

No. 702,III.

Patented June 10, 1902.

J. C. OSBORNE.
ARTIFICIAL TOOTH CROWN.
(Application filed July 20, 1901.)

(No Model.)

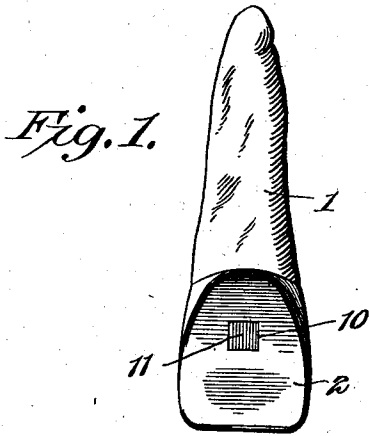
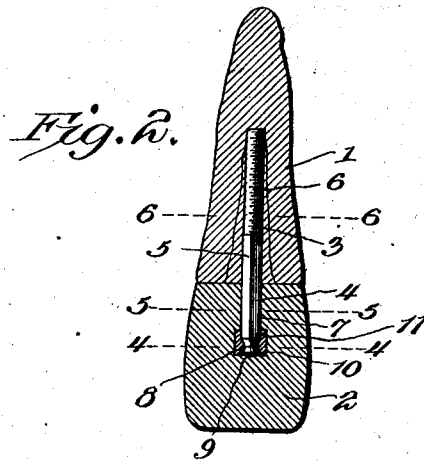
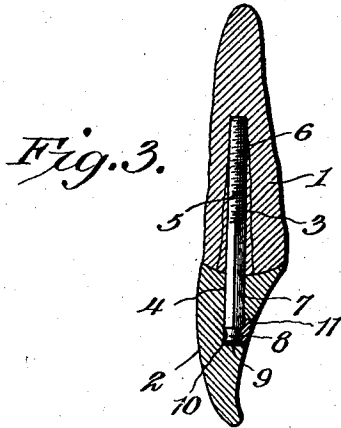
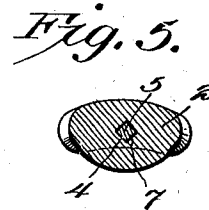
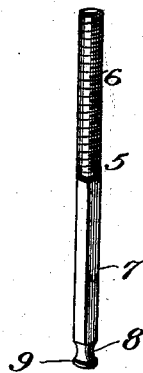
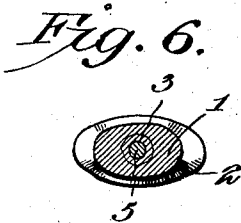


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOSEPH C. OSBORNE, OF LAWNSDALE, NORTH CAROLINA.

ARTIFICIAL TOOTH-CROWN.

SPECIFICATION forming part of Letters Patent No. 702,111, dated June 10, 1902.

Application filed July 20, 1901. Serial No. 69,076. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH C. OSBORNE, a citizen of the United States, residing at Lawnsdale, in the county of Cleveland and State of North Carolina, have invented a new and useful Artificial Tooth-Crown, of which the following is a specification.

My present invention relates to a novel artificial tooth-crown; and my object is to provide the crown with an improved post for effecting its mounting upon a natural root with convenience and expedition and in a manner to insure the rigid retention of the crown in place.

A further object of the invention is to so form the pivot-pin or crown-post as to preclude the possibility of the displacement of the crown in either a longitudinal or a lateral direction with respect to the post, and to so dispose the post as to present its greatest diameters from mesial to distal and from palatal to labial, so that the post will be capable of presenting the greatest resistance in those directions from which it is subjected to the greatest strains.

In the accompanying drawings, in which I have illustrated the application of my invention, Figure 1 is an elevation of a crown mounted in accordance with my invention. Fig. 2 is a sectional view of the subject-matter of Fig. 1. Fig. 3 is a similar view taken at right angles to Fig. 2. Figs. 4, 5, and 6 are transverse sectional views on the lines 4 4, 5 5, and 6 6 of Fig. 2. Fig. 7 is a longitudinal sectional view of the crown detached, and Fig. 8 is a detail view of the crown-post detached.

Like numerals of reference refer to corresponding parts and structural peculiarities throughout the views.

The natural root 1 and the artificial crown 2 are provided, as usual, with longitudinal recesses or cavities 3 and 4 for the reception of the opposite end portions of the crown-post 5. In this general aspect my invention is allied to the usual forms of mountings for artificial tooth-crowns; but it is distinguished from the usual constructions by the relative formations of the cavities 3 and 4 in the root and crown and by the corresponding contours of those portions of the post which engage the cavities to effect the mounting of the crown.

