

(No Model.)

L. T. SHEFFIELD.

ARTIFICIAL TOOTH.

No. 354,356.

Patented Dec. 14, 1886.

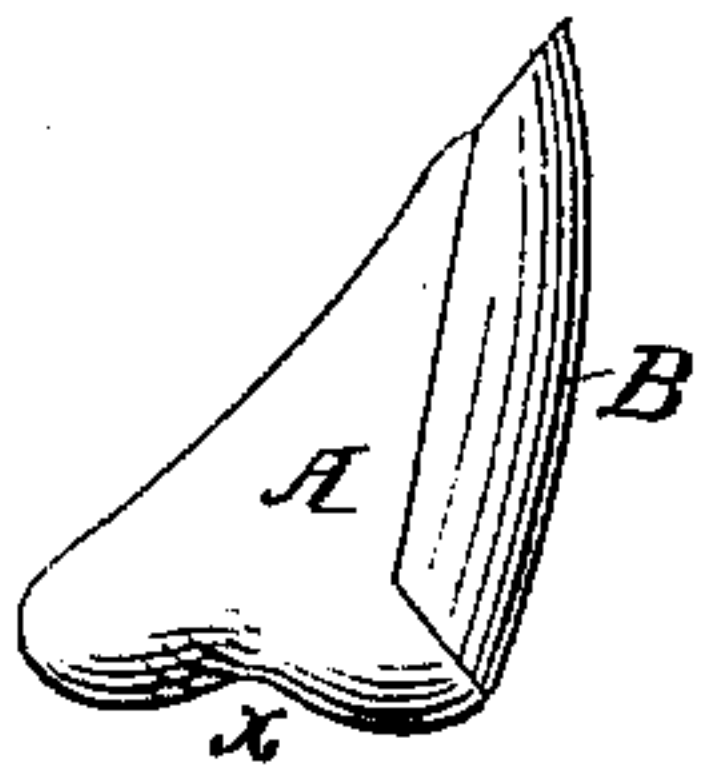


Fig. 1.

