

No. 783,358.

PATENTED FEB. 21, 1905.

S. S. BLOOM.
TOOTH CROWN ANCHOR.
APPLICATION FILED DEC. 17, 1903.

Fig. 1.

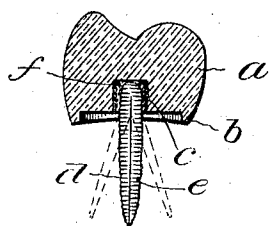


Fig. 2.

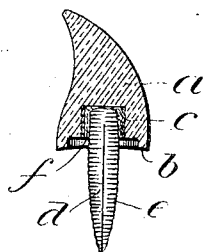


Fig. 3.



Fig. 5.

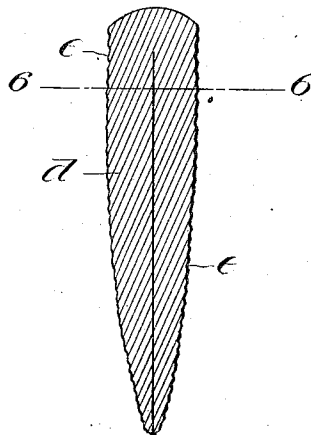


Fig. 4.

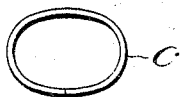
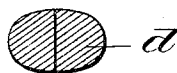


Fig. 6.



WITNESSES:

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SAMUEL S. BLOOM, OF PHILADELPHIA, PENNSYLVANIA.

TOOTH-CROWN ANCHOR.

SPECIFICATION forming part of Letters Patent No. 783,358, dated February 21, 1905.

Application filed December 17, 1903. Serial No. 185,547.

To all whom it may concern:

Be it known that I, SAMUEL S. BLOOM, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Tooth-Crown Anchors, of which the following is a specification.

This invention relates to artificial teeth, and has particular reference to means for securing artificial crowns to the natural roots, although, as will be hereinafter described, the anchor members described and claimed may be used for uniting artificial teeth to plates.

As is well known, platinum has been found to be the metal best suitable for securing artificial teeth or artificial crowns, because said metal is capable of withstanding the high degree of heat employed for baking porcelain of which said teeth or crowns are composed. Many attempts have been made to provide for a saving in the amount of platinum necessary to attain the results aimed at, and numerous patents have been granted for inventions the chief object of which is to economize in the use of platinum.

The object of the present invention is chiefly to provide improved means for securing artificial crowns to the natural roots after the latter have been prepared by the dentist for securing such crowns thereto. As stated, however, my invention contemplates the utilization of the same or similar parts of my present invention for connecting pins of a cheaper metal than platinum to complete artificial teeth, whereby said teeth may be secured to the dental plate in the same manner as referred to in my Patent No. 717,158, granted December 30, 1902.

To these ends my invention consists in the construction and combination of parts, substantially as hereinafter described and claimed.

Of the accompanying drawings, Figure 1 represents, on an enlarged scale and in section, one form of artificial tooth-crown having my invention in one of its embodiments applied thereto. The dotted lines in said figure merely represent positions to which the two parts of the longitudinally-divided pin may be bent for purposes as hereinafter described. Fig. 2

is a view similar to Fig. 1 and representing the invention as applied to a different form of tooth-crown. Fig. 3 represents a longitudinal section, on a still larger scale, of the tubular corrugated anchor. Fig. 4 represents an end view of the anchor shown in Fig. 3. Fig. 5 represents a longitudinal section on a scale corresponding with that of Fig. 3 of the preferred form of longitudinally-divided anchor-pin. Fig. 6 represents a section on line 6 6 of Fig. 5.

Similar reference characters indicate the same or similar parts in all of the views.

