

J. A. WILLIAMS.
ARTIFICIAL TOOTH.
APPLICATION FILED APR. 18, 1908.

944,836.

Patented Dec. 28, 1909.

Fig. 1.

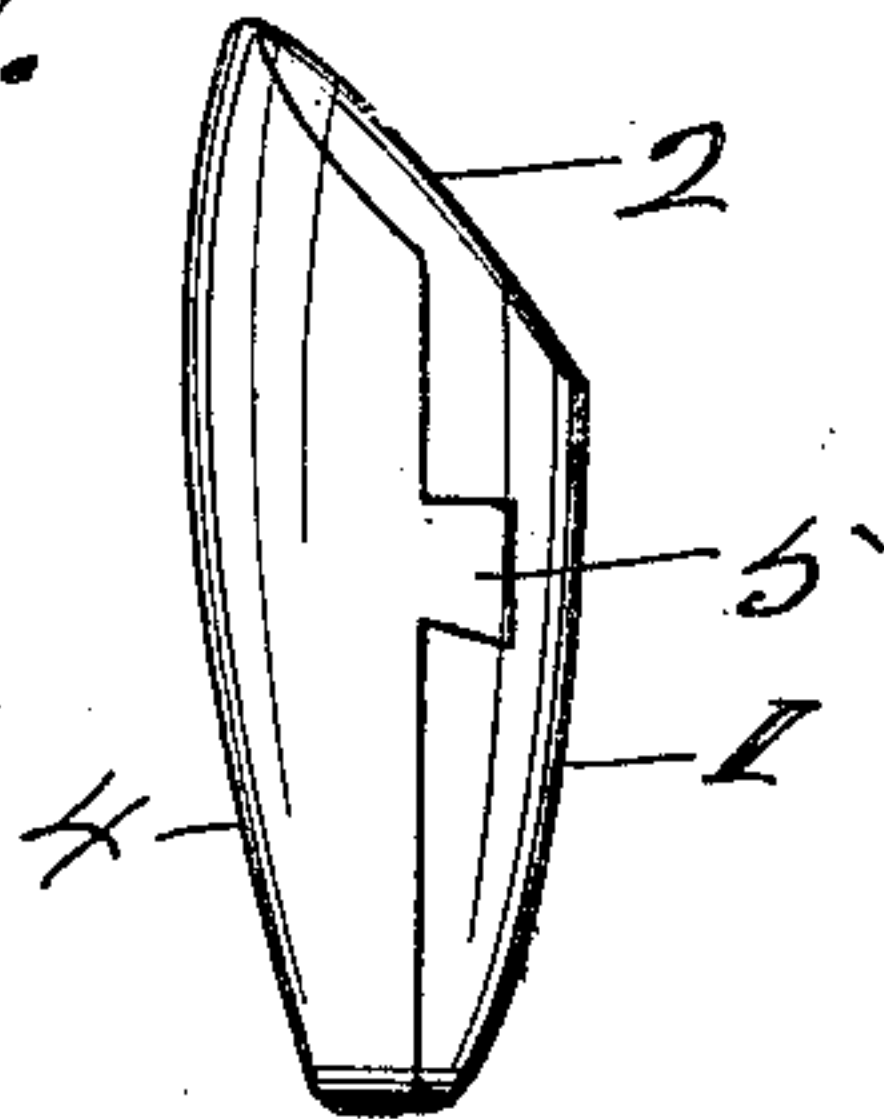


Fig. 2.

