

M. A. Boughton

Forming Air Chambers in Dental Plates.

No. 111,429.

Patented Jan. 31, 1871.

Fig. 1.

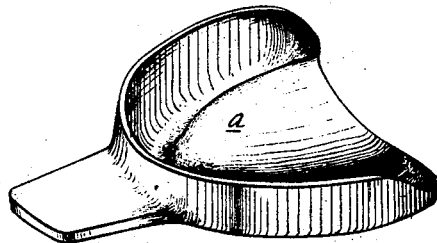


Fig. 3.



Fig. 2.

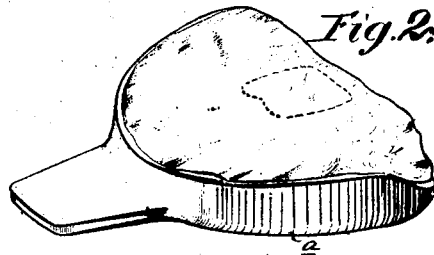


Fig. 4.

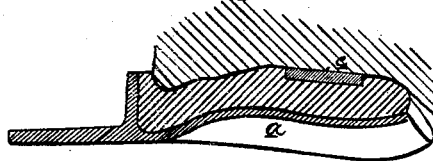


Fig. 5.



Fig. 6.



WITNESSES {

Wm. A. Steel
John Parker

M. A. Boughton
by her atty.
Howe and son

United States Patent Office.

MARY ANN BOUGHTON, OF NORWALK, CONNECTICUT.

Letters Patent No. 111,429, dated January 31, 1871.

IMPROVEMENT IN THE MODES OF FORMING THE AIR-CHAMBER IN DENTAL-PLATES.

The Schedule referred to in these Letters Patent and making part of the same.

I, MARY ANN BOUGHTON, of Norwalk, county of Fairfield, State of Connecticut, have invented an improved mode of forming the Air-Chamber in Plates for Artificial Teeth, of which the following is a specification.

Nature and Object of the Invention.

My invention consists of a mode (too fully explained hereafter to need preliminary description) of forming the air-chamber in plates for artificial teeth by the use of a small block of wax or equivalent material, which is caused to adhere to the roof of the mouth while the cast of the latter is being taken.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of the instrument commonly used by dentists for holding a mass of plaster of Paris within the mouth while the impression of the upper portion of the latter is being taken;

Figure 2, the same, filled with a mass of soft plaster of Paris;

Figure 3, a perspective view of a small block of wax or other material used in carrying out my invention;

Figure 4, a sectional view, illustrating the method of taking the cast in accordance with my invention;

Figure 5, a sectional view of the plaster-cast and die formed on the same; and

Figure 6, a sectional view of the die, and mouth-plate to which the teeth are to be secured.

General Description.

Artificial teeth are commonly secured to metal or hard-rubber plates, by which they are retained in their proper positions.

The plate for an upper set of teeth is fitted against the roof of the mouth, and firmly attached thereto by means of a chamber or concavity formed on the upper side of the plate, and from which the air is exhausted in adjusting the said plate to its place.

It is necessary that the plate should be of the same shape as and fit accurately to the roof of the mouth, in order that it may be attached to the same, as above described.

To obtain such an accurately-fitting plate, it is usual to take an impression or cast of the interior of the upper portion of the mouth in plaster of Paris, a mass of the latter, suitably prepared, being placed in the concave portion *a* of the holder or instrument similar to that shown in the drawing, and then introduced into and held against the upper portion of the mouth until it "sets" or hardens.

From this cast a metal die, *x*, fig. 5, is taken, and the mouth-plate *Y* is swaged or otherwise formed on this die, as shown in fig. 6; or, where a hard-rubber

plate is required, a suitable mold, instead of a die, is formed from the plaster-cast.

The air-chamber *b* in the plate has been generally formed by cutting a recess in the plaster-cast, at what is judged the proper point, so that a corresponding projection might be formed on the die or mold *X*, and consequently a recess similar to that of the cast, in the plate.

The same effect has also been produced without recessing the cast, by securing a small block or plate to the die or mold in such a position that a corresponding recess would be formed in the plate at about the proper point.

The objections to the above methods of forming the air-chamber are, the extra amount of work required, and the fact that it is a matter of extreme difficulty to place the air-chamber at the exact point which will best suit the wearer of the teeth and plate, and enable the latter to be held in its place with the least degree of effort.

I have overcome these objections by the use of a block, *c*, of wax or other material of the size and shape of the required air-chamber.

This block is caused to adhere to the roof of the mouth at the exact point where it is desired to have the air-chamber in the plate, after which the cast of the mouth is taken in the usual manner, the plaster receiving the impression of the block of wax as well as of the roof of the mouth, as shown in fig. 4.

The succeeding operations of forming the plate with its air-chamber from the plaster-cast thus recessed, are precisely the same as before described in connection with the usual process.

I prefer to cut or stamp the blocks from sheet wax of proper thickness, coated upon one or both sides with glue, white of egg, and gum-Arabic; but it should be understood that I do not confine myself to the use of wax only, as any other adhesive material might be used for the purpose.

Claim.

The mode, substantially as herein described, of forming the air-chamber in plates for artificial teeth, that is to say, by placing the adhesive block *c* upon the roof of the mouth, and then taking the impression of the latter.

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

MARY A. BOUGHTON.

Witnesses:

WM. A. STEEL,
F. B. RICHARDS.