Dec. 3, 1929. J. J. STARK 1,738,460

DENTURE

Filed May 5, 1928

Fig. 1.

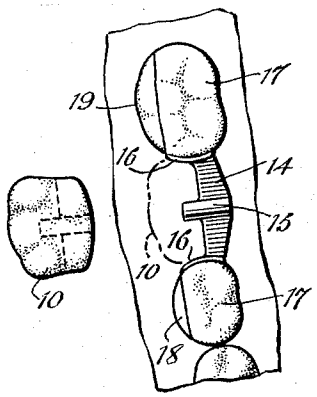


Fig. 2.

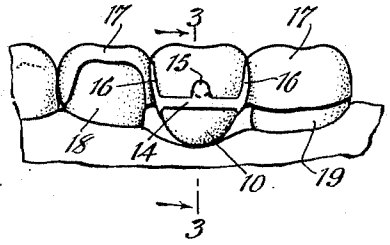


Fig. 3.

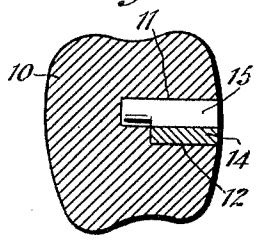


Fig. 4.

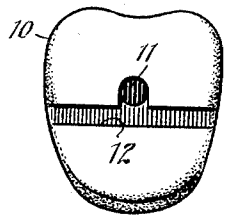


Fig. 5.

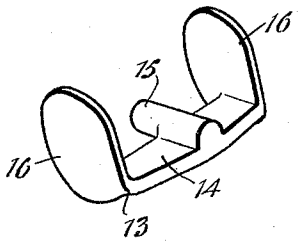


Fig. 6.

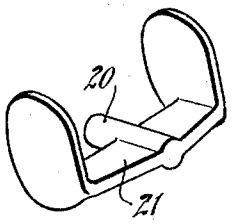


Fig. 7.

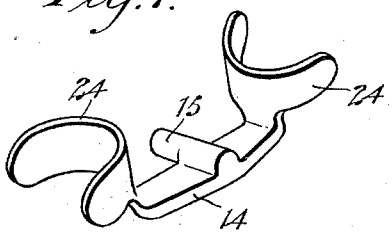
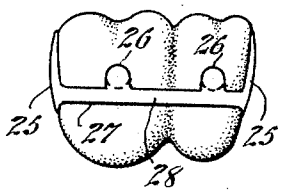


Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE

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DENTURE

Application filed May 5, 1928. Serial No. 275,402.

This invention relates to a denture.

The invention contemplates an improved denture the esthetic and physiologic values of which may be enumerated as follows: It requires a minimum amount of destruction of the artificial tooth substance; it involves a minimum display of metal coming into contact with the soft tissues of the mouth; it enables the reproduction with artificial teeth, as nearly as possible, the crowns of lost natural teeth; and it enables the obtainment of the exact inter-relation of the abutments and artificial teeth with natural teeth in the same arch and teeth in the opposing arch.

The nature of the invention and its distinguishing features and advantages will appear when the following specification is read in connection with the accompanying drawing, in which—

Figure 1, illustrates a denture constructed in accordance with the invention, and in which, as an example, attachment is made to three-quarter crowns respectively on a second bicuspid and a second molar, the artificial tooth, in the form of a first molar, being shown detached in full lines, and in place in dot and dash lines.

Fig. 2, is a view of the denture looking at it from the inside.

Fig. 3, is an enlarged sectional view, taken on the line 3—3 of Fig. 2.

Fig. 4, is an inside view of the tooth.

Fig. 5, is a perspective view of the tooth bridge.

Fig. 6, is a perspective view of a modified form of tooth bridge.

Fig. 7, is a perspective view of a still further modified form of bridge.

Fig. 8, is an inside view of two artificial teeth on a single bridge.

