

(Model.)

R. M. CHASE.

DENTAL PLATE.

No. 371,174.

Patented Oct. 11, 1887.

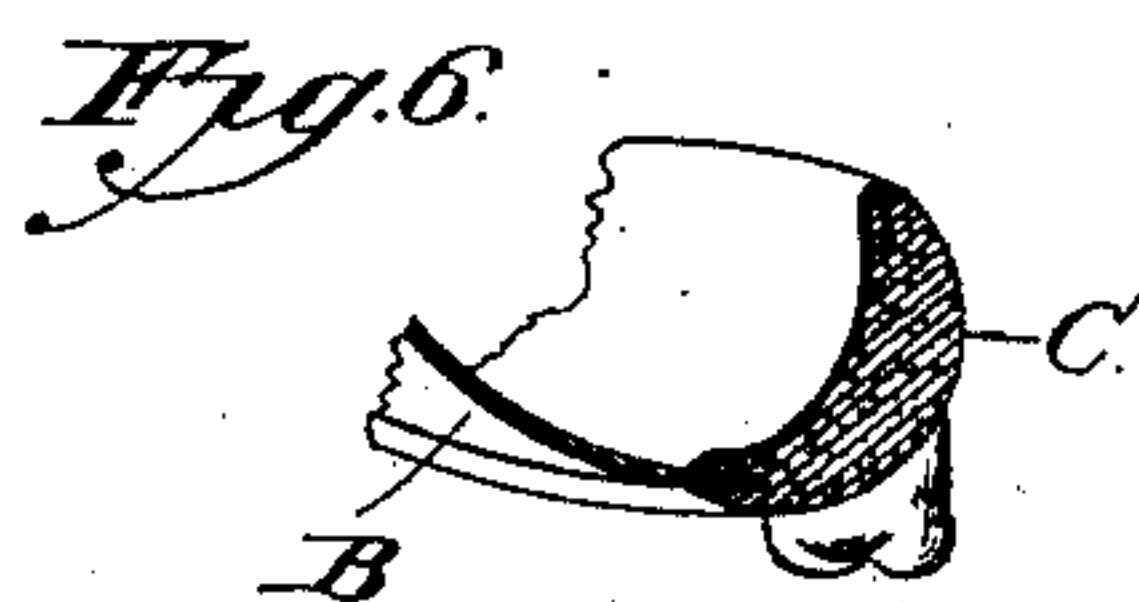
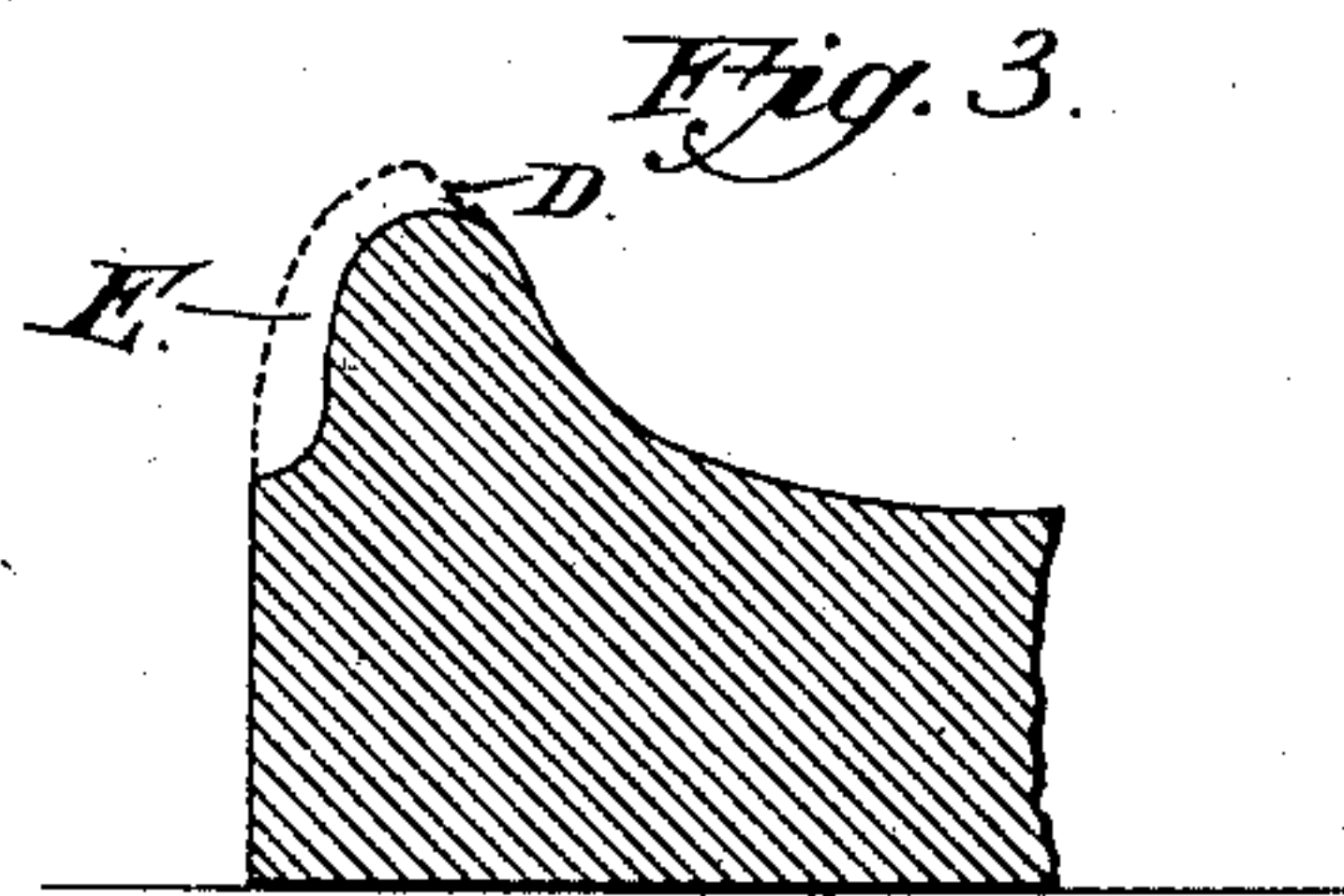