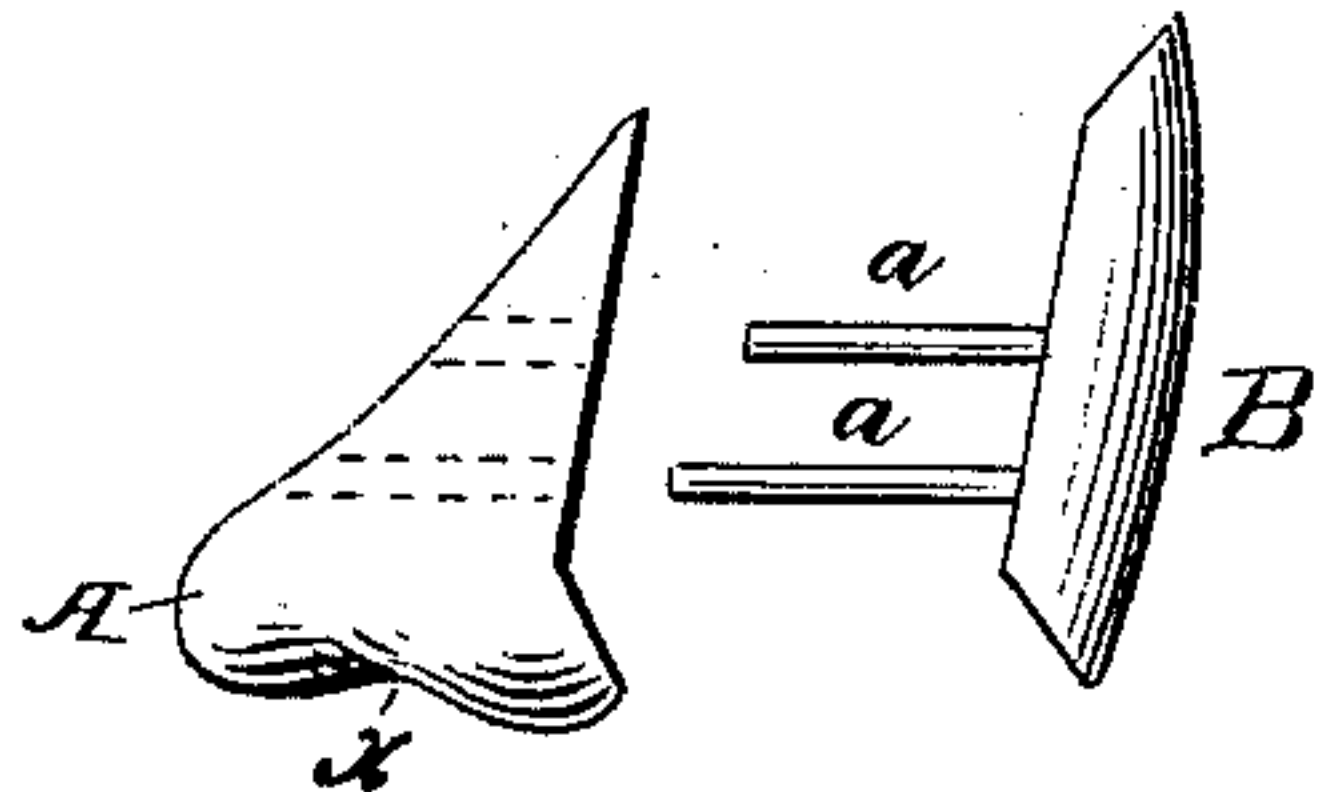


Fig. 2.

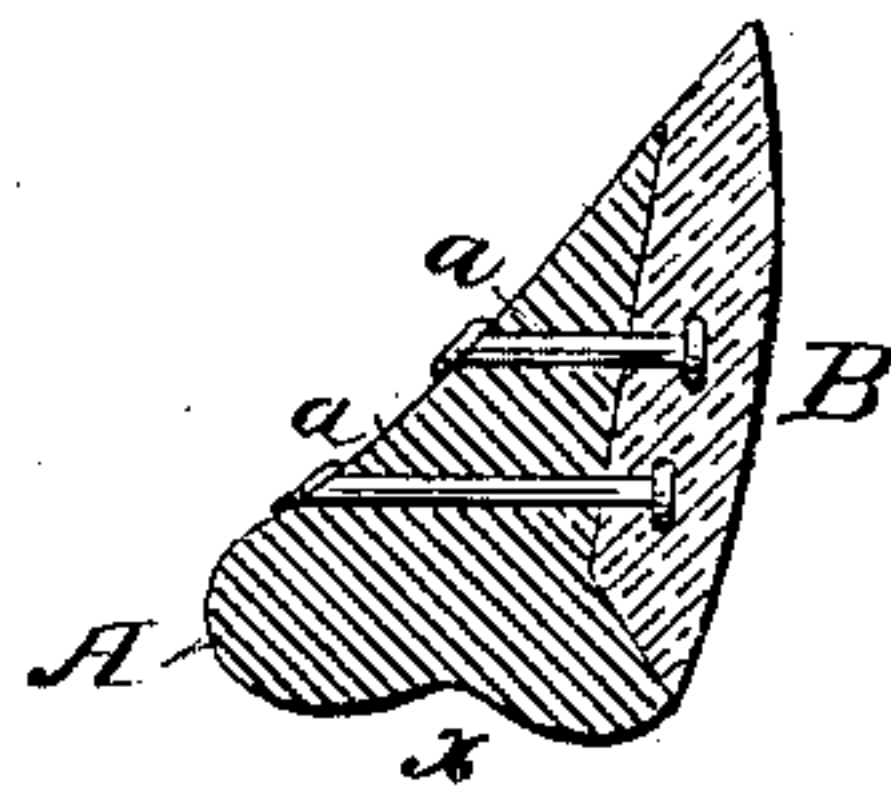


Fig. 3.