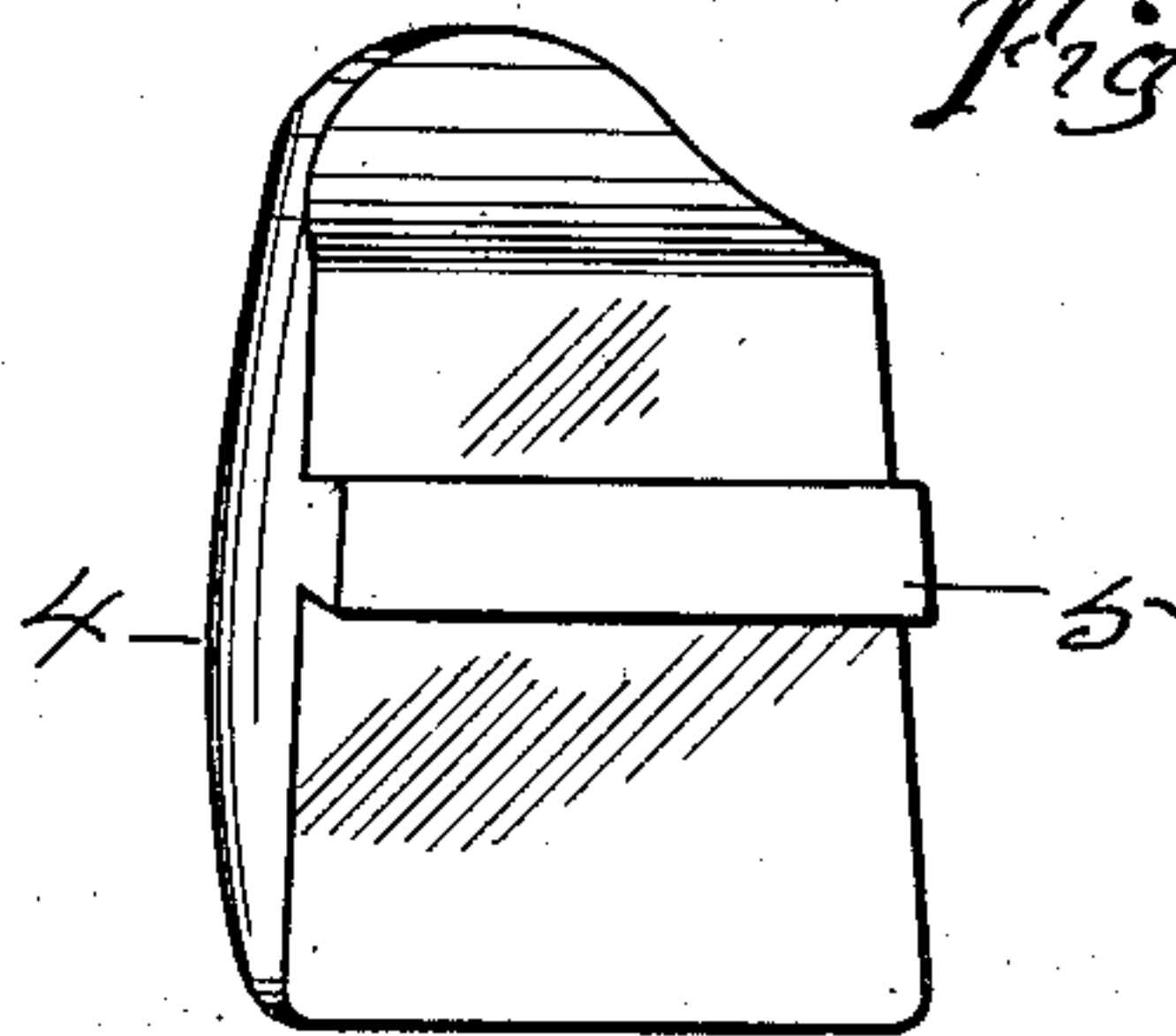


Fig. 3.