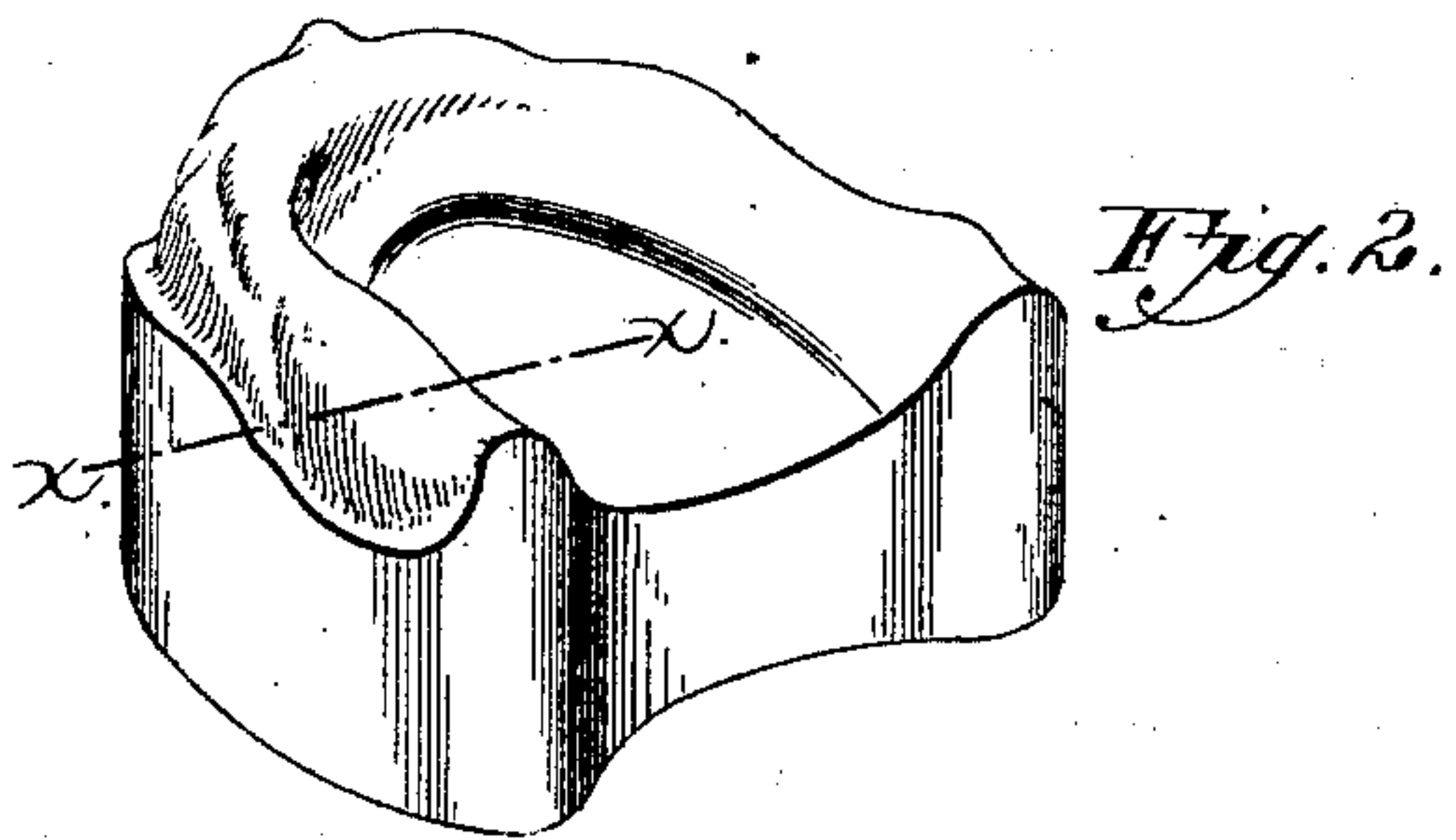
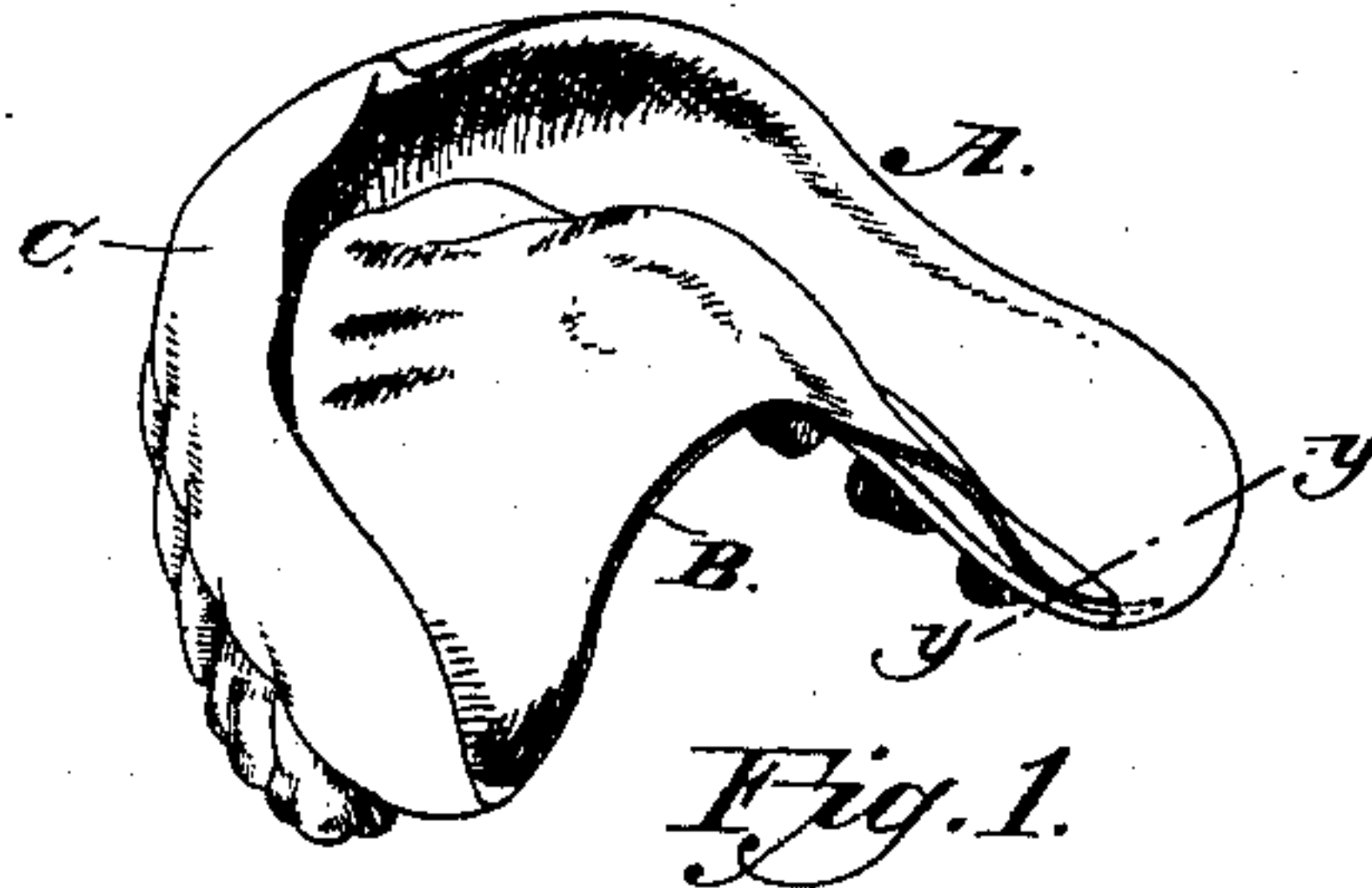