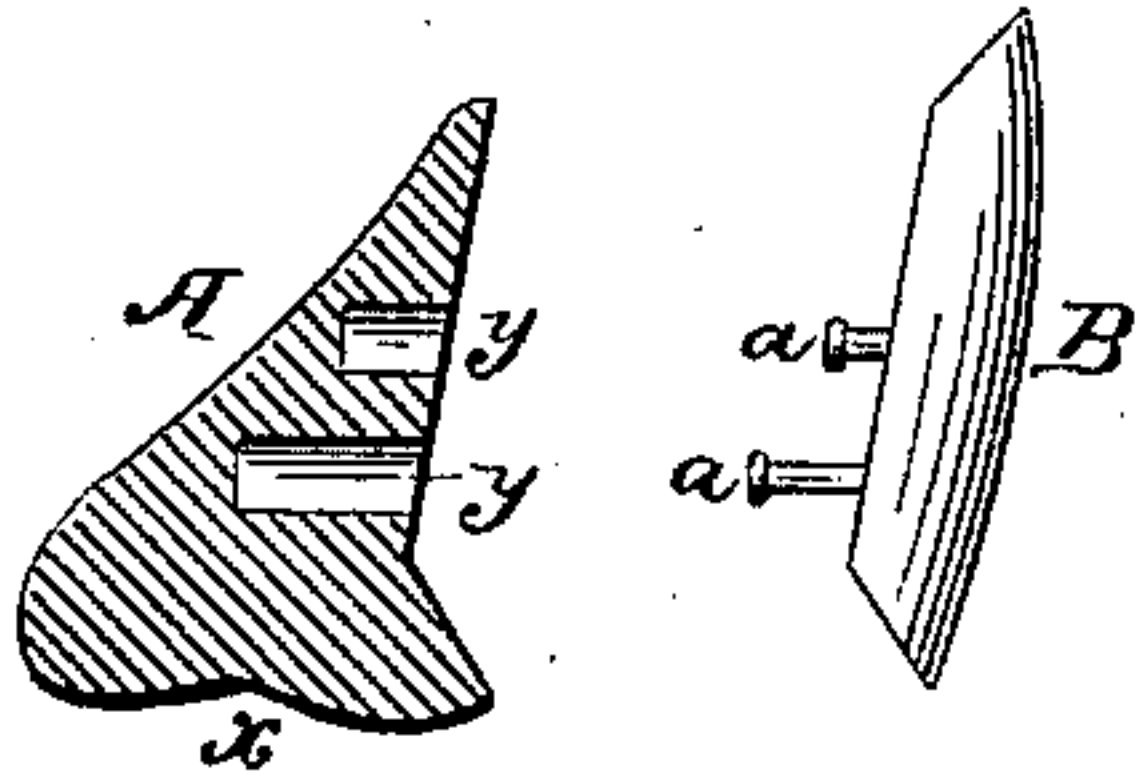


Fig. 4.

