

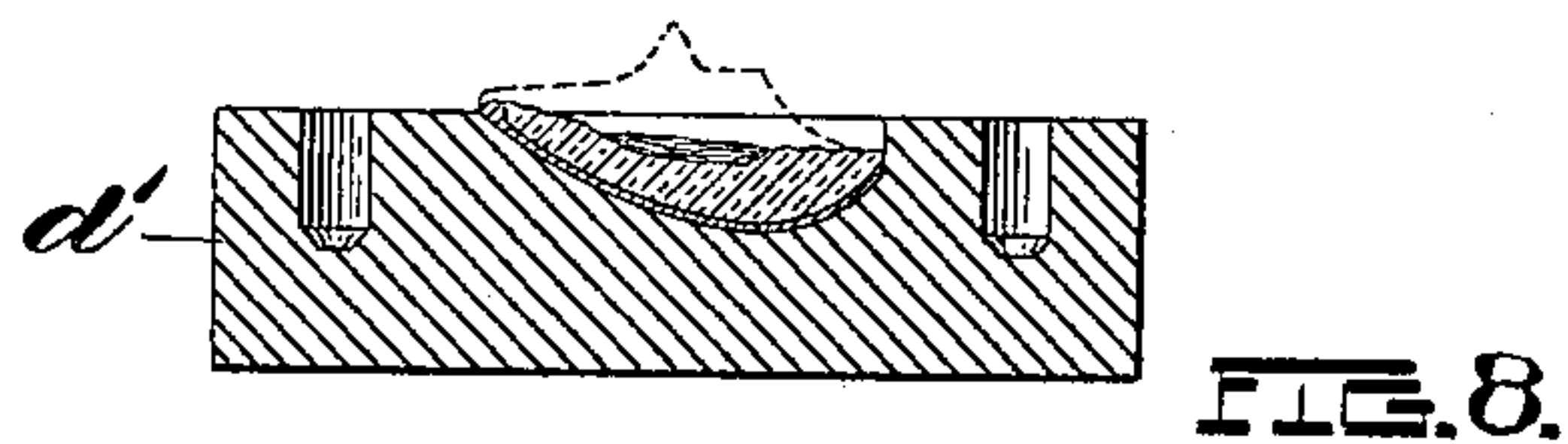
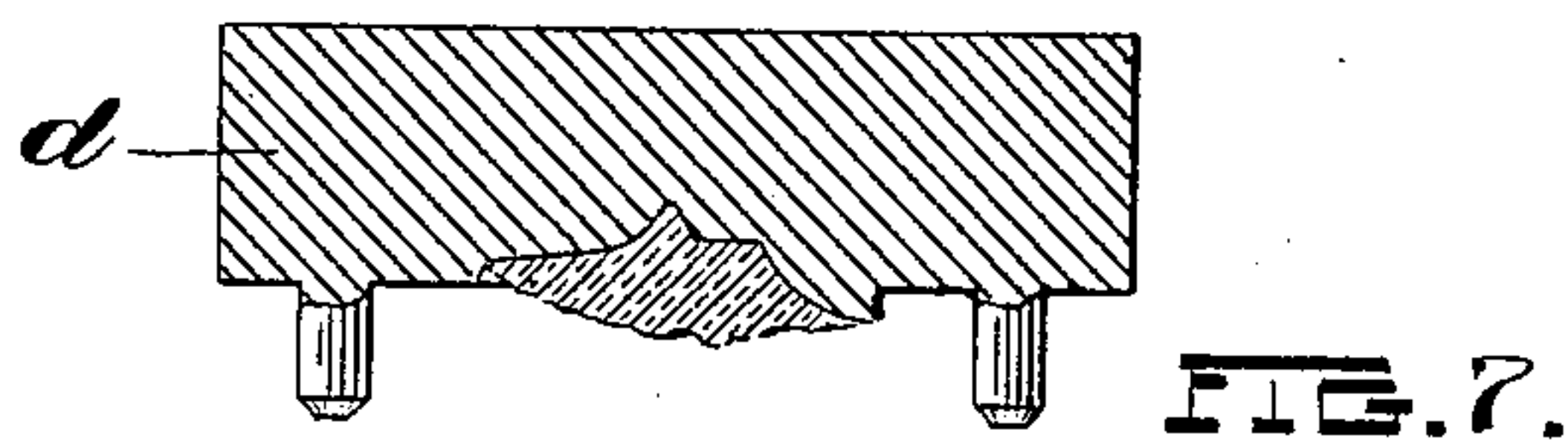
