J. A. Cleveland,

Cell for Dental Plates.

No. 7,451. Patented June 25, 1850.

Fig. 2.

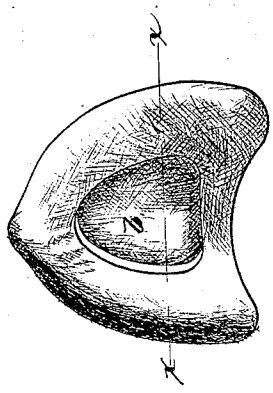
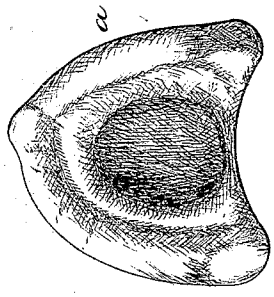


Fig. 3.



Fig. 1.



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

JNO. A. CLEVELAND, OF CHARLESTON, SOUTH CAROLINA.

SETTING ARTIFICIAL TEETH BY ATMOSPHERIC PRESSURE.

Specification of Letters Patent No. 7,451, dated June 25, 1850.

To all whom it may concern:

Be it known that I, JOHN A. CLEVELAND, of Charleston, in the district of Charleston and State of South Carolina, have invented a certain new and useful Improvement in the Mode of Affixing Artificial Teeth by Atmospheric Pressure, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawing, in which—

Figure 1 is a view of the under side of the plates. Fig. 2 is a plan of the upper side next the palatine arch. Fig. 3 is a section through the plates and air chamber at the line *x x* of Fig. 2.

Heretofore there has been a difficulty in the atmospheric plates for artificial teeth on account of a want of surface bearing, and in most of them there are small apertures over which the gum fits and on which the stability of the teeth depends; in plates of this kind the portion of the membrane over the small apertures is apt to strangulate and slough off rendering them very disagreeable to the wearer and the whole apparatus is unsteady. To obviate these difficulties and some others I form a plate covering the whole palatine arch and alveolar ridge as shown at (*a*) in the figures. The greater portion of the base covering the palatine arch consists of two plates, the upper one of which, next the arch having a large sized opening (*b*) in it, formed according to the requirements of the case; around the edge of which on the lower side a round wire is soldered, the object of which is to prevent the thin edge of the plate from irritating the mucous membrane. The lower plate (*c*) is somewhat larger than the opening (*b*) and leaves a space between the two plates, all around the hole forming an air chamber (*e*), see Fig. 3. This lower plate (*c*) is raised up in the center at (*f*) so as to come nearly to a level with the top plate, at the center of the opening through it. The edge of the top plate around the orifice is thickened by adding a wire which is soldered to the lower edge, so as not to have any sharp edges to lacerate the membrane of the mouth at that point. When this plate is fitted to the mouth it rests perfectly steady and does not irritate the parts in contact with it, a large surface being included, and a perfect annular air chamber formed.

The device that most nearly approximates to mine is that of Gilbert in which there is a depression in the center of a plate that like mine covers a portion of the palatine arch, but this when the air is withdrawn does not have an air chamber, the whole of the concavity being filled with the mucous membrane and consequently there is less security in the attachment than in mine, with the large annular air chamber (*e*) in it.

Having thus fully described my improvements in sustaining plates for the attachment of artificial teeth, to the mouth, what I claim therein as new and which I desire to secure by Letters Patent, is—

The air chamber (*e*) constructed and arranged substantially as hereinabove set forth and for the purposes described.

JNO. A. CLEVELAND.

Witnesses:

EDWARD EVERETT,

B. H. MORSELL.