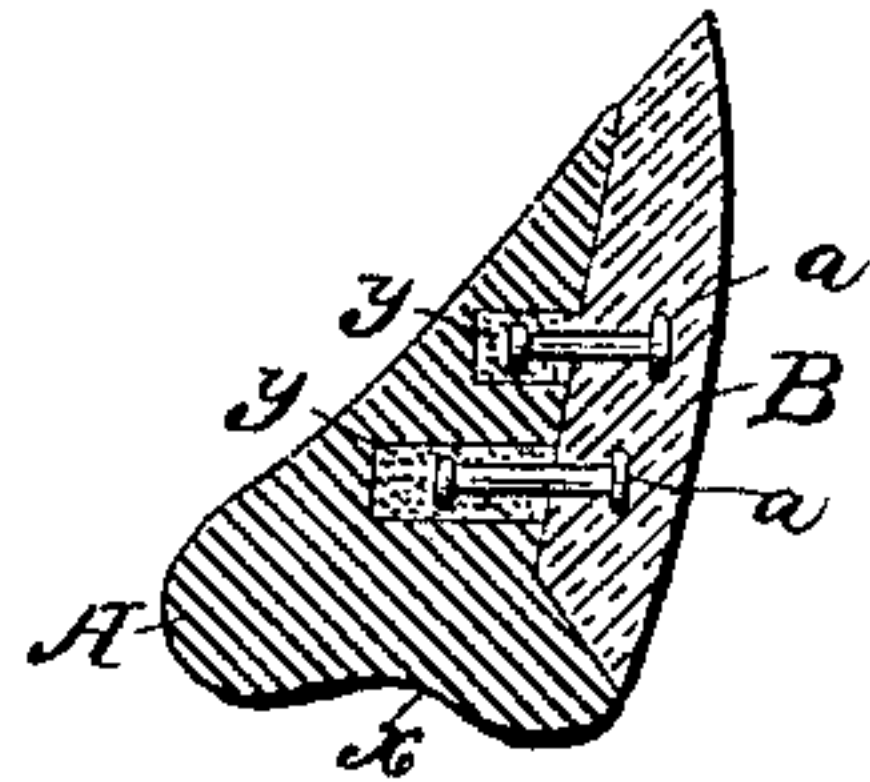


Fig. 5.

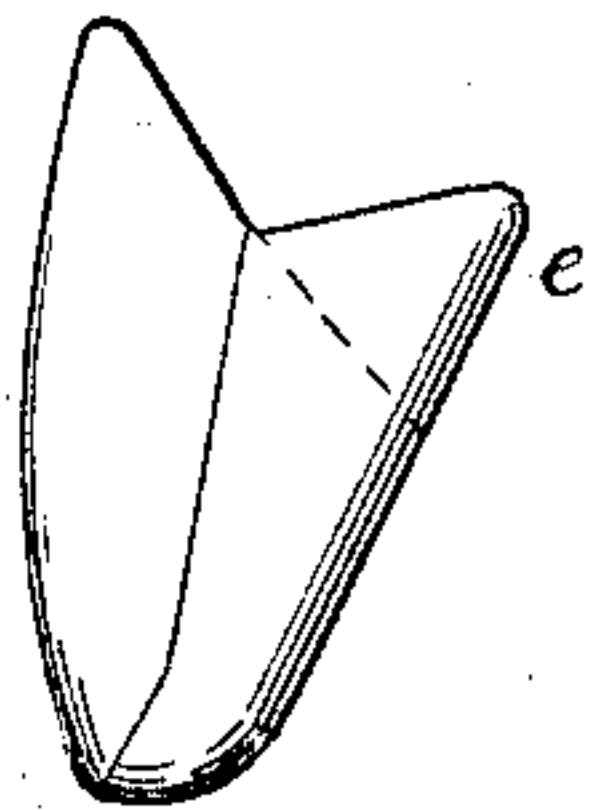


Fig. 6.

