No. 695,796. Patented Mar. 18, 1902.

A. F. COGSWELL.

ARTIFICIAL DENTURE.

(Application filed Nov. 29, 1901.)

(No Model.)

Fig. 1.

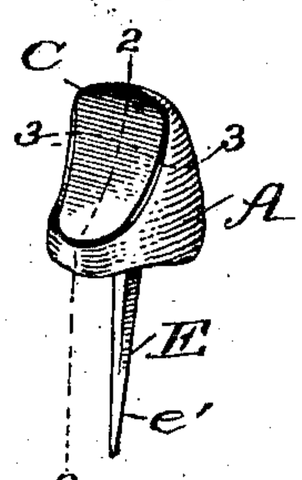


Fig. 2.

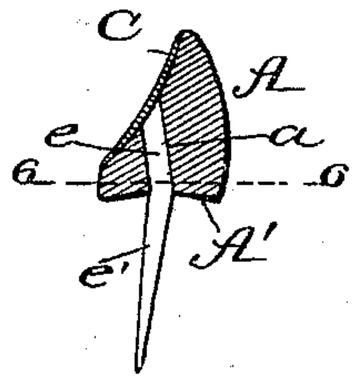


Fig. 4.

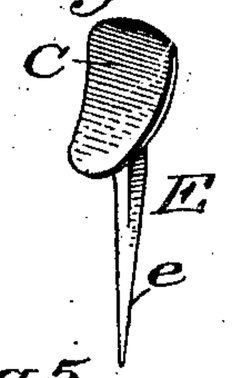


Fig. 3.

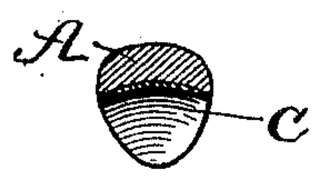


Fig. 5.

Fig. 6.

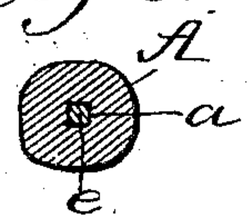


Fig. 7.

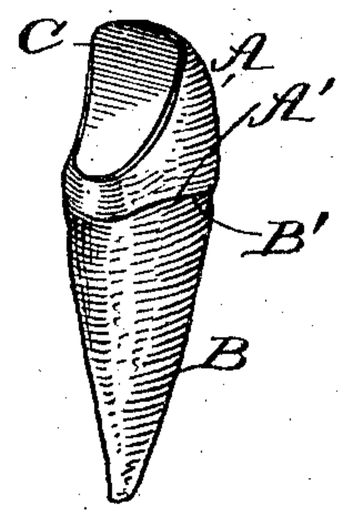
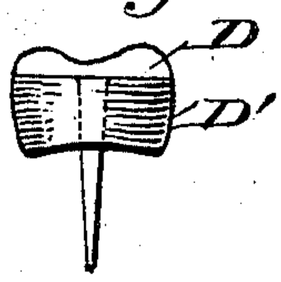


Fig. 8.



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ARTIFICIAL DENTURE.

SPECIFICATION forming part of Letters Patent No. 695,796, dated March 18, 1902.

Application filed November 29, 1901. Serial No. 84,130. (No model.)

To all whom it may concern:

Be it known that I, ASA F. COGSWELL, a citizen of the United States, residing at Crete, in the county of Saline and State of Nebraska, have made certain new and useful Improvements in Artificial Dentures, of which the following is a specification.

My invention is an improvement in dentistry, being in the nature of an artificial crown for natural roots; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of my improved crown-tooth with the metallic backing and the anchor in place. Fig. 2 is a vertical longitudinal section on about line 2 2 of Fig. 1. Fig. 3 is a cross-section on about line 3 3 of Fig. 1. Fig. 4 is a detail perspective view of the metallic backing with the anchor-post secured thereto. Fig. 5 is a detail perspective view of the tooth-crown. Fig. 6 is a cross-section on about line 6 6 of Fig. 2. Fig. 7 is a perspective view of the improved crown-tooth applied to a natural root; and Fig. 8 represents the invention embodied in a bicuspid instead of an incisor, as shown in Figs. 1, 2, and 7.

