

(No Model.)

A. C. FONES.
ARTIFICIAL TOOTH.

No. 455,450.

Patented July 7, 1891.

Fig. 1.



Fig. 2.

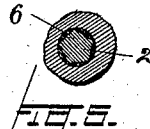
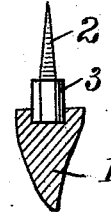


Fig. 3.

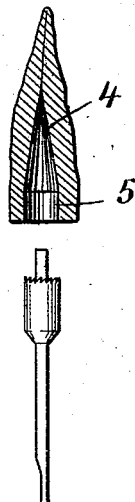
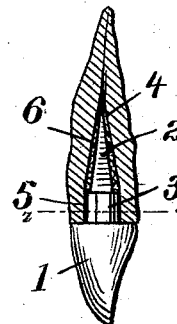


Fig. 4.



WITNESSES

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ARTIFICIAL TOOTH.

SPECIFICATION forming part of Letters Patent No. 455,450, dated July 7, 1891.

Application filed March 18, 1891. Serial No. 385,478. (No model.)

To all whom it may concern:

Be it known that I, ALFRED C. FONES, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Artificial Tooth-Crowns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the class of tooth-crowns which are secured in place by attachment to a natural root by means of a central post rigidly secured in the crown and adapted to be rigidly affixed to the root.

The most serious objections to tooth-crowns as heretofore made have been, first, the complicated and frequently unsatisfactory mode of attaching the crown to the root, and, second, the great liability to breakage in ordinary use.

My invention therefore has for its object to produce a simple and inexpensive artificial crown which may be readily attached in place by any dentist of ordinary skill, special shaping of the root being wholly unnecessary, and which shall be so strong as to practically do away with danger of breakage in ordinary use. With these ends in view I have devised the novel tooth-crown which I will now describe, referring by numerals to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of the stud or post detached; Fig. 2, a section of a tooth with the post secured therein in position for use; Fig. 3, a section of a root prepared to receive the crown, and showing also in elevation a tool for forming the recess in the root to receive the boss upon the post. Fig. 4 is a section of the root, showing one of my novel crowns affixed thereto, the crown, post, and boss being in elevation; and Fig. 5 is a cross-section on line *z z*, Fig. 4.

1 denotes an artificial crown, 2 the stud or post by which it is affixed in place, and 3 a boss at the base of the stud, which is rigidly set in the crown ordinarily in the process of manufacture.

In practice two-thirds (more or less) of the boss extends above the base of the crown,

and when in place is seated rigidly in the root. The exact size and shape of the boss is not of the essence of my invention.

In practice I ordinarily use a stud and post having approximately the proportions shown in the drawings, the boss being made polygonal in cross-section, so as to permit the surplus cement to pass out when the crown is being forced into place. The shape of the post is likewise immaterial, although I ordinarily make it rectangular in cross-section, or, if preferred, the sides may be hollowed out, leaving the edges highest. The face of the root is of course finished to correspond with the base of the crown. If preferred, the face of the root may be finished more or less concave and the base of the crown correspondingly convex, or vice versa. In practice, however, I ordinarily give to both the face of the root and the base of the crown a plane surface, as I find in practice that a curved finish of the face of the root and base of the crown is wholly unnecessary.

The root is prepared by drilling into it, following the nerve-canal, a tapering recess 4, the apex of which is toward the point of the root, and at the lower end of the root is formed a circular straight-sided recess 5, of exact size to receive boss 3 closely. Recess 5 is filled with suitable cement or amalgam, (denoted by 6 in Fig. 4,) and the crown is then forced to place, the stud or post being firmly embedded in the cement in recess 4, the angles of boss 3 just filling recess 5, as clearly shown in Figs. 4 and 5.

I am aware that it is not broadly new to secure artificial crowns to natural roots of teeth by means of pins or posts projecting from the said crowns and embedded in hardened cement or amalgam in the hollow roots; but with these artificial crowns as heretofore secured to natural roots the pins or posts were much smaller in cross-section than the cavities in the roots in which they were inserted, so that they were entirely supported or steadied laterally by the cement, which is more or less apt to yield to strains, and thus permit the anchoring pins or posts to become loosened. This objection is entirely avoided by my invention, as the corners or angles on the straight-sided polygonal boss 3 fit closely against the walls of the straight-sided recess 5 in the root of

the tooth to steady the crown positively in the root, the surplus cement escaping out between the said corners or angles as the pin or post 2 is forced to its place in the recess 5 or socket 4, and the cement, when hardened, securely preventing any turning or axial displacement of the said pin or post and the crown from which it extends.

Having thus described my invention, I 10 claim—

An artificial tooth-crown having a tapering angular post adapted to enter a recess in the root, said post having formed integral therewith a polygonal straight-sided boss, the base

of which is rigidly seated in the crown, leaving the upper portion of said boss to extend 15 above the crown, so as to enter the recess in the root, and to fit at its corners or angles closely against the straight or vertical walls of a circular recess to be formed in the said 20 root, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED C. FONES.

Witnesses:

A. M. WOOSTER,

INA M. NICKERSON.