(Model.)

E. RAUZEROT.

DENTURE.

No. 245,862. Patented Aug. 16, 1881.

Fig. 5.

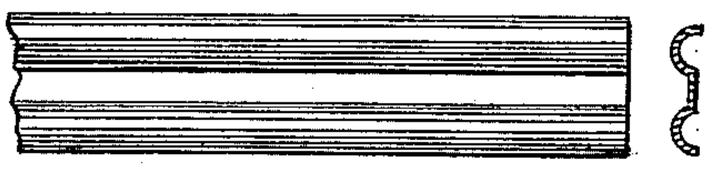


Fig. 1.

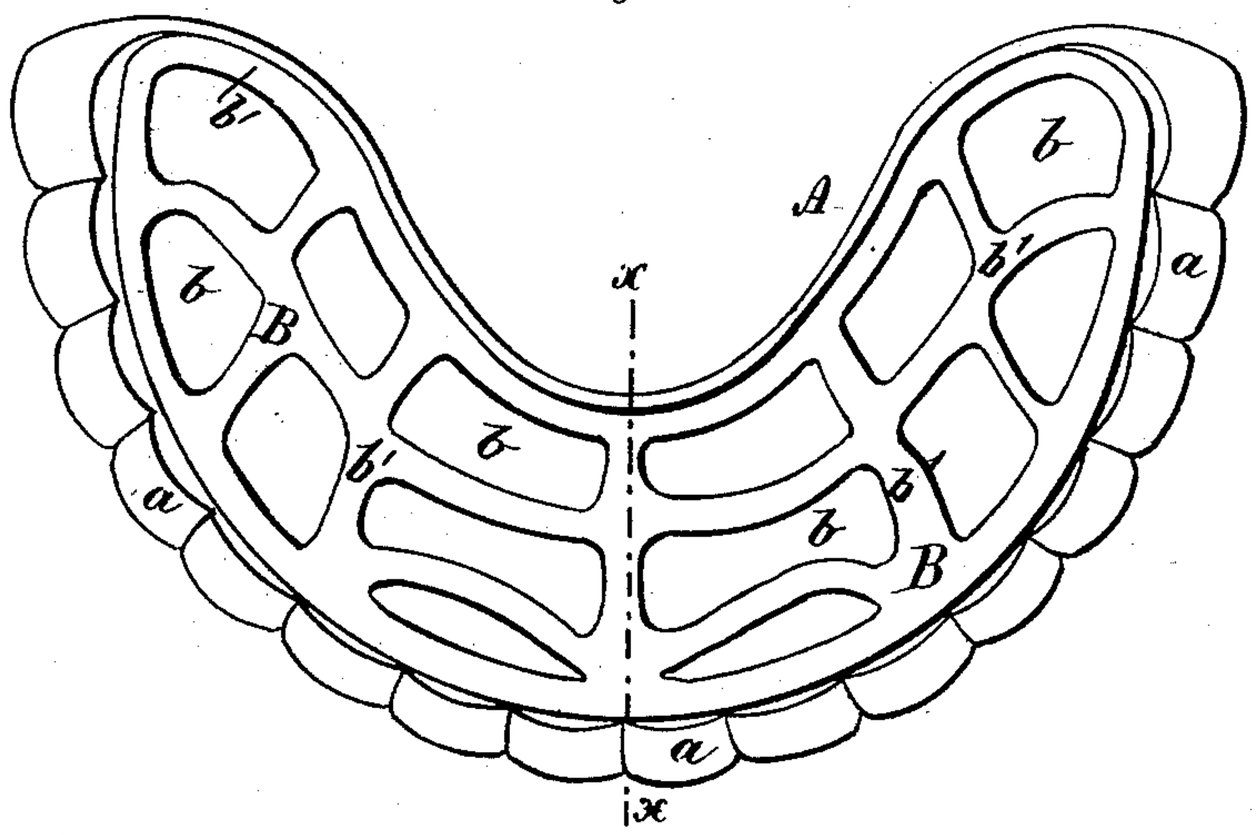


Fig. 2.

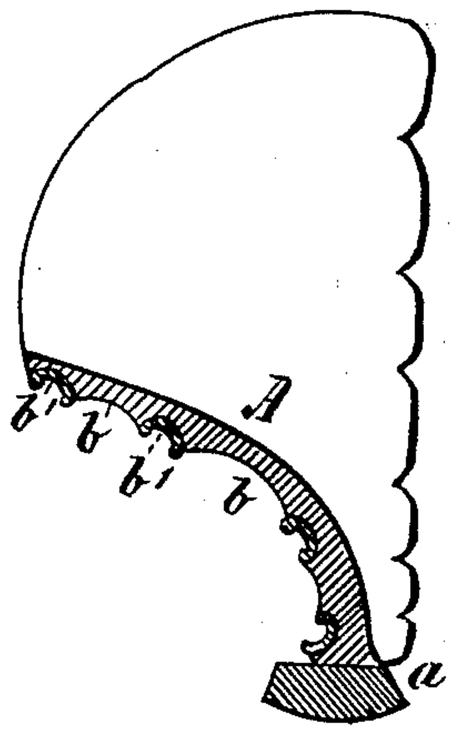


Fig. 3.

