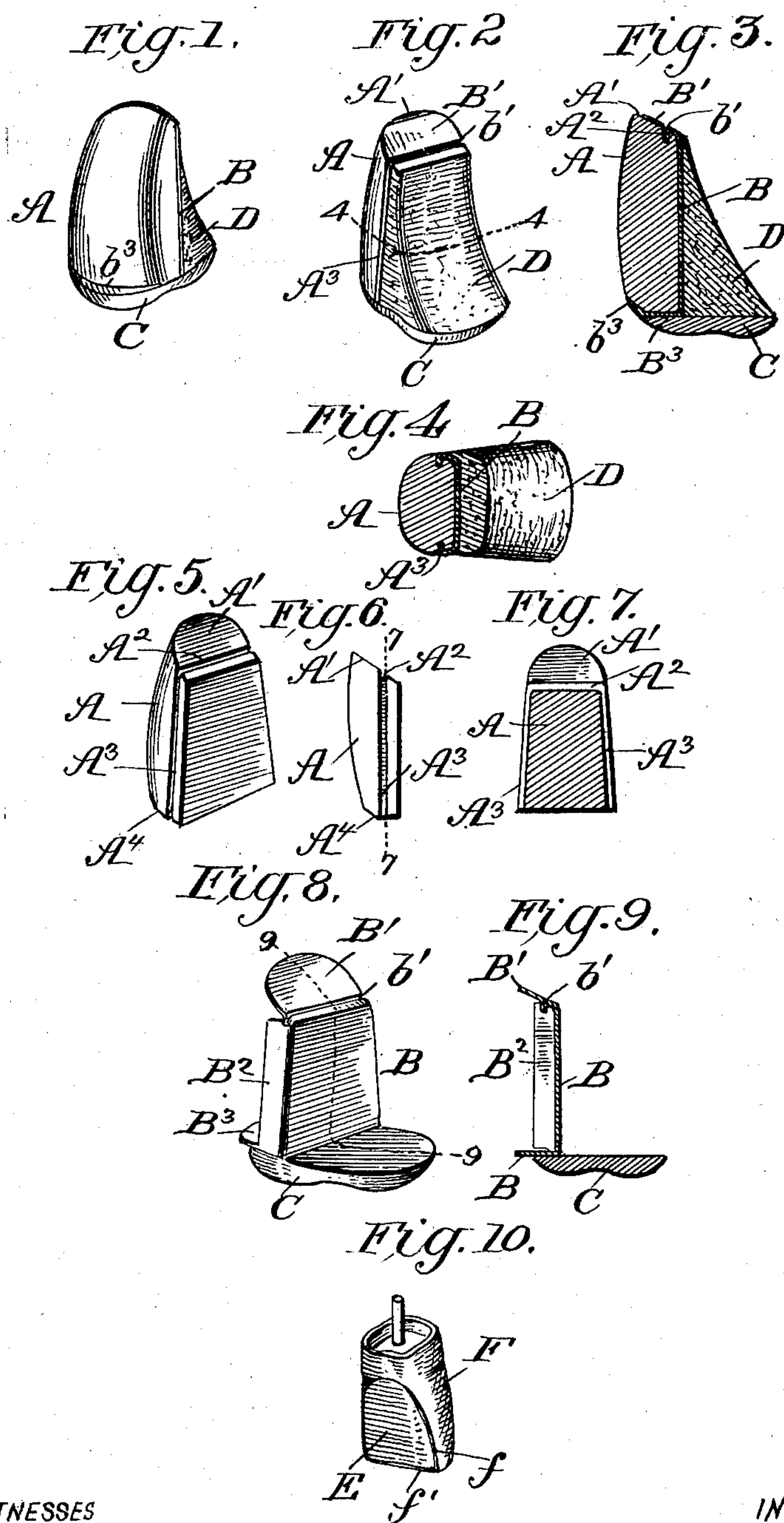


No. 742,011.

PATENTED OCT. 20, 1903.

G. J. DAVISON.
ARTIFICIAL DENTURE.
APPLICATION FILED MAY 19, 1903.

NO MODEL.



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GEORGE JANES DAVISON, OF RICHMOND, VIRGINIA.

ARTIFICIAL DENTURE.

SPECIFICATION forming part of Letters Patent No. 742,011, dated October 20, 1903.

Application filed May 19, 1903. Serial No. 157,756. (No model.)

To all whom it may concern:

Be it known that I, GEORGE JANES DAVISON, a citizen of the United States, and a resident of Richmond, in the county of Henrico and State of Virginia, have made certain new and useful Improvements in Artificial Dentures, of which the following is a specification.

My invention is an improvement in artificial dentures, being in the nature of an improvement in artificial teeth, and especially in the means for securing the porcelain facing; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of the outer side of a tooth embodying my invention. Fig. 2 is a perspective view of the rear side thereof. Fig. 3 is a vertical longitudinal section of such tooth. Fig. 4 is a detail cross-section on about line 4 4 of Fig. 2. Fig. 5 is a detail perspective view of the rear side of the facing. Fig. 6 is a side view thereof. Fig. 7 is a detail section on about line 7 7 of Fig. 6. Fig. 8 is a detail perspective view of the backing with the base or cusp portion. Fig. 9 is a detail section on about line 9 9 of Fig. 8, and Fig. 10 shows a somewhat different construction from that shown in the other figures.