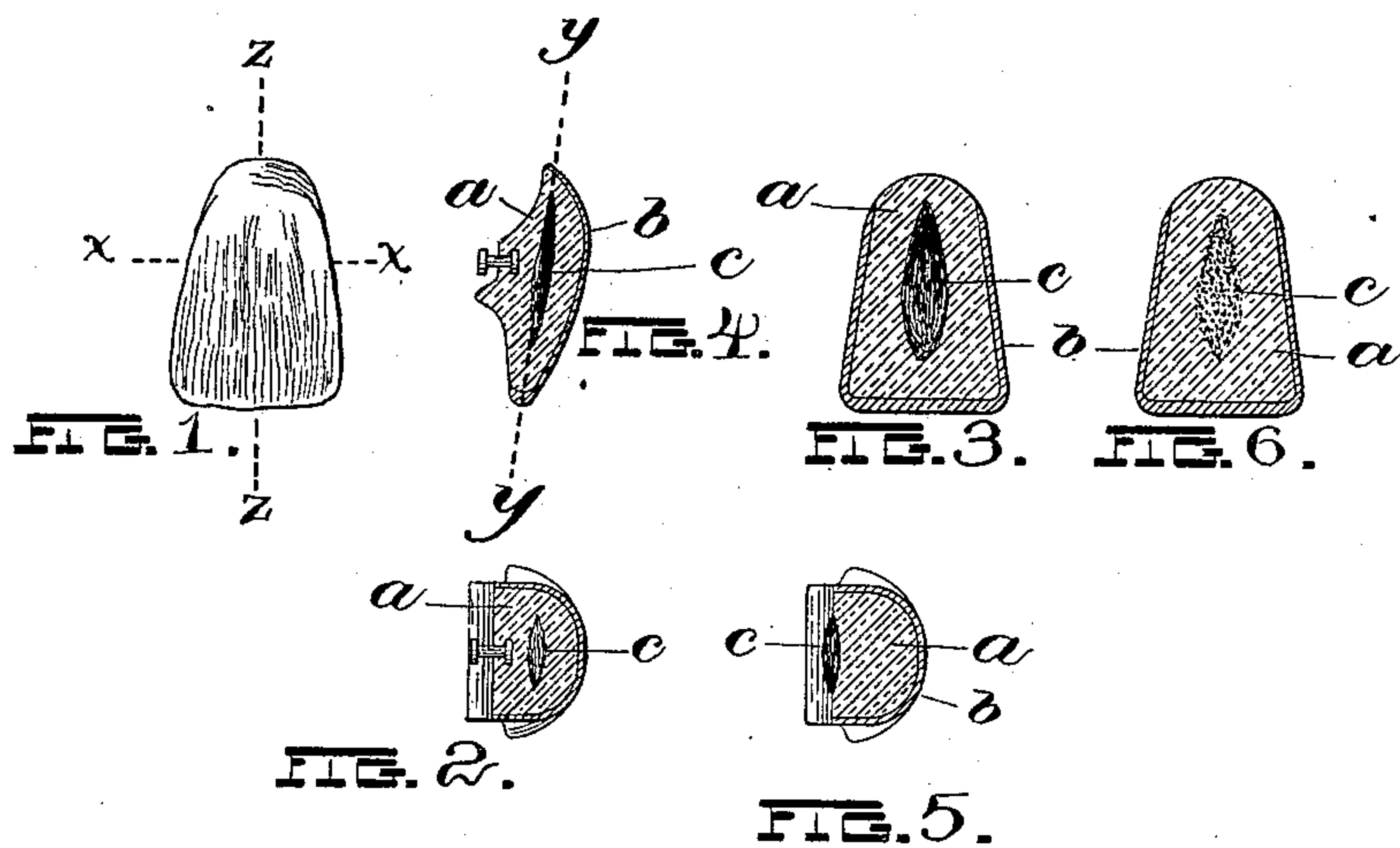
(No Model.)