In accordance with one feature of the invention, use is made preferably, though not necessarily, of porcelain artificial teeth. It is acknowledged that a porcelain tooth has the desired strength because of the volume of its body, to resist the stresses of occlusion and mastication; that because it is highly glazed it is more adaptable to the gum tissue; and that from the esthetic viewpoint it is more sightly in appearance.

Referring now to Fig. 4, it will be apparent that here has been shown an artificial tooth 10 of porcelain, in the form of a first molar. The tooth 10 is provided with a bore 11 which is drilled in the body thereof at a central point from the inside. The tooth 10 is ground to meet a certain condition. The tooth may be provided either with a saddle end or a root end or ends. In the present instance, the tooth 10 is ground to present a saddle, and carved to present the desired occlusal surface after the tooth has been shaped. A kerf or slot 12 is cut in the body of the tooth just below the bore 11 so as to open thereto. Both the bore 11 and the kerf or slot 12 extend part ways into the body of the tooth. When the tooth is set in place, the bore 11 will be disposed buccolingually.

Referring now to Fig. 5, it will be apparent, that use is made of a bridge member 13 which is adapted to fit in the bore 11, and kerf or slot 12, and for this reason consists of a straight flat plate 14 and integral pin 15 on the top of the plate 14, the plate 14 being received edgewise in the kerf or slot 12, and the pin 15 being received in the bore 11. The opposite ends of the plate 14 are provided respectively with wings 16 which fit in recesses respectively in the proximal sides of the tooth. The wings 16 are attached to the abutments which may in the form of crowns, clips, or any other suitable means adapted to be engaged with or attached to the adjacent tooth piers. In order to give the necessary strength, the bridge member 13 is preferably made of highly platinized gold. The bridge member 13 is cemented in place so as to be rigidly connected with the tooth 10, and a pin 15 prevents rotation from the stresses of occlusion and mastication. As shown most clearly in Figs. 1 and 2, each wing 16 has attached thereto a three-quarter crown 17 constituting a means to support the denture in its entirety from a second bicuspid tooth, indicated at 18, and a second molar tooth, indicated at 19. It is to be understood that the denture constructed as described may be fixed or may be made removable.

It is to be understood that the pin of the bridge member 13 may be disposed at any suit-

able point on the plate 14, and at any angle with respect thereto. As shown in Fig. 6 the pin 20 is disposed in the plane of the plate 21, and is slightly larger in diameter than the thickness of the plate 21 so as to present surfaces above and below the upper and lower surfaces presented by the plate 21. It is to be understood that the body of the tooth may be provided with a bore or slot to correspond to the shape of the bridge member in any particular case.

As shown in Fig. 7, the bridge member is provided with attaching means in the form of clips 24, in lieu of the wings 16 and the crowns 17.

The bridge member may be constructed in order to support two pontics or artificial teeth, in which case the bridge member, indicated at 25 is provided with two pins 26, one for each of the teeth, there being provided a single kerf or slot 27 which receives the plate 28 of the bridge member 25.

From the foregoing it will be apparent that in actual practice a denture of the construction set forth will very effectively retain a tooth or teeth in place with all of the advantages specified hereinabove, and in addition thereto will make it possible to readily replace the artificial tooth or teeth.

I claim:

1. A denture comprising a procelain pontic, and a bridge structure having a straight flat plate and a projection on the plate, said pontic having a transverse kerf in which the plate fits and a hole in which the projection fits, said plate and projection being cemented to the pontic, said plate serving to directly support the pontic, and said projection serving to prevent rotation of the pontic with respect to the plate.

2. A denture comprising an artificial tooth, a bridge element consisting of a straight flat plate, a projection on the plate, and an attaching wing on each end of said plate, said tooth having a transverse kerf in which the plate fits and a hole in which the projection fits, with the wings embracing the proximal sides of the tooth, the tooth being secured to the bridge element.

Signed at New York, in the county of New York and State of New York this 4th day of May A. D. 1928.

JACOB J. STARK.