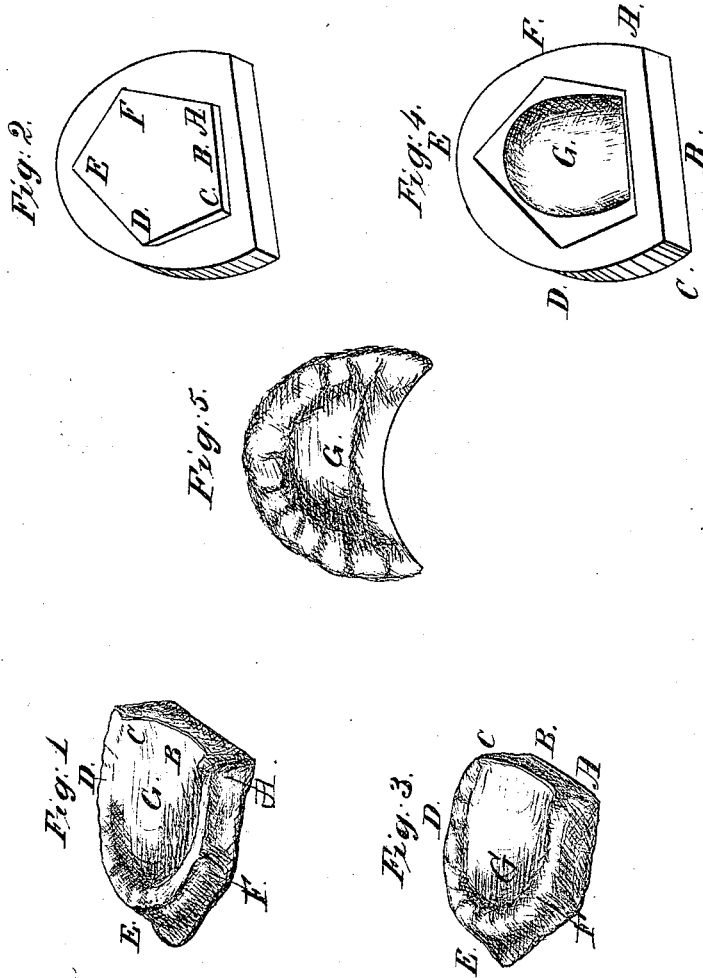


*L. Gilbert,
Dental Mold.*

N^o 5,447.

Patented Feb. 15, 1848.



UNITED STATES PATENT OFFICE.

LEVI GILBERT, OF NEW HAVEN, CONNECTICUT.

PLATE FOR ARTIFICIAL TEETH.

Specification of Letters Patent No. 5,447, dated February 15, 1848.

To all whom it may concern:

Be it known that I, LEVI GILBERT, of the town and county of New Haven, in the State of Connecticut, have invented a new and improved mode of applying atmospheric pressure to gold or other plates used in dentistry for the purpose of inserting full or part sets of upper teeth in the human mouth; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, which make part of this specification, in which—

Figure 1, represents the plaster pattern of the male swage; Fig. 2, represents the plaster patterns of the male and female swages united. Fig. 3, represents the male swage, (of metal,) Fig. 4, represents the female swage, (of metal,) Fig. 5, represents the upper surface of the plate after being swaged, ready for use.

The nature of my invention consists in forming a single plate of gold or other material, with a chamber or cavity in the central part, by swaging, so that on applying the plate to the roof of the mouth and extracting the air from the chamber with the tongue, (which operates as an air pump;) the plate will be pressed against the roof of the mouth, so as to adhere with so much tenacity that it will not be displaced by using the teeth in the ordinary way for masticating food of any kind.

The plate of gold, or other material, is made and swaged in the common way, so as to make an exact fit for the roof of the mouth, (except that part which forms the chamber or cavity wherein the vacuum is to be formed by the aid of the tongue acting as an air pump,) pressing closest immediately around the chamber.

I apply the atmospheric pressure by means of a chamber or cavity made in the central part of the upper surface of the plate, as at G, Fig. 5, (or, two or more chambers may be made in the central part of the plate, if deemed more convenient, by the operator in any case.) The plate being placed in the mouth, the patient is required to draw the air from the chamber by using the tongue as an air pump, when the atmosphere will press up against the lower surface of the plate opposite to the vacuum thus formed, causing the plate to remain firm in the mouth without causing the least irritation, so that the

patient may use his teeth for all purposes, as masticating his food, &c., and yet the plate may be removed from the mouth at any time, at the option of the patient, with the utmost ease and facility, by the aid of the tongue. By drawing out all the air, so as to form a perfect vacuum, the pressure of the atmosphere causes the plate to adhere to the roof of the mouth with the greatest tenacity, while by drawing out less, the plate will be pressed less firmly, so that the patient can suit his or her convenience at any time, at pleasure, simply by the aid of the tongue.

The teeth may be attached to the plate by any convenient method. I would recommend that the swages be made in the following manner, to wit. Take the impression of the upper part of the mouth with wax, in the usual way; and in the central part of the surface of this impression make a chamber or cavity, as seen at G, Fig. 4, by excavating the wax. Place this impression of wax, thus prepared, within a hoop or ring of convenient size, and pour plaster upon it, to form the plaster pattern, Fig. 1, of the male swage, brush this pattern with strong soap suds, place it again in the hoop or ring in a proper position, and pour on plaster to make the plaster pattern for the female swage, separate them and brush them over with shellac varnish, and mold then in sand and cast the metal swages, Figs. 3, and 4, in the common way. The upper or male swage, Fig. 3, I make of zinc, and the female swage I make of lead.

To make an exact fit, I would recommend that the plaster pattern of the male swage, be reduced at the points A, B, and C, Fig. 1, as those points appear in Fig. 3, before molding for the male swage, which will obviate a difficulty frequently met with at those points. I would also recommend that the male swage be made in a pentagonal form, as seen Fig. 2, the angles A, C, D, E, F, operating as guides, which are essentially necessary to give the plate a correct form.

The advantages of my invention over all other methods now used consist, in part, in the simplicity of the construction of the plate; being a single plate with a smooth surface, it can be made at much less expense, kept clean with less difficulty, and will cause no irritation to the mouth.

The form and situation of the chamber is such that the pressure of the atmosphere

may be varied at pleasure by the use of the tongue only, and while it may be sustained in the mouth with a pressure sufficient to render the teeth firm enough for all purposes
5 of masticating food, &c., it may be removed from the mouth with the utmost ease and facility. Thus rendering it cheaper, more serviceable, more comfortable, and more convenient in every particular.
10 I am aware that plates have been made with chambers, by making the plate double and forming the vacuum between the two parts of the plate by means of perforations in the part which comes in immediate con-
15 tact with the roof of the mouth. Also that plates have been made by cutting diagonal lines on the surface of the plate which come in contact with the roof of the mouth, to increase the extent of the surface of contact,

and thereby increase the adhesion of the 20 plate; but I do not claim either of these. But

What I do claim as my invention and desire to secure by Letters Patent is—

The application of atmospheric pressure 25 to gold, or other, plates used in dentistry; the plate being single, of a smooth surface, and a chamber or cavity sunk in the central part of the upper surface of the plate, in which a vacuum can be readily formed by 30 the use of the tongue, as an air pump; constructed and operating substantially as herein described.

LEVI GILBERT.

Witnesses:

R. FITZGERALD,
M. S. BEACH.