No. 851,578. PATENTED APR. 23, 1907.

W. O. WEST.

ARTIFICIAL TEETH.

APPLICATION FILED MAY 8, 1906.

Fig. 1.

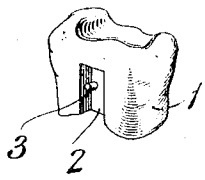


Fig. 2.

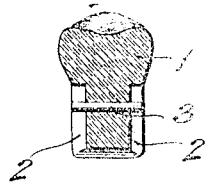


Fig. 3.

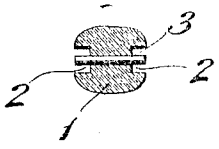


Fig. 4.

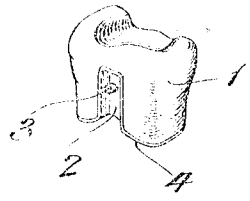


Fig. 5.

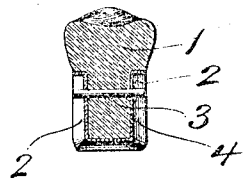


Fig. 6.

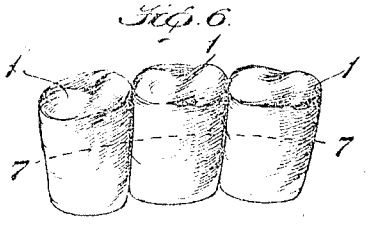
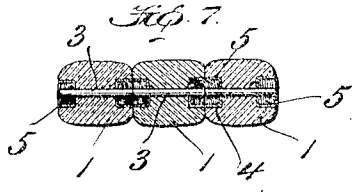


Fig. 7.



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Witnesses:

By W. D. Duvall.

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UNITED STATES PATENT OFFICE.

WALTER O. WEST, OF NEW ORLEANS, LOUISIANA.

ARTIFICIAL TEETH.

No. 851,578. Specification of Letters Patent. Patented April 23, 1907.

Application filed May 8, 1906. Serial No. 315,783.

To all whom it may concern:

Be it known that I, WALTER O. WEST, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Artificial Teeth, of which the following is a specification.

This invention relates to improvements in artificial teeth and more particularly to that class of dentistry known as crown and bridge work.

The principal objects of the invention are to produce a tooth which requires for correctly mounting a minimum amount of skill and labor; which when in position will be firm, strong, durable and natural; and which, also, if broken, may be removed and replaced without removing the bridge from the mouth of the patient.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawing: Figure 1 is a perspective view of an artificial tooth or dummy embodying my invention and shown in the condition in which it is marketed and therefore comes into the hands of the dentist. Fig. 2 is a central vertical sectional view of the same. Fig. 3 is a transverse or horizontal sectional view of the same. Fig. 4 is a perspective view of the tooth or dummy after the usual platinum foil has been burnished over the cervical surface of the tooth and secured in position. Fig. 5 is a vertical central sectional view of the dummy thus treated. Fig. 6 shows a series of teeth arranged in position in the form of a bridge. Fig. 7 is a horizontal sectional view thereof, the section being taken on the line 7—7 of Fig. 6.

Similar numerals of reference indicate similar parts in all the figures of the drawing.

The tooth-body 1, or what is termed the "dummy," is formed of porcelain and is provided at its opposite sides with vertical channels 2, which extend toward the biting or masticating surface from the cervical end of the tooth to a point where the tooth would knuckle with the next adjacent tooth. These vertical channels in the tooth are angular in cross-section, so that when two of such teeth thus provided are arranged in relative position side by side the channels of the teeth register and combine to produce a vertical cavity rectangular in cross-section.

Transversely through the body of each dummy or tooth there extends a platinum or other suitable metal pin 3, said pin registering with the vertical channels and having its terminals or ends extending therein and terminating about flush with the exterior of the tooth. The pin is baked in position in the tooth whereby it is immovably held and is in fact a part of the tooth.

Thus far I have described the tooth as I prepare the same for use by the dentist. In order to prepare the tooth for mounting on the bridge, for instance, it is first necessary to grind it to fit the cast as usual. The operator then takes a piece of platinum, gold, or other metal foil 4, (say about fifty gage), and sufficiently long to extend over the cervical surface of the tooth and have its end extend a short distance beyond the ends of the pin. One end or terminal of the foil is then punctured to receive the pin and is burnished into the channel, after which it is brought over the cervical surface, upon which it is burnished, and the opposite end or terminal of the foil is perforated to engage the opposite end of the pin and is burnished into the opposite channel. The remaining dummies or teeth are treated in a similar manner. The several dummies thus treated are then assembled and waxed in position, and the cast coated with shellac varnish, oiled, and invested with the grinding surfaces downward in plaster of paris. When the investment is thoroughly set the cast is cut away, all wax boiled out, and after proper heating the teeth are joined together by flowing solder downwardly into the inverted rectangular channels 2. When the work is thoroughly cooled off the teeth are removed from the investment, the platinum foil on the cervical surfaces removed and the work finished in the usual manner.

In using said tooth for single crowns, or as piers or abutments for bridge-work, a cap is first made in any of the approved ways to fit the root, after which the tooth is ground to fit the cap on the labial or buccal side only. The operator then burnishes the platinum foil over the pins and around the cervical surface as previously described, waxes the tooth in proper position on the cap, invests as before described, and solders in the usual manner.

It will be observed that when mounted in position in the mouth, the teeth will have a very natural appearance owing to the fact that no solder is within sight, the solder all being contained within the rectangular re-

cesses between the teeth. This arrangement of the solder renders the bridge exceedingly strong, the teeth being prevented from rocking, in that each deposit of solder constitutes a connecting and strengthening key entirely out of view.

The channels may be given any other angular form in cross-section, without sacrificing the advantages of my invention, and if desired, instead of running the platinum pins entirely through the teeth I may employ short pins, two for each tooth. I prefer, however, to make the channels rectangular in cross-section and also to use the single pin in each tooth or dummy.

Having described my invention, what I claim and desire to secure by Letters-Patent is:

1. A plurality of teeth each having at its inner side a vertical angular channel, the channel of one tooth registering with that of the adjacent tooth, and a body of solder filling the cavity produced by the registering channels.

2. A plurality of teeth, each having at its inner side a vertically disposed angular channel extending from an intermediate point of the tooth to the cervical end thereof, the channel of one tooth registering with that of the next adjacent tooth and combining therewith to form a cavity, a pin extending into the channel, and a deposit of solder filling the cavity and serving to lock the teeth together.

3. A plurality of teeth, each having a transverse pin and a longitudinally disposed channel, the channel of one tooth registering and combining with that of the next adjacent tooth to produce a cavity, a foil extending under the cervical end of the tooth and into the cavity and engaging the ends of the pin, and a body of solder occupying the cavity and serving to secure the foil in position and lock the teeth together.

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

WALTER O. WEST.

Witnesses:

A. R. BEARY,

JOHN C. GOMEZ.