

(No Model.)

H. H. SCHUHMAN.
DENTAL PLATE.

No. 535,225.

Patented Mar. 5, 1895.

Fig. 1.

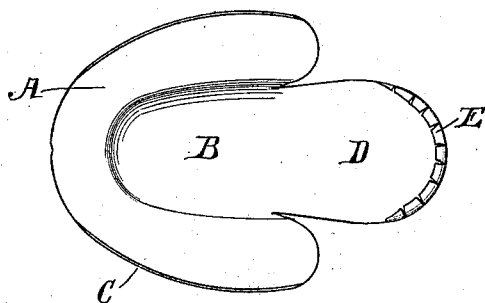


Fig. 2.

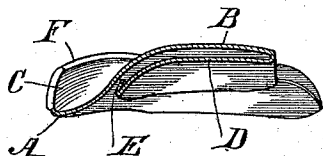


Fig. 3.

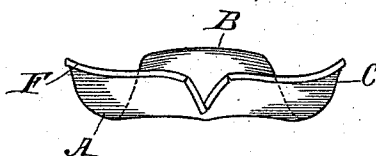


Fig. 4.

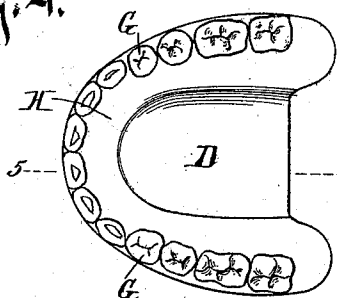
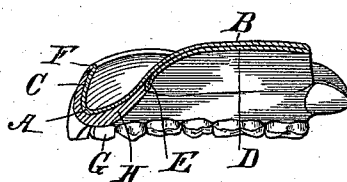


Fig. 5.



Witnesses.

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HENRY H. SCHUHMAN, OF HARTFORD, WISCONSIN.

DENTAL PLATE.

SPECIFICATION forming part of Letters Patent No. 535,225, dated March 5, 1895.

Application filed October 4, 1894. Serial No. 524,901. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. SCHUHMAN, of Hartford, in the county of Washington and State of Wisconsin, have invented a new and useful Improvement in Dental Plates, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to improvements in metal dental plates on which teeth are mounted by means of vulcanized rubber, celluloid, or similar material.

The object of the invention is, by the means and in the manner herein shown and described, to provide a dental base plate easily and inexpensively made, stronger, more enduring and satisfactory than dental base plates heretofore in use have been; which object is attained by means of an integral metal base plate including a flap lying centrally upon and secured to the body of the plate.

In the drawings, Figure 1, is a view of the under side of a metal plate, as primarily swaged out of sheet metal, preferably of aluminum, intended ultimately for mounting thereon teeth for the upper part of the mouth. Fig. 2, is a central longitudinal section of the same plate after the rubber-securing tongue or flap, has been folded inwardly opposite the lingual surface of the plate. Fig. 3, is an elevation of the plate from the front. Fig. 4, is an under side view of the completed plate with the teeth mounted thereon. Fig. 5, is a medial longitudinal section of the completed plate, on line 5—5 of Fig. 4.

The metal base plate, in my improved dental plate, is preferably of aluminum, because of its many qualities which adapt it for this purpose, and especially for my improved plate, because of its lightness, its capability of being readily and successfully swaged and because opposing parts of the sheet of metal from which the plate is formed, can be made successfully to adhere by pressure in a mold. The metal plate is readily prepared by cutting it in suitable form from a sheet of the metal and then swaging it in a mold or under proper dies into the form shown in Fig. 1.

The general conformation of the plate is substantially that of metal plates heretofore used in denture, especially in that it has the ordinary alveolar ridge A, the thereto related

palatal member B of the plate, and the labial ridge C. Besides these my improved plate is provided with the rubber-securing tongue or flap D. This flap D is formed integrally with the plate, at the rear of the palatal member B and is substantially of the same form though somewhat wider and longer than the member B, being originally (as shown in Fig. 1) in reverse position thereto, and being in the process of the manufacture of the dental plate folded over inwardly, substantially on the line of the posterior arch of the plate against the palatal member B covering it and lying upon or overlapping, at its edges the sides of the alveolar ridge A. A narrow margin of the front end of the flap D is preferably turned over inwardly forming an irregular ridge or border E. The margin of the flap is advantageously incised or notched preparatory to folding it over, so that the parts of the fold, will not when turned inwardly wrinkle up or overlap each other. After this flap D has been turned inwardly opposite to the palatal member B in substantially the manner shown in Fig. 2, the plate is again swaged under dies and the flap is pressed firmly against and made to adhere to the palatal member and the sides of the alveolar ridge. The contacting faces of the flap and plate, being of soft metal are readily made, under pressure, to adhere or weld firmly together in the manner shown in Fig. 5. The edge or margin of the labial ridge C, is also turned or folded over outwardly forming a recurved flange or border F. Before proceeding further the margin of the flap D that has been pressed against the alveolar ridge, is released and slightly raised therefrom, so as to leave a little vacant space around the edge of the flap, between it and the alveolar ridge, as shown at Fig. 2, and as also seen in Fig. 5. When the metal plate has been so prepared, the teeth G, inserted in rubber, celluloid or similar material H, are placed in proper position on the metal plate, and the rubber, celluloid or other teeth-securing material is made to extend to or slightly underneath the edge of the flap around that portion of it that lies on the alveolar ridge, and also the rubber or teeth-securing material is extended on the outside to and so far as it can conveniently be done underneath the recurved border E around the edges of the labial ridges. The

plate and teeth thereon in the teeth-securing material, are then placed in a dental flask, substantially such as is in common use, and is subjected to such heat, as suitably to reduce the rubber or other teeth-securing material to such condition, that it enters the interdental spaces, and also under the edge of the flap D and within the border E in which spaces and positions it is suitably vulcanized or hardened and sets on removing it from the heat to which it has been subjected. The plate is then removed from the flask, and it will be found that the rubber or other tooth securing material has not only entered the spaces between and set firmly around the teeth, but has also adhered to the surface of the alveolar ridge, and has also at its edges, entered beneath and filled the space between the flap D and the alveolar ridge, and also has entered and filled the spaces within the recurved borders E. By this means the edges of the rubber or teeth-securing material are covered and protected against any tool or thing that might otherwise get beneath the edge of the

rubber and lift it away from the metal plate. Thereupon the edges of the metal both about the flap D and the edges of the borders E, that overlie the rubber, are abraded and polished off so as to be smooth and vanish on to the rubber. This construction forms a strong, smooth and enduring article well adapted for the purposes of denture.

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

A metal dental base plate, comprising a plate swaged from sheet metal having an alveolar ridge, a palatal member, labial ridges, and a flap integral with the palatal member, upon which it is folded so as to be opposite to and cover that member, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY H. SCHUHMAN.

Witnesses:

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LOUIS PORTZ.