By my invention I provide a metallic backing for the wearing-surface of the tooth, whether it be an incisor, as shown in Figs. 1 and 2, or a bicuspid, as shown in Fig. 8, and also provide in connection with said metallic backing an anchor post or stud, which is secured to the metallic backing and extends through the crown-tooth and is anchored in the canal in the root to which the crown is applied. The metallic backing and the anchor are separable from the crown, so the crown can be conveniently ground or otherwise manipulated to accurately fit upon the outer end of the root. It is well understood that it is important to secure an accurate fit between the crown and the root and that this is practically impossible when the crown is supplied with a fixed projecting anchor-post. I have therefore in my invention sought to provide means by which to securely support the anchor-post in connection with the tooth-crown, so it can be readily removed and applied and so the wearing-surface of the tooth will be reinforced by a metallic backing. I also seek to so construct the metallic backing and to apply the same to the tooth-crown in such manner that it will be held firmly in place and will not become displaced laterally.

In the construction shown the crown A may be of any suitable material and, as shown in Fig. 7, is formed at its base A′ to fit the outer end B′ of the natural root B. Upon the wearing-face of the tooth I provide the metallic backing C or D, the backing C being fitted to the wearing-surface of an incisor and the backing D being applied to the wearing-surface of a bicuspid D′. Manifestly the invention may be embodied in the different teeth, as will be understood from Figs. 1 and 8, and I will now describe in detail the construction shown in Figs. 1 to 7, inclusive. The metallic backing C is in the form of a plate fitted longitudinally and transversely on the lines 2 2 and 3 3 of Fig. 1 to the concave surface of the tooth, the plate being thus dished longitudinally, as shown in Fig. 2, and transversely, as shown in Fig. 3, and extending over the entire wearing-surface of the tooth A and fitting snugly thereto, so that when the anchor-post is applied, as shown in Fig. 2, there will be no tendency on the part of the plate C to turn or otherwise become displaced. This metallic backing reinforces the biting-surface of the tooth and strengthens the tooth, as will be understood from the drawings.

The anchor-post E is secured at its outer end to the under side of the metallic backing C by soldering, brazing, or in other suitable manner and unites with the backing C at about the center of the latter, as shown in Fig. 2. This post E extends through the opening *a* in the crown A, and the said opening *a* and the portion *e* of the post which fits therein are made non-circular in cross-section and preferably square, as best shown in Fig. 6, to prevent any turning of the post in the crown when the parts are applied, as shown in Fig. 2. It is preferred to unite the post E with the backing at about the middle of the latter and to form the opening *a* to emerge from the base A′ of the crown A at about the middle thereof, and I therefore have shown the opening *a* as leading through

the crown somewhat at an angle, with the portion of the post E outside the crown at an angle to the portion *e* of said post within the crown, as shown in Fig. 2. It will be understood, however, that in practice when the base A′ of the crown has been formed to fit the outer end of the root the projecting portion *e′* of the anchor will be bent to properly enter the canal in the root in the application of the crown to the said root, as will be understood by those skilled in the art.

In the practice of my invention it will be understood the crown A and the anchor, as shown in Fig. 4, may be readily separated to enable the proper fitting of the base of the crown to the end of the natural root. When this is done in such manner as to secure the proper articulation of the crown with the opposing tooth, the anchor, as shown in Fig. 4, may be applied to the crown, as shown in Fig. 2, and the projecting portion *e′* of the post be inserted in the canal in the natural root and removed and bent to properly conform to said canal when the crown is pushed home, as shown in Fig. 7. In completing the operation the metallic backing C may be cemented to the wearing biting-surface of the crown A and the post E be cemented in the canal in the natural root.

By the described construction it will be noticed I so connect the post with the crown that the post can be readily detached when desired. The metallic backing will reinforce and strengthen the crown, and the crown will be positively held from turning on the anchor-post.

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

1. An artificial denture substantially as described, comprising the crown provided with a longitudinal opening leading out of its biting-surface and made non-circular in cross-section, the metallic backing fitted to said biting-surface and extending throughout the same, and the anchor-post secured to the metallic backing and extending through the opening in the crown and conformed in cross-section thereto and projecting at its point beyond the crown, substantially as and for the purpose set forth.

2. An artificial denture comprising the crown having an opening extending through it and leading out of its biting-surface, the metallic backing fitted to said biting-surface and the anchor-post secured to the metallic backing and extending through the opening in the crown, substantially as set forth.

3. In an artificial denture the anchor-mounting consisting of a metallic backing for application to the biting-surface of the tooth, and an anchor post or prong secured to and projecting from the inner surface of the metallic backing, substantially as set forth.

4. In an artificial denture, the metallic backing dished longitudinally and transversely and the anchor-post secured to the inner side of the metallic backing, substantially as described.

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