

(No Model.)

D. GENESE.
ARTIFICIAL TOOTH.

No. 377,248.

Patented Jan. 31, 1888.

Fig. 1.

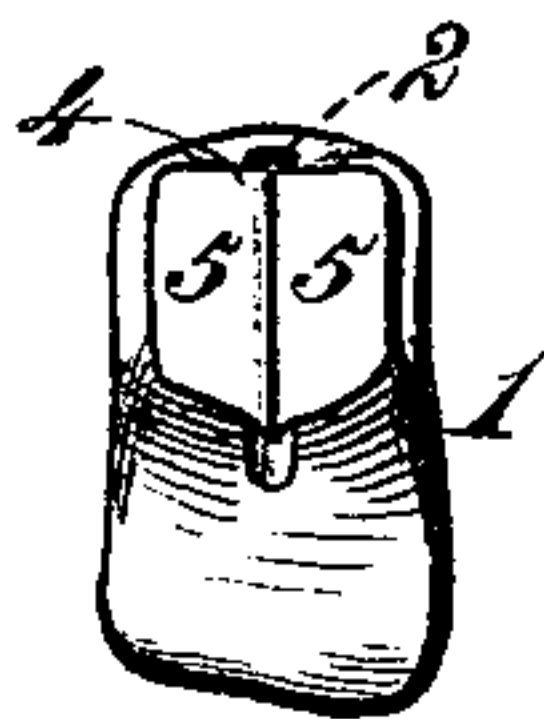


Fig. 2.

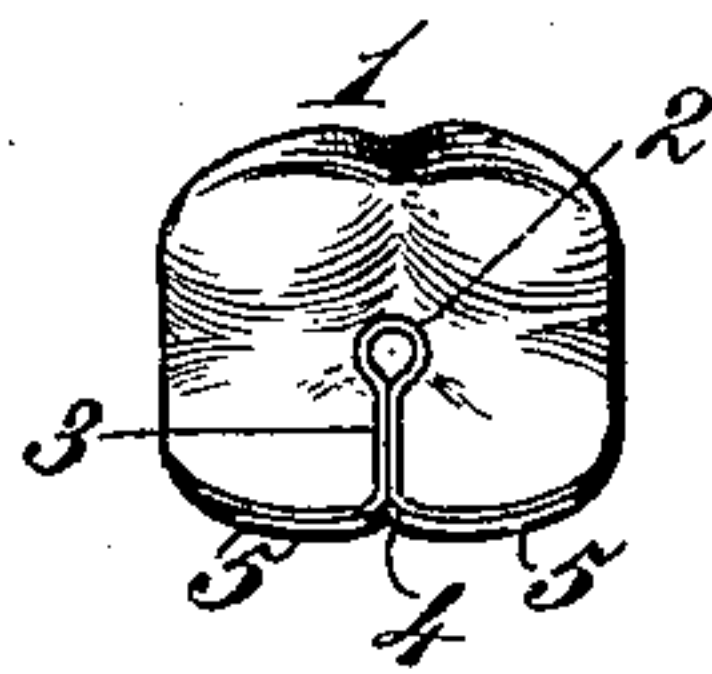


Fig. 3.

