the jaw will be extruded through the openings adjacent said raised portions and unites behind the same which is greatly facilitated by the recesses in the underside of the spoon. The provision of these recesses is only possible due to the fact that the spoon is sufficiently thick at the corresponding location by the provision of the raised portions. Due to this construction, it will be evident that, upon removal of the impression spoon, after the impression has been made, the impression material extruded through the pairs of openings will form a bridge over the zone of the associated raised portion preventing or resisting a separation of the impression material from the spoon.

In order to additionally increase this effect the invention provides that the edges of the spoon are bead-like enlarged in width since this will also counteract a separation of the impression material from the spoon. In addition this enlargement of the edge of the spoon causes an especially accurate molding of the sublingual space and also of the zone of the teeth 5,4, 4.5.

The composed effect between the impression material and the spoon may be improved yet in the zone of the bead-like edge in that slot like apertures are provided, extending horizontally in parallel relation to the bead-like edge. Upon urging the spoon against the jaw impression material will be extruded through these aperture and will unite in a bridge-like fashion across the edge.

Following the invention shall be described in detail in connection with the drawing attached hereto showing one exemplified embodiment.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a schematic top view of the impression spoon according to the invention; and FIG. 2 is a sectional view taken along the line 8-8 in FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, there is shown an impression spoon 1 for making an impression of the upper jaw. The spoon includes, in a well known manner, a handle 2 and has a half circular arcuate shape formed with upwardly extending edges 3 terminating with a bead 4.

At the inner side of the spoon 1 transversely extending ribs 5 are provided in a dished portion corresponding to the shape of the alveolar ridge. At either side of each rib 5 a slot-like aperture 6 is provided. The underside of the spoon 1 is formed with depressions 7 opposite each rib 5 (see FIG. 2). Slot-like apertures 8 are formed, extending in parallel relation to the edge 3 and being evenly distributed over the extent of the edge.

Due to this construction the impression spoon 1, after impression material has been placed on the inner side thereof, and after it has been pressed against a toothless jaw, the ribs 5 will seat themselves on the jaw, thereby preventing that certain projecting portions of the alveolar ridge are flattened and contact the inner surface of the spoon, while simultaneously squeezing away the impression material. Upon firmly pressing the spoon against the jaw, the impression material will be extruded through both the openings 6 adjacent the ribs 5 and well as the apertures 8 in the edge 3 of the spoon 1 and will form bridge-like connections between the impression material and the spoon 1 which prevent a dislodgement of the impression material from the spoon when the latter is removed from the jaw, whereby the impression may be removed out of the patient's mouth in an unobjectionable manner without any deformations, which may occur if the impression material is not supported across the entire surface of the impression spoon. In addition, by the bead-like...
shape of the edge 3 of the impression spoon 1 a corresponding increase in width is provided, enabling an improved molding of the sublingual space and also of the space adjacent the teeth 5,4,1,4.5.

Preferably the spoon is made of well known plastic material suitable for this purpose, since in this manner the described configurations of the spoon are readily achievable in a most simple manner.

The described preferred embodiment may be altered without departing from the basic scope of the invention. Thus, instead of the rib-like raised portions 5 also point-like projections, arranged in a defined even pattern, may be provided; however, the described construction using transversely extending ribs is favorable, since, due to the extent of these ribs a correspondingly large range of differently dimensioned jaws are comprehended.

What I claim:

1. A dental tray for taking impressions of toothless jaws having a shape corresponding substantially to the jaw and including inner and outer upturned sides for extending in an arc adjacent the inner and outer surfaces of the alveolar ridge, and further including projecting ribs in that part of the tray which receives the impression material and in which said ribs are urged with said impression material into contacting engagement against the jaw, the improvement comprising said ribs being distributed at spaced points over substantially the whole jaw impression area of the tray, said ribs extending transversely with respect to the alveolar ridge across the full distance between said inner and outer sides and integral therewith, and means adjacent each rib for retaining the impression material.

2. A dental tray as claimed in claim 1, wherein the means for retaining the impression material includes elongated apertures on both sides of each rib.

3. A dental tray as claimed in claim 1, wherein an aperture in the form of an elongated hole is provided adjacent either side of each rib, and indentations formed in the underside of the tray in the zone of said ribs between said elongated holes.

4. A dental tray as claimed in claim 3 wherein the top edges of said inner and outer sides are increased in width to form a bead, and slotted apertures through said inner and outer sides positioned below said beads and extending substantially in parallel spaced relation thereto.

* * * * *