Fig. 4.

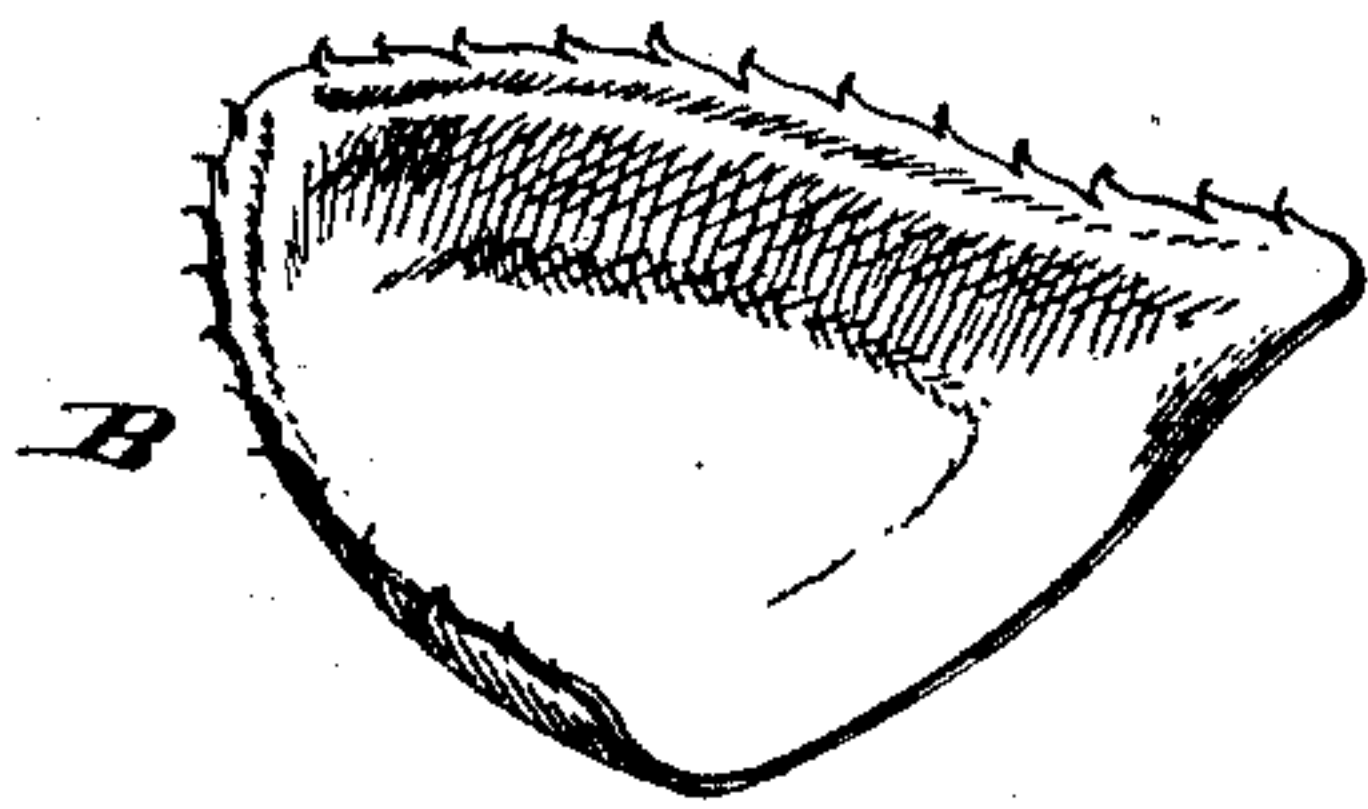