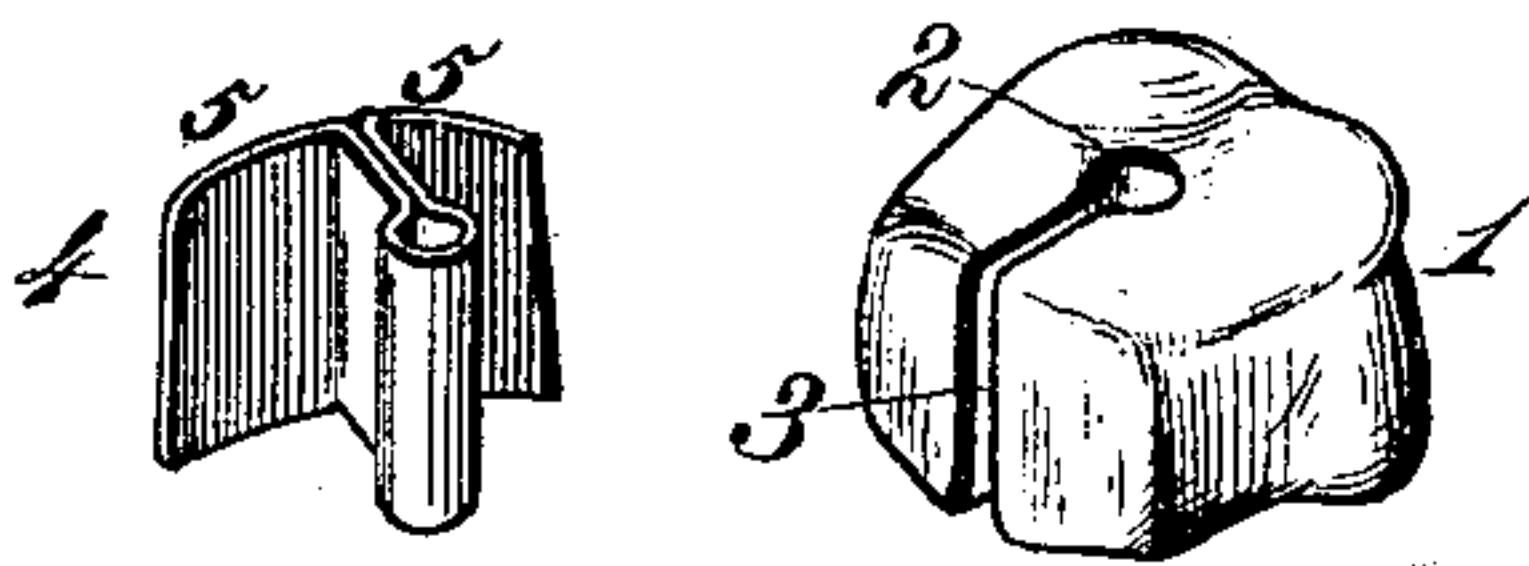
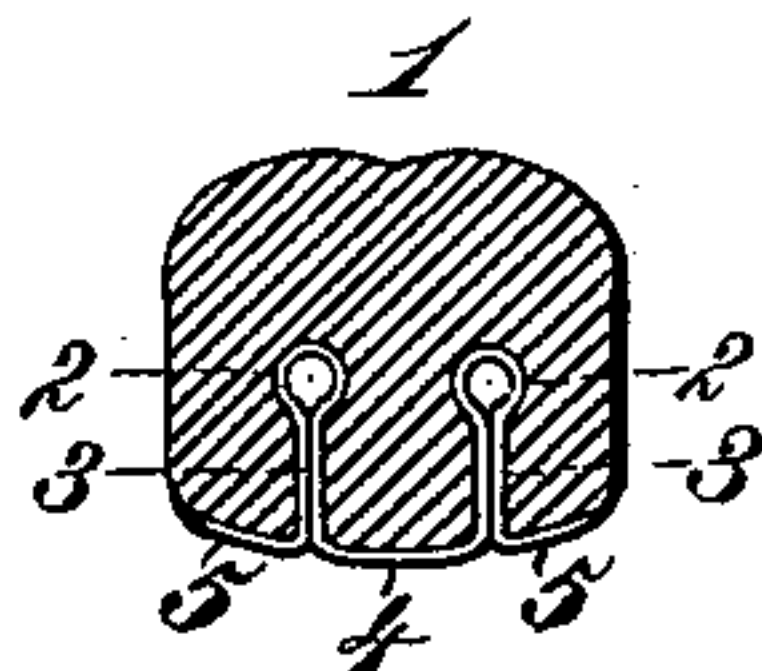


Fig. 4.



Witnesses.
Robert Smith,
J. A. Rutherford,

Inventor.
David Genese.
By James L. Norris,
Att'y.

UNITED STATES PATENT OFFICE.

DAVID GENESE, OF BALTIMORE, MARYLAND.

ARTIFICIAL TOOTH.

SPECIFICATION forming part of Letters Patent No. 377,248, dated January 31, 1888.

Application filed October 25, 1887. Serial No. 253,350. (No model.)

To all whom it may concern:

Be it known that I, DAVID GENESE, a subject of the Queen of Great Britain, residing at Baltimore, in the State of Maryland, have
5 invented new and useful Improvements in Artificial Teeth, of which the following is a specification.

My invention relates to the manufacture of artificial teeth and the method of mounting
10 them upon the plate, and is especially applicable to that class of work in which the base or denture is composed wholly of metal.

