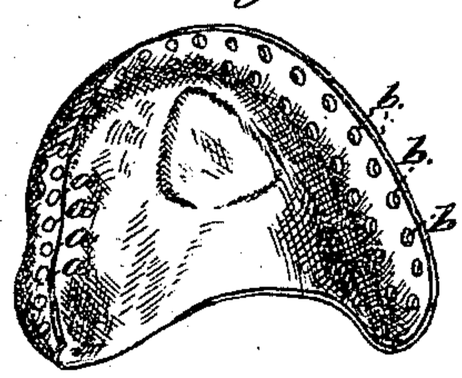
G. F. C. REESE.

Methods of Fastening Artificial Teeth.

No. 144,699. Patented Nov. 18, 1873.

Fig. 1.



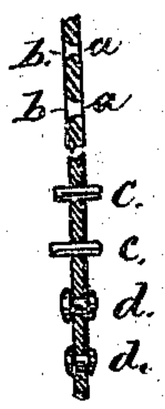
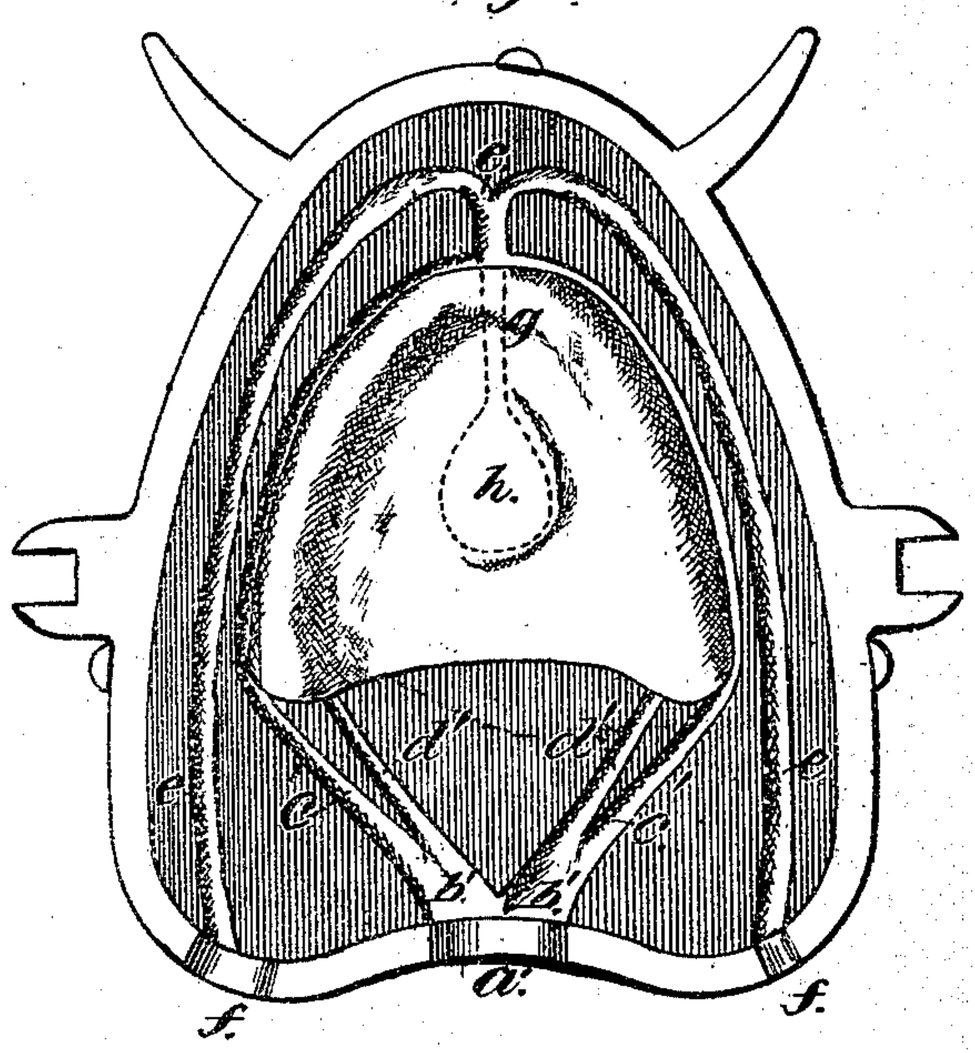


Fig. 2.