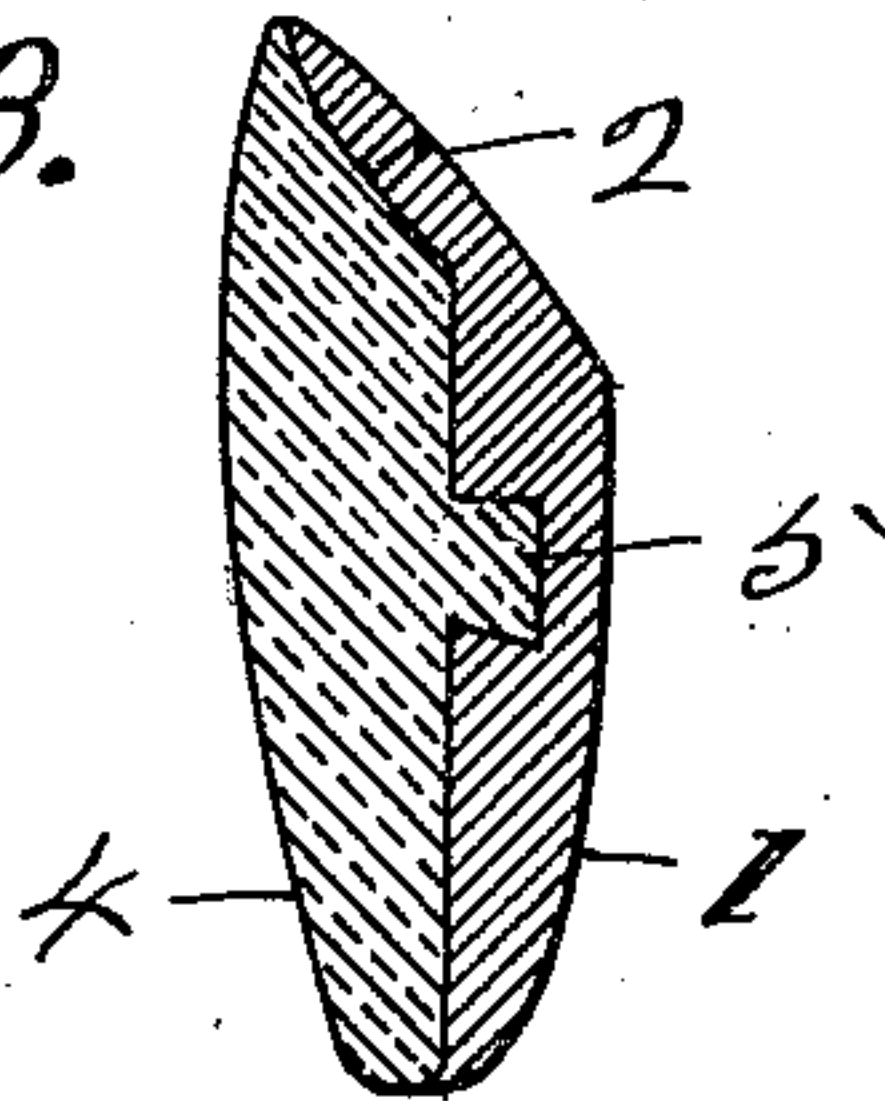