It is the purpose of my invention to provide improvements in the construction of the tooth
15 and in the attachment thereto of the metal fastening by which it is soldered to the plate, whereby expansion and contraction of both metal and porcelain may take place independently of each other, and whereby, also, fracture of the porcelain in any one or more of
20 the teeth of a denture, after the same is finished, shall be wholly obviated.

The invention consists in the several novel features of construction and new combinations
25 of parts hereinafter fully set forth, and definitely pointed out in the claims following this specification.

Referring to the drawings which form part of this specification, Figure 1 is an elevation
30 of an incisor tooth embodying my invention, the view being taken from the labial surface. Fig. 2 is a plan view of the grinding-surface of a molar tooth, showing the same invention. Fig. 3 is a detail view of the metal fastening
35 and of the tooth shown in Fig. 2, said parts being separated for the purpose of illustration. Fig. 4 is a transverse section of a tooth, showing a modified construction.

Heretofore in the manufacture of dentures
40 much annoyance has been experienced by reason of the fracture of the porcelain in one or more teeth after the plate is finished and the patient has begun to wear it. This accident may be caused by the sudden meeting of two
45 occluding teeth, especially where one has received a slight flaw, or it may arise from other causes, such as the strain caused by the capillary action of fluids entering the minute spaces between the teeth and the backing or between
50 the former and the rubber plate. One cause of this defect is unquestionably the common

practice of inserting the metal pins by which the teeth are attached to the plate in the center of the tooth, or nearly so, thereby giving the latter a constant leverage from both ends, 55 making the base of the tooth the fulcrum. The materials employed having no affinity, each supports the other by the bulk of material, and the parts being united by a method causing constant contraction each upon the 60 other, the unity of the teeth and the base is broken up, and the whole reliance must be placed upon the small pins or wires, which hold by the resistance of their rivet-heads only. To obviate these defects I construct 65 the teeth and the metal fastenings in the following manner.

In the drawings, the reference-numeral 1 denotes the body of the tooth, which is molded upon a metal backing having a centrally-arranged rib or cylindrical portion, 2, extending from the base to the grinding-surface. 70 This cylindrical part lies in a substantially central cavity, 2^a, in the tooth, and the metal of the backing passes to the rear surface of 75 the tooth, lying in a channel, 3, while the ends 5 are folded over in opposite directions on the back of the tooth. This construction, as will readily appear, permits the free and independent expansion of both metal and porcelain. 80 It also gives a spring-space running to the back of the tooth, embracing and protecting the part which receives the greatest pressure in mastication. At the same time it unites the tooth to the plate by a large central hold- 85 fast beside the ordinary backing, which is already burned to the tooth, and will therefore not shrink or expand again, like the ordinary backing riveted to the pin-teeth.

I may employ a double cylindrical portion, 90 2^a, as shown in Fig. 4, and place the metal therein in a similar manner, the only difference being in the duplication of the rib or cylindrical part 2 and channels 3.

Heretofore a metal backing has been used, 95 in which the metal is folded upon itself to form a central rib or edge projecting slightly from the inner face of the metal backing, the latter being folded over in opposite directions on the back of the tooth. The edges of the 100 lateral portions are also bent inward and buried in the body of the tooth. This con-

struction differs from my own in that it provides no cylindrical portion 2, lying vertically in the body of the tooth. Moreover, in my invention the cylindrical cavities in the tooth extend entirely through the same, whereby the material of the plate may enter the same and form a strong anchorage. This feature is of the utmost importance in the art, as without it no sufficient central attachment is afforded, and the leverage upon the teeth is liable to render them loose or entirely detach them from the plate.

Having thus described my invention, what I claim is—

1. A porcelain tooth for artificial dentures having one or more vertical cylindrical cavities or openings extending entirely through the body of the tooth, and a channel leading from each of said cavities to the rear or labial surface of said tooth, substantially as described.

2. The combination, with a porcelain tooth having one or more vertical cylindrical cavities extending entirely through the body of the tooth, of a metal backing lining and co-extensive with said cavity and passing through the channel in rear thereof, the ends of said metal backing being folded down laterally in opposite directions upon the body of the tooth, forming an opening inclosed by the lining, and passing through the body of the tooth to receive the material of the plate, substantially as described.

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

DAVID GENESE.

Witnesses:

G. EVRETT REARDON,
C. R. ROUGH,
J. R. D. THOMAS.