Witnesses.

George W. Sinclair

Robert R Sinclair

Inventor.

George F. C. Reese.

UNITED STATES PATENT OFFICE.

GEORGE F. C. REESE, OF BROOKLYN, E. D., NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO ROBERT R. SINCLAIR, OF NEW YORK CITY.

IMPROVEMENT IN METHODS OF FASTENING ARTIFICIAL TEETH.

Specification forming part of Letters Patent No. **144,699**, dated November 18, 1873; application filed September 19, 1873.

To all whom it may concern:

Be it known that I, G. F. C. REESE, of Brooklyn, E. D., State of New York, have invented an Improved Method of Fastening Artificial Teeth to an aluminum dental suction-plate, of which the following is a specification:

My invention relates to an improved method of securing artificial teeth to an aluminum dental suction-plate, by the means hereinafter fully described. By this process I am enabled to fasten the teeth to the aluminum plate with fusible metal, which, under other processes, cannot be made to adhere (if at all) without serious injury to the plate. The oily surface of aluminum rejects the melted metal unless acids or other substances are used to prepare such surface for its adhesion, in which case the acids or other substances gradually eat through the plate and render it worthless.

The process by which I secure artificial teeth to the aluminum dental suction-plate is substantially as follows: After the plate is shaped (by pressing or swaging up until the suction and general conformation are perfect) I perforate the upright sides of the plate, with a very small punch, into two rows of holes, (Fig. 1, *a a a a*,) one row near the outer edge, and the other where the teeth-fastening rests, each hole about a quarter of an inch distant from the next one; then with a bore enlarge the inner side of the holes (Fig. 1, *b b b*) so as to form resting-places for the heads of rivets, to be driven as hereinafter described; then cut a fusible metal wire into quarter-inch lengths, and having placed the plate on the concave side of a metal cast, hammer one of the wire bits thus made into each of the holes until it has flattened on both sides of the plate. The wire filling will then be found to have formed inner and outer bases of fusible metal with which to secure the teeth to the plate. This done, set the teeth in plaster in the usual way. Then take the plate out of the cast until ready to pour the metal. Next cut into the plaster-cast the channels and air-chamber, (shown in Fig. 1,) which prepares the cast for the reception of the metal.

In pouring the metal, hold the flask at such an angle as to run the metal on the base of the teeth, and not directly on the plate, lest the metal-riveted pins should thus be run out. All that then remains to be done is to polish and finish the metal settings.

The explanations of the drawings are as follows:

Figure 1, the plate in course of preparation. *a a a a*, the perforations for metal pins; *b b b b*, bases of holes drilled to receive heads of metal pins; *c c c*, metal pins partially driven; *d d d d*, metal pins completely riveted.

Fig. 2, the plaster cast prepared to receive the melted metal. *a'*, mouth of passage, into which the metal is poured in the direction of the arrows; *b b*, passage-ways for melted metal; *c c*, grooves for metal to run to form outer rim; *d d*, grooves for metal to run to form inner rim; *e e e*, channels for air expelled from outer rim passages by run of metal; *f f*, outlets for expelled air; *g*, passage-way for expelled air; *h*, receiver in plaster cast for air expelled from *g* passage.

I do not claim as my invention the fastening of artificial teeth on an aluminum plate by means of fusible metal, for this, I am aware, is not new.

I claim—

The fusible metal rivets inserted and riveted in the base-plate to aid in fastening the teeth thereto, all as described.

GEORGE F. C. REESE.

Witnesses:

GEORGE W. SINCLAIR,

ROBERT R. SINCLAIR.