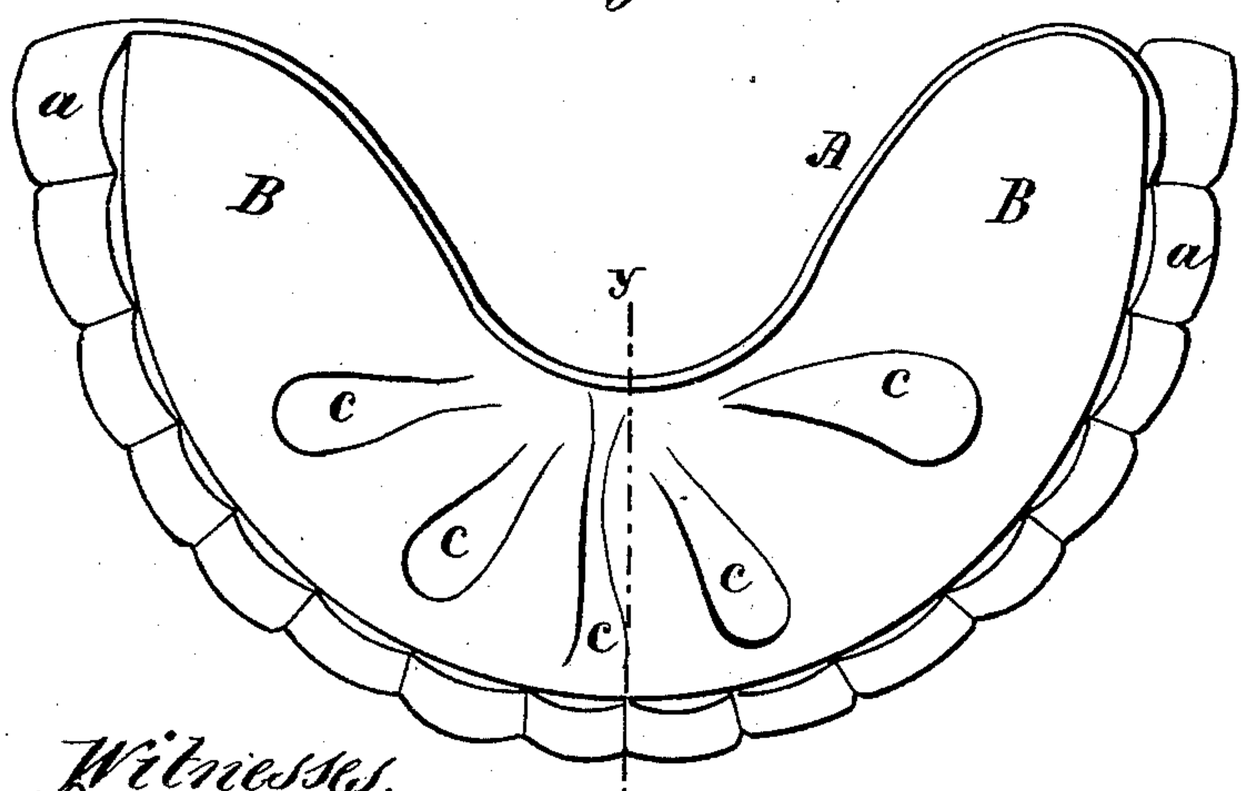
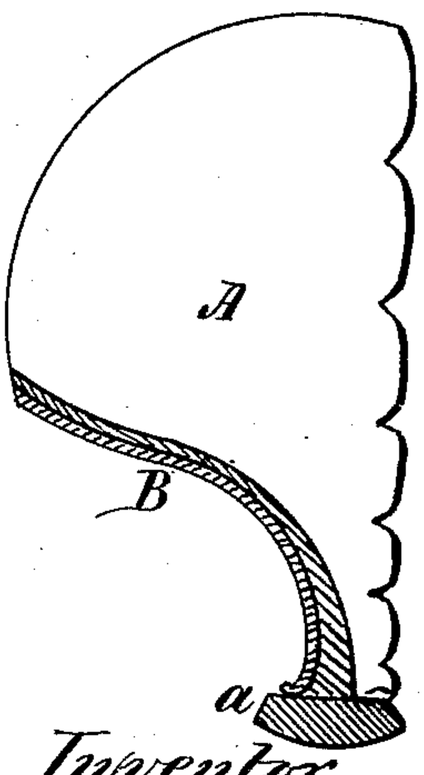


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

ETIENNE RAUZEROT, OF PARIS, FRANCE.

