

June 3, 1958

D. E. SILVIS
DENTURE

2,836,890

Filed July 16, 1956

2 Sheets-Sheet 1

Fig. 1

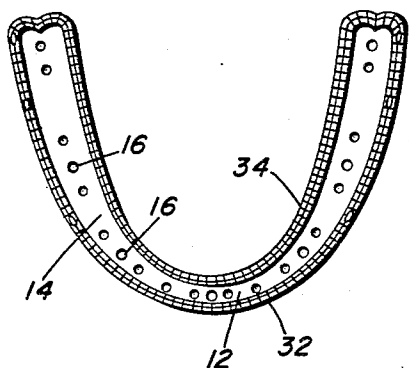


Fig. 2

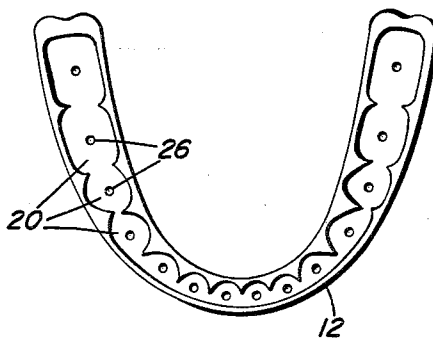


Fig. 3

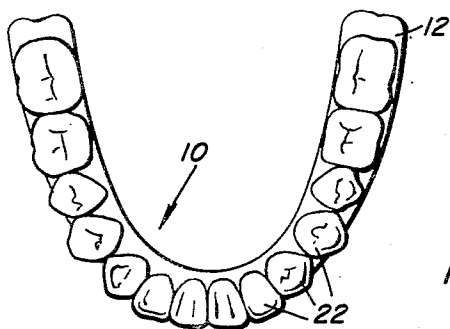


Fig. 4

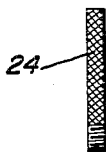


Fig. 5

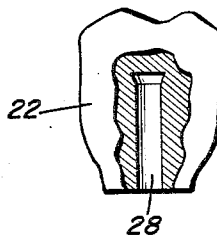
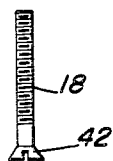


Fig. 6



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2 Sheets-Sheet 2

Fig. 7

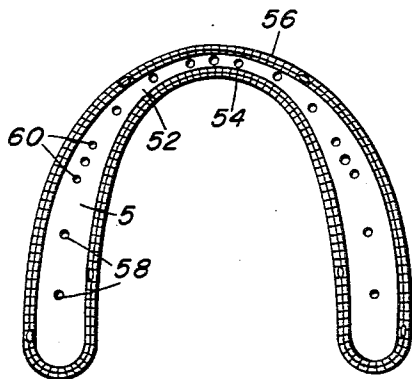


Fig. 8

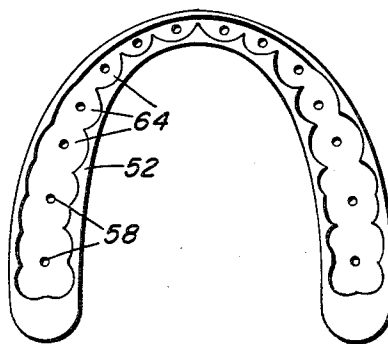


Fig. 9

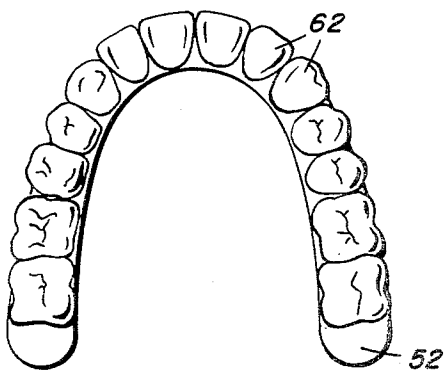


Fig. 10

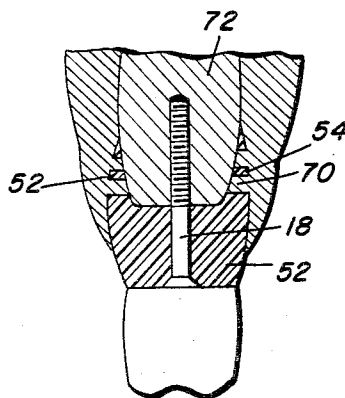
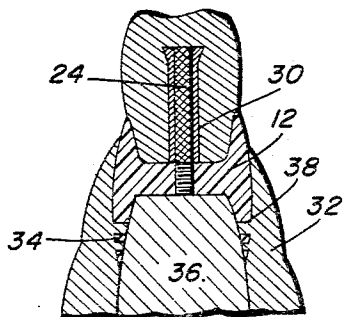


Fig. 11



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DENTURE

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5 Claims. (Cl. 32-2)

This invention relates to a denture and more particularly to a replacement set of teeth which are actually implanted under the gum tissue and on the jaw bone of a patient.

A primary object of the present invention resides in the provision of a denture which will eliminate the rocking, rolling, or rattling which usually occurs with conventional type of dentures which are held in place by suction or other means.

A further object of the present invention resides in the provision of a denture which will eliminate any embarrassment of a patient because of the dentures slipping or clapping during eating.

An additional object of the invention resides in the provision of a denture constructed of vitallium or other suitable alloy material which is completely tolerated by human bone and tissue and sets up no foreign body reactance and therefore can be left in place. Thus, the invention will enable an arrangement of parts whereby tissue can knit through perforated screens to thereby maintain the gums of the patient in their full and proper size preventing undue shrinkage as usually occurs when natural teeth are removed.