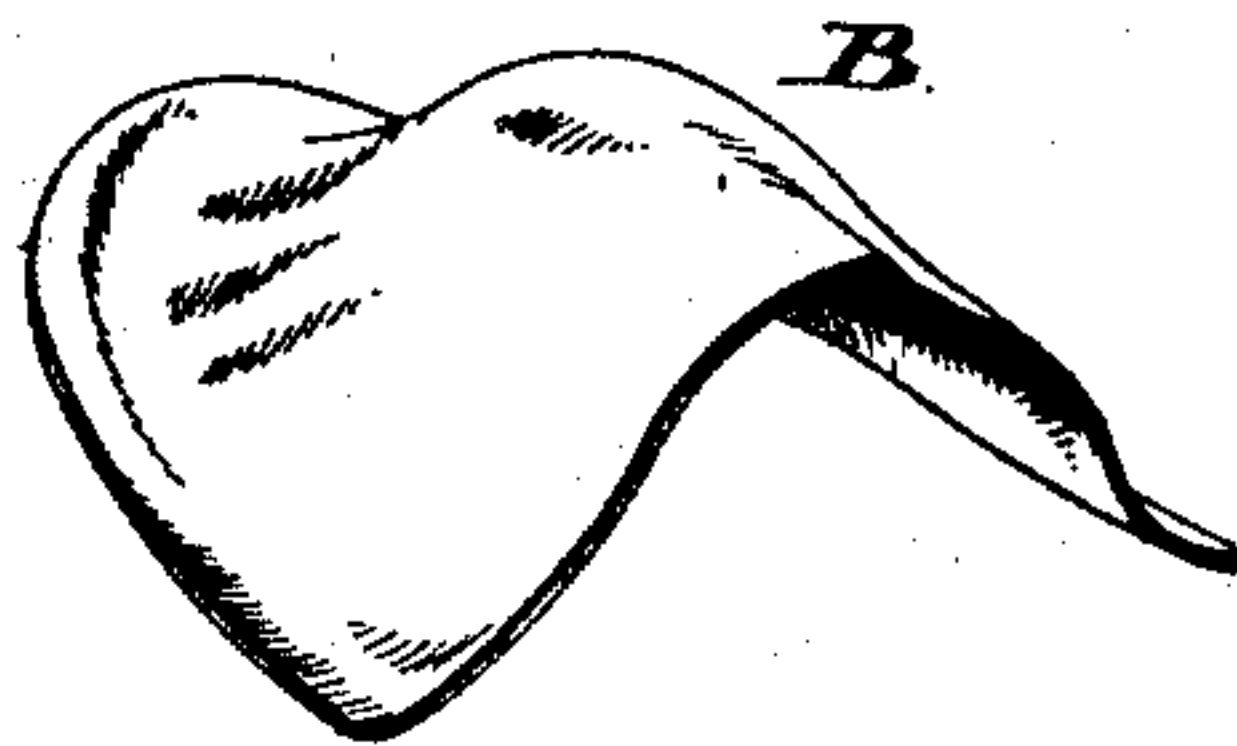