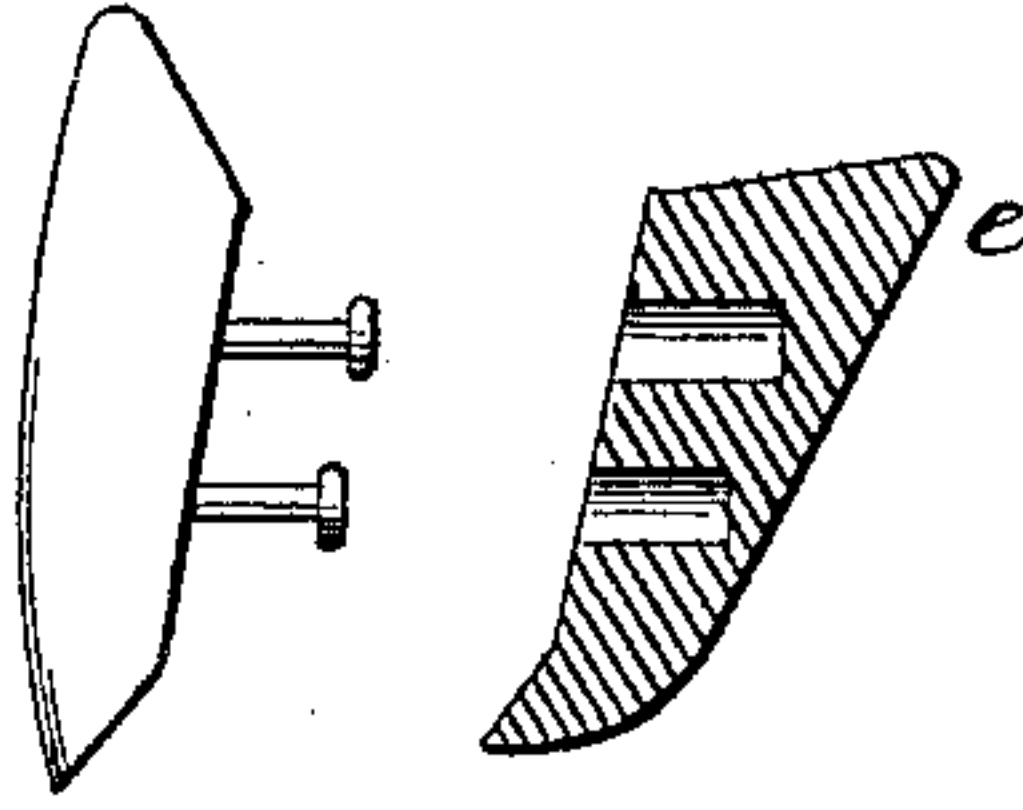


Fig. 7.

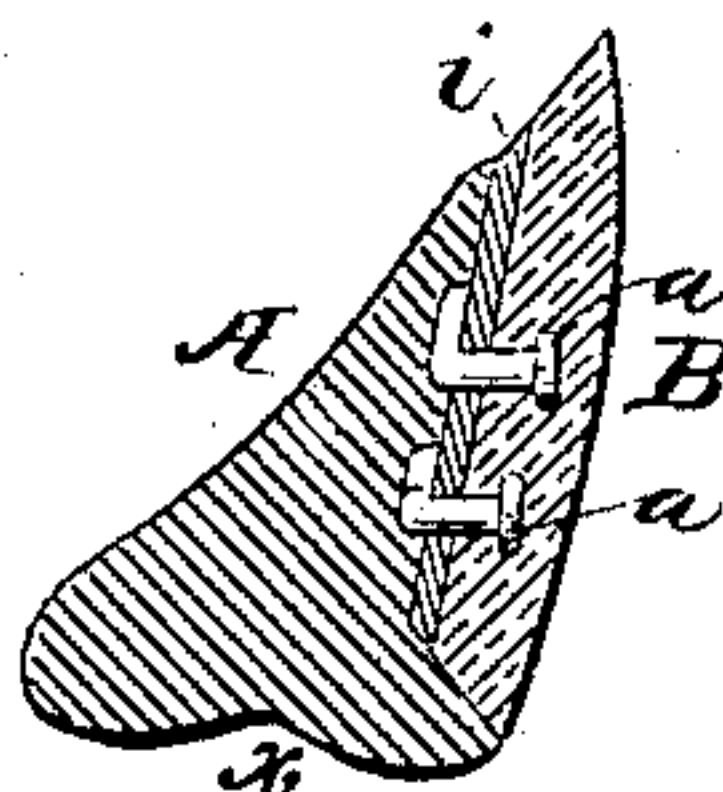


Fig. 8.

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UNITED STATES PATENT OFFICE.

LUCIUS T. SHEFFIELD, OF NEW YORK, N. Y.

ARTIFICIAL TOOTH.

SPECIFICATION forming part of Letters Patent No. 354,356, dated December 14, 1886.

Application filed August 12, 1884. Serial No. 140,359. (No model.)

To all whom it may concern:

Be it known that I, LUCIUS T. SHEFFIELD, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Artificial Dentures, of which the following is a specification.

My invention relates to that class of artificial dentures in which the masticating-surfaces are upon metallic portions of the teeth provided with outer facings of porcelain; and my invention consists in making separate teeth of combined metallic and porcelain blocks, adapted to be sold as articles of manufacture, and to be connected to form continuous metallic bridges or supports behind the separate porcelain facings.

My invention also consists in means, hereinafter described, for connecting the porcelain and metallic portions of incisor and lateral teeth, and for preventing lipping.

In the drawings, Figure 1 is a side view of my improved artificial tooth; Fig. 2, a side view showing the parts detached; Fig. 3, a transverse section; Figs. 4, 5, and 8, views illustrating different modes of connecting the two parts of the tooth; Fig. 6, a side view of a tooth constructed to prevent lipping; Fig. 7, a view showing the parts of the tooth illustrated in Fig. 6 as detached and in part section.