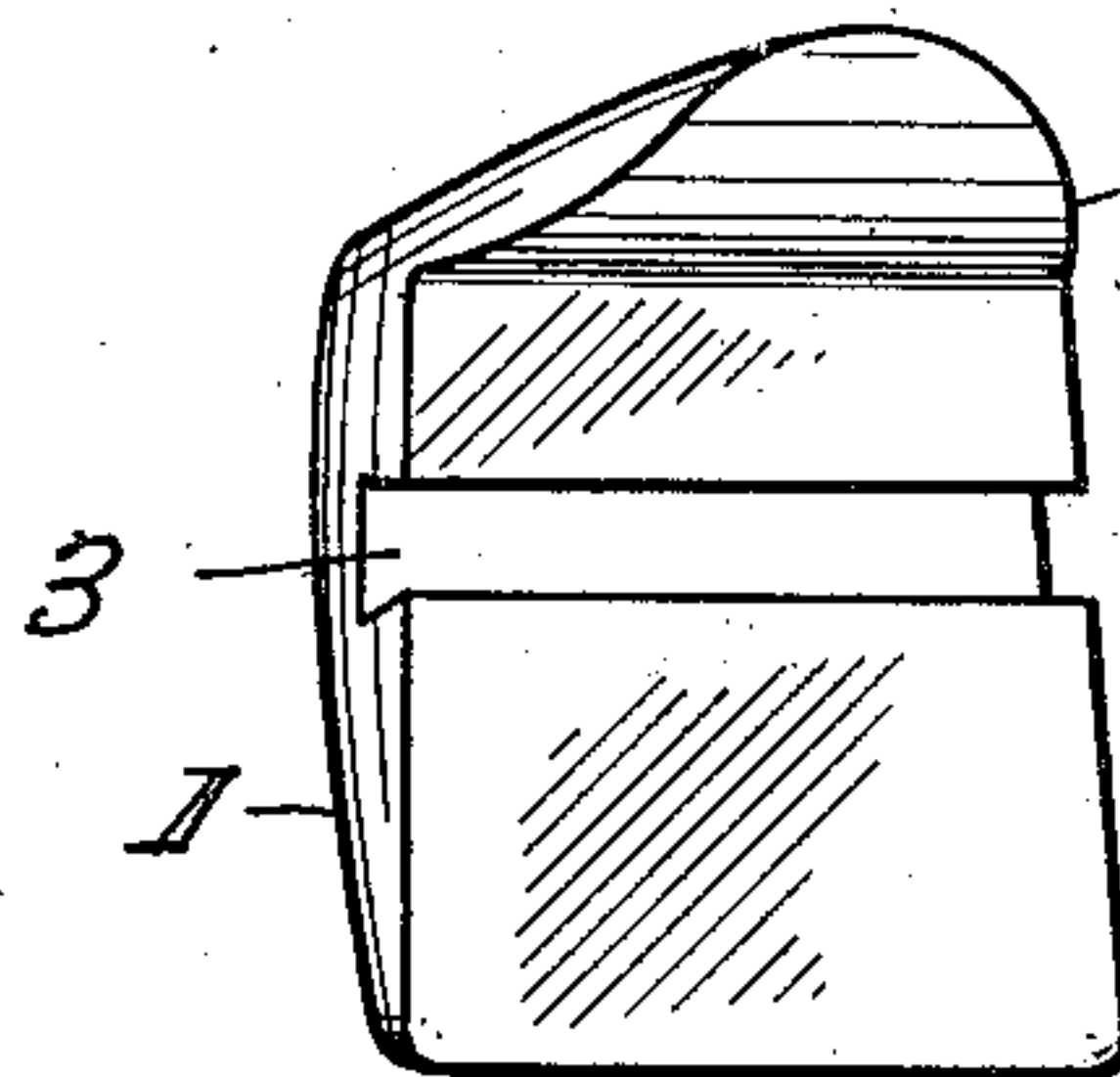