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

ROLLA MINER CHASE, OF BETHEL, VERMONT.

DENTAL PLATE.

SPECIFICATION forming part of Letters Patent No. 371,174, dated October 11, 1887.

Application filed January 13, 1887. Serial No. 224,270. (Model.)

To all whom it may concern:

Be it known that I, ROLLA MINER CHASE, a citizen of the United States, residing at Bethel, in the county of Windsor and State of Vermont, have invented a new and useful Improvement in Dental Plates, of which the following is a specification.

My invention relates to an improvement in dental plates for artificial teeth and processes for making the same; and it consists in a dental plate comprising a metallic plate to cover the roof of the mouth and a plastic base or extension attached to the edges of the metallic plate in the peculiar manner pointed out in the claim, and to which plastic base the teeth are attached.

In the drawings, Figure 1 is a perspective view of a dental plate embodying my improvements. Fig. 2 is a similar view of the model. Fig. 3 is a sectional view taken on the line *xx* of Fig. 2. Fig. 4 is a perspective view of the metallic palatal plate before being completed. Fig. 5 is a similar view of the same when finished and before the plastic base or extension is attached thereto. Fig. 6 is a detail sectional view on line *yy* of Fig. 1.

A represents a dental plate for an upper set of artificial teeth, of which B is the roof-plate, which is made of gold or other suitable metal; and C is the base or extension made of rubber, celluloid, zylonite, or other plastic material, which is attached to the edge of the metallic plate, and is adapted to cover the alveolar ridge, and to which the teeth are attached in the usual manner.

The method of making my improved dental plate is as follows: An impression of the mouth is taken in the usual manner, and from this impression is formed a model, such as is shown in Figs. 2 and 3. The buccal and labial portions of the model are covered with wax and paraffine, filling all undercuts and depressions of the model and beveling and shaping the same, so that the model will draw from the sand in the flask. This wax or paraffine is extended over onto the alveolar ridge of the model and covers the same to a depth of about an eighth of an inch, and the inner edge of the wax or paraffine is beveled, as at D in Fig. 3, the wax being shown at E in the said figure.

The model and the wax or paraffine thereon is coated with shellac varnish, and a die and counter die are made therefrom in the usual manner. A metallic plate, B, is then cut large enough to cover the palatal portion of the model and extend a little over the beveled edge thereof. The plate is then swaged once or twice and the edges trimmed or notched or roughened, and then finally swaged and adapted to the shape of the model. The wax or paraffine is then removed from the model and the plate adjusted to it, and a new rim of wax and paraffine or gutta-percha is formed over the ridge, making a trial-plate, which is articulated and the teeth fitted thereto and waxed up, letting the wax extend onto the plate. The plastic material is then molded to the model and the metallic plate, the edge of the latter being upturned at an angle corresponding to the beveled edge D of the wax, and thereby the material of which the base or extension is composed is attached to both sides of the edge of the plate very firmly, thus avoiding danger of the base or extension becoming broken from the metallic palatal plate.

From the foregoing it will be observed that the teeth are attached to the plastic base or extension at the same time that the latter is secured to the sides of the palatal plate.

A plate thus constructed is very advantageous, and is exceedingly strong. It will be seen that I combine a metallic swaged plate covering, principally, the hard palate or roof of the mouth with any of the various plastic materials. This metallic plate differs from the swaged plates heretofore used, as it only covers the hard palate and a portion of the *alveoli*, while the material used for the continuation of the plate and attachment of the teeth extends over the ridge and up under the cheek and lip, as in an ordinary celluloid or rubber plate. The edge of the metallic plate, turned up as shown, affords a more secure hold for the material used for attaching the teeth and for the sides of the plate.

My invention combines the many desirable points requisite in a plate for artificial teeth—viz., strength, metallic conductivity of heat and cold in the roof of the mouth, thinness, cheapness, perfect adaptability to the under-

cuts and uneven portions of the jaw, and the ease and simplicity with which these plates are made.

Having thus described my invention, I
5 claim—

A dental plate comprising the palate metallic plate A, shaped to fit the entire roof of the mouth, the serrated or notched edge of the metallic plate being upturned at an angle, combined with the gum plate molded upon the upturned edge of the metallic plate, but not extending beyond the said upturned edge, so that

the metallic plate and not the gum plate comes in contact with the roof of the mouth, the said gum plate covering both sides of the upturned edge of the metallic plate, as set forth. 15

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ROLLA MINER CHASE.

Witnesses:

FRED ARNOLD,
J. J. WILSON.