H. E. DENNETT.

ARTIFICIAL TOOTH AND METHOD OF MAKING SAME.

No. 589,383.

Patented Aug. 31, 1897.



Witnesses.
Arthur F. Randall,
Mr. B. May

Inventor:
By *H. E. Dennett,*
Arthur W. Crossley,
Att'y.

UNITED STATES PATENT OFFICE.

HERBERT ENOS DENNETT, OF BOSTON, MASSACHUSETTS.

ARTIFICIAL TOOTH AND METHOD OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 589,383, dated August 31, 1897.

Application filed May 24, 1895. Serial No. 550,505. (No model.)

To all whom it may concern:

Be it known that I, HERBERT ENOS DENNETT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain
5 new and useful Improvements in Artificial Teeth and the Art of Producing the Same, of which the following is a specification.

This invention has relation to artificial teeth and to the art of producing the same, the object being to produce teeth that shall simulate human teeth so closely that it shall be impossible to distinguish between them.

As heretofore manufactured it has been difficult to produce satisfactory imitations of
15 living human teeth and to provide against their having a glassy or dead appearance, since they consisted of a thin exterior covering of enamel and a body portion of porcelain which was all of the same color or consistency throughout; but I have found that by
20 providing the tooth with a core of artificial pulp, to represent the pulp in a human tooth it presents the "live" appearance of a living human tooth.

My invention therefore consists in an artificial tooth having in addition to the usual enamel and body portion a tinted portion to represent the pulp; and it further consists in the art of producing the same.

30 In the drawings, Figure 1 represents, in front elevation, an artificial tooth, it being of the shape of a front tooth or upper incisor. Fig. 2 is a transverse section on line *xx*, Fig. 1. Fig. 3 is a vertical section on line *yy*,
35 Fig. 2. Fig. 4 is a vertical section on line *zz*, Fig. 1. Fig. 5 is a cross-section of a tooth with the colored portion to represent the artificial pulp on the inside. Fig. 6 is a vertical section of a tooth with the artificial pulp
40 formed in the tooth by coloring-matter scattered in small particles through the center of it. Figs. 7 and 8 show in perspective the molds for forming a tooth in accordance with my invention.

45 The tooth may be formed in any of the well-known ways, but for the purposes of illustration I have shown an apparatus for and will describe one way of molding it.

50 The body, preferably translucent, of the tooth is formed of porcelain, glass, or other suitable material and is designated by *a*. This body takes the place of the dentine in

a living tooth and is covered with enamel *b*. These parts are white or slightly tinted and are the same as those now in use. With the
55 tooth thus formed I add an artificial pulp *c*, or "nerve," so called, which may be formed as a core in the interior of the tooth, as in Figs. 2 and 6, or on the inner face, as in Fig. 5. The portion forming the pulp may be of any
60 material, as porcelain, glass, &c., and is tinted slightly with coloring-matter, so that it may be very faintly seen through the translucent enamel and body portion. If desired, the portion forming the artificial pulp may
65 be tinted with gold-dust, gold-filings, &c., so as to present the desired appearance, or it may be colored in any other way. Generally I have found that the best imitations are produced by tinting the portion forming the pulp
70 so as to have as near as possible the color of the human pulp, which is pink, or similar to the color of the gums. When the tooth is thus formed with a body portion, a covering of enamel, and a tinted portion representing
75 artificial pulp, it is similar in appearance to a human living tooth.

As above said, there are many processes which can be followed in producing the above-described tooth, and it will be understood that
80 I do not limit myself to the details of the process which I will now proceed to describe.

Referring to Figs. 7 and 8, I employ two mold-boxes *d d'*, they being for one tooth for simplicity of illustration, but, if desired, they
85 may be formed so as to mold any number of teeth at once. They may be formed of any material and in any shape desired. In mold-box *d* I first place a layer of enamel while in a plastic state, and then place upon it a small
90 portion of plastic material for forming the body, so as not to entirely fill the cavity in the mold. In the cavity in the other box *d'* I place a thin layer of plastic enamel and then fill up the cavity with the plastic body portion
95 of the tooth, heaping it up until there is sufficient to fill the balance of the cavity left in the box *d*. Then with an instrument I form an indentation in the plastic mass in box *d*
100 (which is to form the front portion of the tooth) of a shape to suit, and lay it in a small mass of plastic colored porcelain, glass, or other material, which is to represent the pulp. Then the two mold-boxes are fitted and

pressed together and are heated for a short period of time until the mass becomes sufficiently hardened for its removal therefrom. Then the teeth may be trimmed and burned
5 or baked in a suitable oven and finished as desired, the pins having been put in in the usual manner, if desired.

The plastic porcelain or other material to form the body portion of the tooth and the
10 pulp may be placed in the molds in many different ways so as to produce different teeth—as, for instance, one like that in Fig. 5, or in any other way to suit the particular fancy of the dentist or manufacturer or to suit a par-
15 ticular requirement.

In Fig. 6 I have shown a tooth in which the pulp is not formed of a solid core, as in Figs. 2 and 5, but is formed by scattering gold-dust over the center of the plastic mass in box *d*
20 before the tooth is finally molded. Formed in this way the pulp shows faintly through the enamel and artificial dentine, although it is not formed of a solid mass.

Having thus explained the nature of the
25 invention and described a way of construct-

ing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. An artificial tooth formed of a translucent body with a core tinted to represent the pulp. 30

2. The herein-described improvement in the art of producing artificial teeth which consists of placing plastic enamel material in
35 a mold-box, covering it with plastic material to form the tooth-body, inserting a plastic mass to form the pulp, placing plastic tooth-body material in the other mold-box, molding the two masses thus formed together, and
40 then baking and finishing them in the usual way.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 2d day of
45 March, A. D. 1895.

HERBERT ENOS DENNETT.

Witnesses:

MARCUS B. MAY,

ARTHUR W. CROSSLEY.