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN A. WILLIAMS, OF FORT WAYNE, INDIANA.

ARTIFICIAL TOOTH.

944,836.

Specification of Letters Patent.

Patented Dec. 28, 1909.

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To all whom it may concern:

Be it known that I, JOHN A. WILLIAMS, a citizen of the United States, residing at Fort Wayne, in the county of Allen, in the State of Indiana, have invented certain new and useful Improvements in Artificial Teeth; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in artificial teeth.

The prime object of my present invention is to provide a comparatively cheap, substantial, and reliable artificial tooth formed of a porcelain front and a metallic backing so united as to admit of immediate, convenient and economical repairs where either or any portion of the tooth is broken or damaged.

My invention consists of an artificial tooth formed of two interlocking portions or sections, one section being a metal base or backing provided upon its inner face with a transverse slot or recess whose sides are substantially parallel and the lower of which sides is slightly undercut, and the upper end of which may have a forwardly projecting shoulder adapted to embrace the corresponding end of the front section; the other section being a porcelain facing provided upon its inner face with a transverse ledge or flange slightly dovetailed on its lower edge adapted to form an interlocking engagement and dovetailed union with the said transverse recess.

The principal novel feature of my invention resides in the construction and coöperative relation of the coacting interlocking sections, and particularly in the form of dovetailed union of the tooth sections.

In the accompanying drawings similar reference numerals indicate like parts in the several views in which—

Figure 1 is a side elevation of my invention showing the manner of uniting the interlocking parts. Fig. 2 is a detail perspective of the porcelain facing section looking toward its inner face showing the dovetailed transverse ledge. Fig. 3 is a longitudinal central section of Fig. 1, and Fig. 4 is a perspective detail of the metal backing or

body portion of the tooth showing the undercut transverse recess on its inner face.

The metallic section 1, preferably of gold, and of proper dimensions, may have its upper end provided with a forwardly projecting shoulder 2 of any desired contour, adapted to overhang and substantially embrace the upper end of the facing thereof, though this shoulder is not essential to my invention and may be omitted at pleasure without affecting the character and efficiency of the same. This metallic section constitutes both the body of the tooth and the backing thereof, and is provided, substantially midway of its ends, with a dovetail transverse groove or recess 3 of proper dimensions adapted to receive the interlocking portion of the facing. The undercut is upon the lower side of the recess to interlock with the flange 5 for the purpose hereafter described. This metallic section 1 has its lower or cutting edge properly curved to correspond with the curvature of the natural tooth, as shown in Figs. 1, 2 and 4.

The tooth facing 4, of proper dimensions, is formed of porcelain or other suitable material, and has its outer face laterally and longitudinally rounded or convexed to conform to the contour of the outer face of the natural tooth, as shown in Figs. 1 and 3.

The upper end of the facing section 3 is, of course, beveled to snugly fit the lower face of the shoulder 2, as shown when such shoulder is employed, and is provided upon its inner face approximately midway of its ends with a transverse slightly dovetailed ledge or flange 5 adapted to form a snug interlocking union with the said recess 3 of the metal section. It is essential that the undercut or dovetailed portion of the flange 5 should be upon the lower edge thereof to resist the lateral strains upon the porcelain facing in use which tend to disunite it from its backing. As no such strains are felt by the upper end of the facing the upper edge of the flange 5 is not dovetailed; and for the further reason that otherwise the facing can not be placed in position from the front, as is necessary in repairing a damaged or broken facing which has another artificial tooth upon each side thereof and firmly united to its metal backing in the usual manner.

The component parts or sections of my improved artificial tooth thus described are

firmly secured together by means of suitable cement. The manner of mounting dentures of this character in position of use is well understood, and the manner of uniting the component parts is obvious since it is apparent that they can be united by first inserting the ledge 5 in the recess 3 and then the balance of the ledge all from the front, and can readily be permanently thus united by means of a proper cement. In case either the porcelain facing 4 or the metal backing 1 is broken or otherwise damaged the dentist can readily disunite them and save the undamaged section, and then conveniently substitute a new companion section as before.

It is obvious that when the parts are thus united and secured by cement they cannot be displaced or separated by any ordinary usage. It is also evident that my construction of the dovetailed connection of the parts of the tooth is specially adapted to resist the biting strains thereon, and at the same time

permits the convenient replacing of a new facing upon an old backing from the front without detaching the backing from its supporting denture.

Having thus described my invention and the manner of employing the same, what I desire to secure by Letters Patent is:

In an artificial tooth the combination of two interlocking sections, one section being a porcelain front with a beveled front edge and a transverse integral ledge undercut at its lower edge only, and the other section being a metal backing with a projecting upper edge and a transverse recess under cut at its lower edge only.

Signed by me at Fort Wayne, Allen county, State of Indiana, this 16th day of April, 1908.

JOHN A. WILLIAMS.

Witnesses:

WATTS P. DENNY,
AUGUSTA VIBERG.