The root-engaging end of the post 5 is provided with screw-threads, as indicated at 6, and is designed to be screwed into the cylindrical socket, channel, or cavity 3 of the root, while the crown-engaging portion 7 of the post instead of having a flat or cylindrical form, as in ordinary mountings, is square in cross-section for engagement with the correspondingly-shaped cavity 4 of the crown.

One of the distinguishing characteristics of the invention will now be apparent, since by reference to Fig. 5 it will be noted that the post is so disposed within the crown 2 as to bring the greatest diameters of said post between the mesial and distal and the palatal and labial sides, respectively, of the crown—that is to say, the square portion of the post has its several angles disposed opposite the mesial, distal, palatal, and labial sides of the tooth, so that said post will present the greatest resistance in those directions from which the crown is subjected to the greatest lateral strains. It will also be observed that this angular contour of the post will absolutely prevent the turning of the crown thereon, and in order to prevent the longitudinal displacement of the crown I provide the post adjacent to one extremity with a reduced portion or neck 8, defining a terminal head 9, which bears against the end of the cavity 4 in the crown. Opposite this reduced portion or neck of the crown-post 5 the lingual or palatal face of the tooth is pierced by a transverse opening or recess 10, intersecting the cavity 4 at the end thereof and designed to facilitate the introduction of an alloy or other filling 11. This filling, which may be quickly and conveniently inserted, extends around the neck 8 of the post, completely filling the annular cavity there formed, and extends into the transverse opening or recess 10 to constitute a key, which prevents the slightest longitudinal movement of the crown upon the post. The filling, having been properly inserted, is finished off flush with the surface of the tooth and the crown will be securely retained in place upon the root.

Obviously the order of procedure in effecting the mounting of the crown in accordance with my invention is not essential, since the crown may be secured upon a post previously set into the root, or the reverse of this pro-

cedure may be adopted. It is likewise immaterial what metal is adopted in the manufacture of the post or what material is selected for the filling. Therefore I desire to be understood as reserving to myself the right to effect any changes, modifications, or variations of the illustrated construction and arrangement which may appear to be expedient under various conditions, provided only that such variations are fairly comprehended within the scope of the protection prayed.

What I claim is—

1. An artificial tooth-crown having a longitudinal opening or cavity of square transverse contour, disposed with its greatest diameters extending from mesial to distal and from palatal to labial, and having a transverse opening piercing the palatal face of the tooth and intersecting the cavity.
2. The combination with an artificial tooth-crown having a longitudinal cavity and a transverse opening intersecting the cavity, of a crown-post extending into the cavity and having a reduced portion disposed opposite the transverse opening in the crown.
3. The combination with an artificial tooth-crown having a transversely-angular longitudinal cavity and a transverse opening intersecting said cavity, of a crown-post corresponding in contour to the contour of the cavity and fitting therein to prevent the turning of the crown upon the post, and means preventing relative endwise movement of the crown and post.
4. The combination with an artificial tooth-crown provided with a longitudinal cavity having an angular transverse contour, and a transverse opening intersecting the cavity adjacent to its inner end, of a crown-post having a cross-sectional contour corresponding to the contour of the cavity and fitting therein, said post being provided with a reduced portion disposed opposite the transverse opening in the crown, and a filling surrounding the reduced portion of the post and extended into the transverse opening in the crown.
5. The combination with an artificial tooth-crown provided with a longitudinal cavity having a polygonal cross-sectional contour, and a transverse opening intersecting the cav-

ity at its inner end, of a crown-post of polygonal cross-sectional contour fitted into the cavity in the crown and provided with a terminal head, and a filling extended under the head of the post and into the transverse opening in the crown.

6. The combination with an artificial tooth-crown having a longitudinal cavity of square cross-sectional contour, and a transverse opening intersecting the cavity adjacent to the inner end thereof, of a crown-post having a square end fitted into the cavity in the crown and provided with a reduced portion defining a head located at the end of the cavity, and a filling surrounding the reduced portion of the post below the head thereof and extended into the transverse opening in the crown, the greatest diameters of said post being disposed between the mesial and distal and between the palatal and labial walls of the crown, respectively.

7. The combination with an artificial tooth-crown provided with a longitudinal cavity of angular cross-sectional contour, of an angular crown-post fitted into the cavity and provided with a terminal head, and a filling extended under the head of the post to prevent detachment of the crown.

8. As a new article of manufacture, an artificial crown having a longitudinal cavity of square cross-sectional contour, and a transverse opening intersecting the cavity, the angles or corners of said cavity being disposed opposite the mesial, distal, palatal and labial sides of the crown.

9. As a new article of manufacture, a crown-post having a cylindrical screw-threaded portion at one end, a round head at its opposite end, a rounded reduced neck immediately adjacent to the head, and an angular portion extending from the neck to the cylindrical screw-threaded portion of the post.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH C. OSBORNE.

Witnesses:-

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JOHN L. SCHENCK