DENTURE.

SPECIFICATION forming part of Letters Patent No. 245,862, dated August 16, 1881.

Application filed October 7, 1880. (Model.) Patented in France March 9, 1880.

To all whom it may concern:

Be it known that I, ETIENNE RAUZEROT, a citizen of France, residing at Paris, in the Department of the Seine and Republic of France, have invented certain new and useful Improvements in the Construction of Dentures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in the construction of dentures, either partial or full; and it consists, essentiallly, in the use of a skeleton metallic plate having a series of arched openings or panels forming a series of ribs in combination with the usual base, as hereinafter fully described, and shown in the accompanying drawings, in which—

Figures 1 and 2 represent, respectively, a plan view and a section, on line *x x* of Fig. 1, of a full denture constructed according to my invention. Figs. 3 and 4 are like views showing a full denture as heretofore constructed; and Fig. 5 shows a partial denture or plate constructed according to my invention.

The construction of dentures has long been a subject of numerous researches, having always presented serious difficulties, from the fact that not only is lightness combined with solidity a primary requisite in a denture, but the various parts must necessarily conform to the gums and palate of the person using it to afford comfort and ease in use.

In order that my invention may be better understood, I have illustrated in Figs. 3 and 4 a denture as heretofore constructed, the former being a plan view, the latter a section on line *y y* of the former. These dentures are composed of teeth *a* mounted in a base, A, of india-rubber, celluloid, or other suitable material covered by a plate, B, either of gold, platinum, or other metal. It will be observed that this strengthening-plate B consists of a blank of solid sheet metal difficult of application, inasmuch as it is necessary that it should conform to the shape or undulations *c* of the base A, the latter being obtained in the usual manner from the mouth of the person that is to use the denture. To fit this plate accurately to the shape of the base is not only a difficult piece of work requiring an expert workman, but can never be accomplished thoroughly when the mold has been well taken, for the reason that the plate of sheet metal cannot be made to adapt itself to the undulations of various degrees of said base. A result contrary to that sought is obtained, because the plate B does not uniformly adhere to the base A, producing pain to the wearer, and when strain is applied either this plate or the base has to give, resulting in the fractures so common in this class of dentures.

Instead of using a re-enforce or strengthening plate, B, of solid sheet metal, I employ a paneled plate—that is to say, a plate having numerous apertures *b* forming ribs or partitions *b'*. These apertures may be made of any desired shape or configuration; but in order to better adapt the plate B to be fitted accurately to the base A, I form these apertures in such manner that the ribs or partitions *b'* will, as nearly as possible, follow the outer curvatures of the base A, producing a plate of great lightness, while the curvilinear connecting-ribs, being narrow, not only afford strength, but adapt themselves to the slightest irregularity of the surface of said base. Another great advantage lies in the fact that the base, when fitted to the plate, will form a setting for the latter around each aperture *b*, and in practice I form a bead or rib, b^2, on the edges the apertures, as hereinafter described. I thus obtain a denture of greater strength, lighter, and better fitted to the mouth of the person using it than it is possible to obtain by the old method of construction, while the usual causes of pain to the wearer and fracture of one or the other part of the denture are averted.

From what has been said above it will be readily seen that the application of the principle may be applied to partial dentures or to dentures for the lower jaw. In the latter case, instead of using the usual flat plate, I can employ a ribbed plate or band, as shown in Fig. 5.

Besides the more valuable advantages above enumerated, I am also enabled to effect a saving in the cost of manufacture, and in practice

I have adopted the following method: The plates B are stamped out from the sheet metal in given sizes, and by means of punches adapted to said given sizes the apertures *b* are punched out, which may be done by either punching out each aperture separately or by punching out all the apertures simultaneously, and by means of chasing-tools or other suitable tools I form the ribs b^2 upon the edges of the narrow partitions, and, finally, by means of pliers or other suitable tools, I shape the partitions *b'* to fit the varying undulations of the base A, which may thus be effected more speedily and with great precision.

It will be readily seen from what has been said above that this novel construction of denture-backing may be employed either for whole or partial dentures, employing therefor any of the well-known metals and materials.

Having fully described my invention, what I desire to claim and secure by Letters Patent is—

1. In a denture, the combination, with the dental plate, of a flexible metallic backing-plate, B, having the openings *b* and partition ribs or web *b'*, substantially as described, for the purpose specified.

2. The combination, with the dental plate, of the flexible backing or metallic plate B, provided with a series of openings or panels, *b*, the partitions *b'* of which are grooved or channeled or provided with a bead upon their edges, substantially as described, and constructed as specified.

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

ETIENNE RAUZEROT.

Witnesses:

ROBT. M. HOOPER,

E. PAGES.