As shown in Figs. 1 to 4 inclusive, my invention includes in its practical embodiment the facing A, the backing B, the base C, and the solder D.

The facing A may be conformed generally to the shape of a tooth and has its gum end A' beveled toward its rear face and is provided in its beveled end near its rear face with a groove A², extending from side to side and communicating at its ends with grooves A³, formed in the opposite side edges of the facing A near the rear side thereof and extending from end to end of the facing, as shown in Figs. 5, 6, and 7. At its outer or bite end the facing is sloped at A⁴ at its front face to form a seat for the outer portion of the backing presently described.

The backing B is of thin soft metal, usually gold of a high carat, and may be pressed to conform closely to the rear side of the facing A by using the latter as a die in impressing the soft-metal backing. This backing B thus forms a cup fitted to the rear side of the

facing and has at one end a forwardly-projecting wing B', which extends over the beveled gum end A' of the facing A and is creased at b' down into the groove A² in such end of the facing, and the backing has at its sides forwardly-projecting flanges B², which are bent into the side grooves A³ of the facing, while the base portion B³ of the backing is bent along the outer end of the facing and overlaps the sloped surface A⁴ of said facing and is burnished at b³ closely up against the face of the outer end of the facing A, as best shown in Figs. 1 and 3. By the described construction it will be noticed the backing is caused to embrace the upper, lower, and side edges of the facing in such manner as to securely hold the same whenever desired. At the same time by turning back the overlapping portions of the backing the facing will be released and can be removed at any time without necessitating the removal of the entire denture, whether the latter be in the form of a bridge, a plate, or other suitable securing means.

The base or cusp C is of metal and overlaps at its outer end the outer portion B³ of the backing and extends rearwardly beyond the backing to any desired extent, such base C and the backing being reinforced by the solder D, which may be supplied in any desired quantities to give the desired strength to the denture. This cusp is secured to the outer end of the cup or backing B and by the solder which is flowed in back of the said cup.

In the operation of producing the denture when the backing with the base or cusp properly connected, as shown in Figs. 1, 2, and 3, has been properly formed and the facing A has been applied and properly fitted to the backing the facing may be removed, the backing and the base or cusp C be invested, and the solder D applied in a manner which will be readily understood by those skilled in the art.

It will be noticed that the cup B constitutes an important feature of my invention, being, as it is, an article which can be readily manufactured by manufacturers of dental supplies and placed with corresponding facings on the market, the flat facings and the metallic cups being suitably numbered or otherwise identified, so that cups may be manufactured and

sold and facings can be supplied to fit said cups in any desired color.

In Fig. 10 I show a pivot-tooth having a facing E, of porcelain or the like, and the back-
 5 ing F arranged to overlap at its edges f and f' the edges of the facing and form a continuous overlapping flange-like edge for securing the facing, so the latter may be removed and replaced whenever desired.

10 It will be understood that my invention in its broad features is not limited to any special kind of tooth, and I am also able by my invention to apply rubber-plate teeth to a bridge without vulcanizing them on, both of
 15 which are important features of my invention.

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

20 1. The improvement in artificial dentures herein described consisting of the facing having its gum end beveled toward its rear face and provided in said end with a groove extending from side to side and having grooves
 25 in the opposite sides of the tooth in alignment with said end groove and having the outer end of said facing sloped at its outer edge, the thin metallic backing fitted to the rear side of the facing and having at one end
 30 a forwardly-projecting wing extending over the gum end of the facing and creased into the groove therein and having at its sides portions bent into the side grooves of the facing and its outer portion bent along the outer
 35 end of the facing and overlapping the sloped surface thereof, the base or cusp overlapping at its outer edge the outer portion of the end of the backing and extending rearwardly beyond the said backing, and the reinforce of
 40 solder applied to the base and backing, substantially as set forth.

2. In an artificial denture the combination with the facing grooved in its gum end and opposite sides adjacent to its rear face, of a
 45 soft metallic backing fitted to the rear face

of the facing and having forwardly-projecting flange-like portions depressed into said grooves and an outer end portion overlapping the outer end of the facing, substantially as set forth.

3. The combination with a facing of a backing fitted and conformed closely to the rear side of the facing and having the edge flanges overlapping the said facing whereby to detachably secure the same, substantially as set
 55 forth.

4. In an artificial denture the combination of the facing having its gum end beveled toward its rear face and having the sloped surface at the front side of its outer end and the
 60 backing conforming closely to the inner surface of the facing having at its opposite ends portions overlapping the beveled end and sloped surface of the facing, substantially as set forth.

5. The combination with the facing having the cross-groove in its gum end and the longitudinal grooves in its opposite edges, of the
 65 backing fitted to the rear side of said facing and having forwardly-projecting flange portions pressed into said grooves of the facing, substantially as set forth.

6. In artificial dentures, and as an improved article of manufacture, a flat metallic cup adapted to receive and conform closely to the
 75 inner surface of a flat tooth-facing and having at its edges the projecting flanges to engage with the said facing at the edges thereof, substantially as set forth.

7. In artificial dentures, a backing B of
 80 thin soft metal, and comprising a cup having at one end forwardly-projecting ends B' , at its sides the forwardly-projecting flanges B^2 , and the forwardly-projecting base portion B^3 at its end opposite the wing B' , all substan-
 85 tially as and for the purposes set forth.

GEORGE JANES DAVISON.

Witnesses:

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