The body of the artificial tooth-crown is represented at *a*, said body having, preferably, a projecting flange or edge *b*. In the manufacture of the tooth-crown or a complete artificial tooth, as the case may be, there is baked within the porcelain body a tubular anchor member *c*, having external and internal corrugations. This anchor member is preferably composed of platinum in sheet-metal form. The annular corrugations are parallel with each other and with the ends of the said tubular member. The pin-anchor member *d*, which may be of relatively inexpensive metal, is provided with external corrugations *e*, similar to the corrugations of the tubular anchor member. The head end of the securing or anchor pin *d* is of a diameter sufficiently smaller than that of the tubular member *c* to enable the said head to be pushed endwise into the tubular member, solder *f* being employed to fill the space between the external corrugations of the pin and the internal corrugations of the tubular member. Preferably the two anchor members are non-circular in cross-section, so that after the pin has been inserted in the tubular member it cannot be rotated therein. The preferred form of the two members is oval, as clearly indicated in Figs. 4 and 6. Moreover, owing to the described form of the tubular member it is firmly secured within the tooth or crown-body. The external corrugations of the said tubular member receive portions of the porcelain, and therefore the said member is securely locked in position to form a firm socket for the head of the pin.

The securing or anchor pin which I prefer to employ is longitudinally divided, as best

shown in Figs. 5 and 6. While it may consist of two pieces of metal, which may be secured together at the headed end, I preferably form said pin of a single length of wire which is first bent or doubled and then suitably shaped to the form substantially illustrated. The reason for longitudinally dividing this pin is as follows: It frequently happens that a crown is to be attached to what is left of a tooth, the latter having two roots one or both of which may be what is known as a "live" root or a "dead" root. In such case the dentist after shaping the tooth which is to receive the base of the crown will simply drill two holes diverging from each other into the two roots and he will then spread the two portions of the divided pin somewhat as represented by dotted lines in Fig. 1. The means or method employed for securing the pin in the drilled hole or holes will be as usual, the corrugations of the pin increasing the hold obtained by the cement employed.

While I prefer to employ the forms of tubular and pin-anchor members, substantially as shown, in combination with each other, yet I do not limit myself to such use. Obviously a pin which is not divided may be employed in connection with the tubular member shown, or I may employ my improved pin with other forms of baked-in embedded anchors. Furthermore, as hereinbefore mentioned, I may employ my improved anchor members for securing complete artificial teeth to dental plates. I therefore wish it to be understood that by the term "artificial teeth" as employed in the appended claims I intend to include either complete teeth or portions of teeth, such as crowns.

Owing to the fact that the tubular anchor member is of sheet metal, it may be made of a lesser amount of metal, by weight, than can be practically effected with coiled wire. Moreover, the walls are continuous between the corrugations, so that there can be no escape of the solder employed to unite the pin and

tubular members. Owing to the fact that the corrugations are in a plane at a right angle to the axis of the anchor and not spiral or screw-shaped, there can be no tendency of the tubular or pin members to become loosened by any rotation, even if said members were circular in cross-section.

Having now described my invention, although without attempting to disclose all of the forms in which it may be made or all of the modes of its use, what I claim is—

1. Means for securing artificial tooth-crowns, said means comprising a tubular bottomless corrugated anchor non-circular in cross-section and having its corrugations in a plane at a right angle to the axis of the anchor, said anchor being secured within the crown-body, and an anchor-pin having its head corrugated and of a shape in cross-section similar to the anchor and having a diameter sufficiently smaller than the diameter of the anchor to enable the said head to be pushed endwise into the anchor.

2. Means for securing artificial tooth-crowns, said means comprising a sheet-metal platinum tubular corrugated anchor non-circular in cross-section and having its corrugations in a plane at a right angle to the axis of the anchor, said anchor being secured within the crown-body, and an anchor-pin having its head corrugated and of a shape in cross-section similar to the anchor and having a diameter sufficiently smaller than the diameter of the anchor to enable the said head to be pushed endwise into the anchor, the said pin being formed of a single length of wire doubled to form a longitudinally-divided projecting portion.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL S. BLOOM.

Witnesses:

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