An additional object of the invention resides in the provision of a denture which includes a bone plate permanently installed in conjunction with the jaw bone of a patient and adapted to be overlaid in part at least by the gums of the patient, which jaw bone may have teeth removably and replaceably attached therethrough so that if a tooth of the denture becomes broken it can be readily replaced.

Still further objects and features of this invention reside in the provision of a denture that is simple in construction, easy to install, capable of being readily contoured to conform to the shape of a patient's mouth, and which will allow a complete cosmetic restoration of the mouth of a patient.

These, together with the various ancillary objects and features of the invention which will become apparent as the following description proceeds, are attained by this denture, and method of affixing the denture in the mouth of a patient, preferred embodiments of the upper and lower dentures for a full set of teeth being shown in the accompanying drawings, by way of example only, wherein:

Figure 1 is a bottom plan view of a lower denture bone plate;

Figure 2 is a top plan view of the lower denture bone plate;

Figure 3 is a top plan view of a denture constructed in accordance with the concepts of the present invention;

Figure 4 is an elevational view of a vitallium screw utilized to secure a tooth to the bone plate;

Figure 5 is an elevational view with parts broken away and shown in section of a tooth utilized in the invention;

Figure 6 is an elevational view of a vitallium screw used to secure the denture to the jaw bone of a patient;

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Figure 7 is a top plan view of a bone plate for use in an upper denture;

Figure 8 is a bottom plan view of the bone plate for an upper denture;

5 Figure 9 is a bottom plan view of a denture constructed in accordance with the present invention;

Figure 10 is a sectional detail view illustrating the manner of securing the bone plate to the jaw bone of a patient illustrating the vitallium screws utilized as a securing means; and

10 Figure 11 is a sectional detail view of a lower denture illustrating the manner of affixing a tooth to the bone plate.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, and with initial attention directed to the arrangement of parts as shown in Figures 1 through 3, reference numeral 10 generally designates a denture constructed in accordance with the concepts of the present invention. The denture 10 includes bone plate 12 constructed of cast vitallium or other suitable denture alloy. Vitallium is a well-known dental alloy consisting mainly of chromium and cobalt and including traces of other metal such as molybdenum. The bone plate 12 has a substantially solid central portion 14 provided with aperture 16 therethrough through which screws such as those shown in Figure 6 and indicated by reference numeral 18 are adapted to extend to secure the bone plate 12 to the jaw bone of a patient. The central portion 14 of the bone plate is further provided with a series of communicating recesses as at 20 which are adapted to receive teeth 22 therein which teeth are held by threaded pins 24, see Figures 4, 5 and 11 and which are formed in the central portion 14 of the bone plate 12 and centrally disposed with respect to each of the recesses 20. As can be best seen in Figure 5, the individual tooth 22 is provided with a recess or cavity 28 therein for reception of not only the roughened head of the pin 24 by a cement or locking member as indicated at 30 used in holding the pin 24 in place. This locking member can be best seen in Figure 11.

The front and rear portions as indicated at 32 and 34 respectively are heavily perforated or else formed in the shape of a screen. Hence, when the gums 32 of a patient are parted and split upon extraction of the teeth from the mouth, the screen portions may embrace a portion of the jaw bone as indicated at 36. The gums will then knit through the various apertures or perforations so as to interlock the vitallium screen as indicated at 38, Figure 11. This further anchors the denture in place and prevents unpleasant denture breath when the teeth forming the other portions of the denture are scrubbed clean.

55 The screws 18 may be threaded as in a conventional wood screw and the heads 42 thereof are of course concealed by the teeth 22.

In Figure 7 there is shown an arrangement of parts for use on the upper jaw bone and it is noted that herein the bone plate 50 is provided with a central portion 52 of substantially solid material having the screen-like perforated front and rear portions 54 and 56 attached thereto. Suitable perforations as at 58 are provided for holding the teeth on the bone plate 50 and other apertures 60 are provided for receiving the pins 24 holding upper set of teeth 62 to the jaw bone 52. As can be best seen in Figure 10, the gums 70 of a patient will knit through the vitallium screen against the jaw bone 72 so as to substantially conceal the plate 52.

70 In installing these dentures, the gum is of course slit is as usual when removing all of the teeth from the

mouth of a patient, then, the bone plate 52 is affixed in place after which the gums are allowed to knit through the vitallium screen.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A denture for attachment to a jaw comprising a bone plate adapted to be positioned on and affixed to a jaw bone and having a solid central portion with arcuate front and back perforated portions through which perforated portions gums are adapted to knit together, and teeth secured to said bone plate.

2. A denture comprising a bone plate having a solid central portion with front and back perforate portions, and teeth secured to said bone plate.

3. A denture comprising a bone plate having a solid central portion with front and back perforate portions, said bone plate conforming to the contours of a jaw, means for securing said bone plate on a jaw with the gums split back and engaging said perforate portions, and teeth secured to said bone plate.

4. A denture comprising a bone plate having a solid central portion with front and back perforate portions, said bone plate conforming to the contours of a jaw, means for securing said bone plate on a jaw with the gums split back and engaging said perforate portions, a plurality of teeth, and fasteners removably securing said plurality of teeth to said central portion.

5. A denture comprising a bone plate having a solid central portion with front and back perforate portions, a plurality of teeth, and fasteners removably securing said plurality of teeth to said central portion.

References Cited in the file of this patent

Lew, Isaih: "Implant Denture," Dental Digest, Jan. 1952, pp. 10-15.