In some classes of artificial dentures the masticating-surfaces constitute parts of bars or bridges, supported in the mouth and faced with porcelain blocks or pieces, which represent the natural teeth, but which are simply facing-pieces, serving merely an ornamental purpose and not employed in masticating.

In order to facilitate the manufacture of this class of dentures, I provide separate blocks each supporting a porcelain tooth and connected thereto, and constituting therewith a salable article of manufacture, the said blocks with their porcelain facings being adapted to be fitted to and secured upon the usual supports.

In the manufacture of the improved article the block A, which really constitutes the working portion of the tooth, is secured in any suitable manner to the porcelain piece B, the face α of the block A being formed to correspond to the crown of a molar or bicuspid tooth, as shown in Figs. 1 to 5 and 8, or to correspond

to the biting-edge of an incisor tooth, as shown in Figs. 6 and 7.

In the drawings I have shown different modes of connecting the two parts together. Thus the porcelain part B, corresponding in outward form to an ordinary porcelain tooth, but generally thinner than the latter, may be provided with fixed pins a , embedded in the body of the piece, as shown in Fig. 3, and the metallic portion A, preferably of nickel, though any other suitable metal—such as gold—may be employed, is perforated to receive the said pins, which may be riveted upon the lingual or palatal sides of the block, as shown in Fig. 3.

Where it is not desired to extend the pins completely through the block, they may be headed at their inner ends, and sockets y may be formed in the block to receive a suitable cement, which is inserted in a plastic state in the socket, and the pins are then forced into the latter until the two parts A B are close together, as shown in Fig. 5, in which position they will be confined by the hardening of the cement. I have found that when the backings of teeth which form bridges are beveled, so as to permit the escape of air between the teeth and gums, it is very apt to cause a lipping sound. This I prevent by increasing the thickness and height of the backing, as shown in Figs. 6 and 7. The extension e thus formed touches the gum, serving to close the air-passages.

Another mode of securing the porcelain portion to the backing is shown in Fig. 8, and consists in fastening an ordinary backing, i , to the porcelain portion B, by means of the usual platinum pins, and in then soldering the backing to the metallic portion A. Instead of the platinum pins, however, I prefer in many cases to use a pin made of nickel, permanently attached to the artificial tooth crown or porcelain. This nickel pin is capable of being baked into the teeth in the same way that the platinum pins now are, but is in many respects superior, it being a very refractory metal and not liable to oxidation, and, further, being much less expensive than platinum. I have discovered that it may be used instead of the platinum pins without fracturing the teeth by variations of expansion or by reason of any other difficulty. It is further obvious that a tooth-

crown so provided with nickel pins may be used for attachments other than that specified in this application.

5 The teeth, consisting of combined porcelain and metallic portions connected as above described, or in any other suitable manner, constitute articles of manufacture, which may be sold like ordinary porcelain teeth, for use in manufacturing that class of dentures in which 10 the masticating-surfaces are of metal, the said dentures being formed by placing the teeth in proper relative position and then soldering the backings A together, so as to form a continuous bar.

15 It will be evident that the modes of connecting the facing portions B to the backing may be used when the said backing consists of a bridge or bar formed of a continuous piece, as usual.

20 Without limiting myself to the precise construction and arrangement of parts shown, I claim—

25 1. As a new article of manufacture, an artificial tooth consisting of metal, including the masticating-face, and provided with an ornamental facing of porcelain, substantially as described.

2. The combination, in an artificial tooth, of an outer ornamental porcelain facing and an inner metallic block, including the masticating-face, and pins connecting the two portions, substantially as described. 3c

3. The combination, in an artificial tooth, of an ornamental porcelain face provided with headed pins and a metallic socketed block, including the masticating-face, and a body of cement surrounding each of the pins in the said sockets, substantially as set forth. 35

4. The combination, in an artificial denture, of an outer ornamental porcelain facing and an inner metallic backing, including the masticating-face, and provided with an extension, e, substantially as and for the purpose set forth. 40

In testimony whereof I have signed my name 45 to this specification in the presence of two subscribing witnesses.

LUCIUS T. SHEFFIELD.

Witnesses:

GEO. H. EVANS,
F. L. FREEMAN.