

E. TELLE.
DENTAL PLATE.
APPLICATION FILED JUNE 24, 1908.

909,038.

Patented Jan. 5, 1909.

Fig. 1.

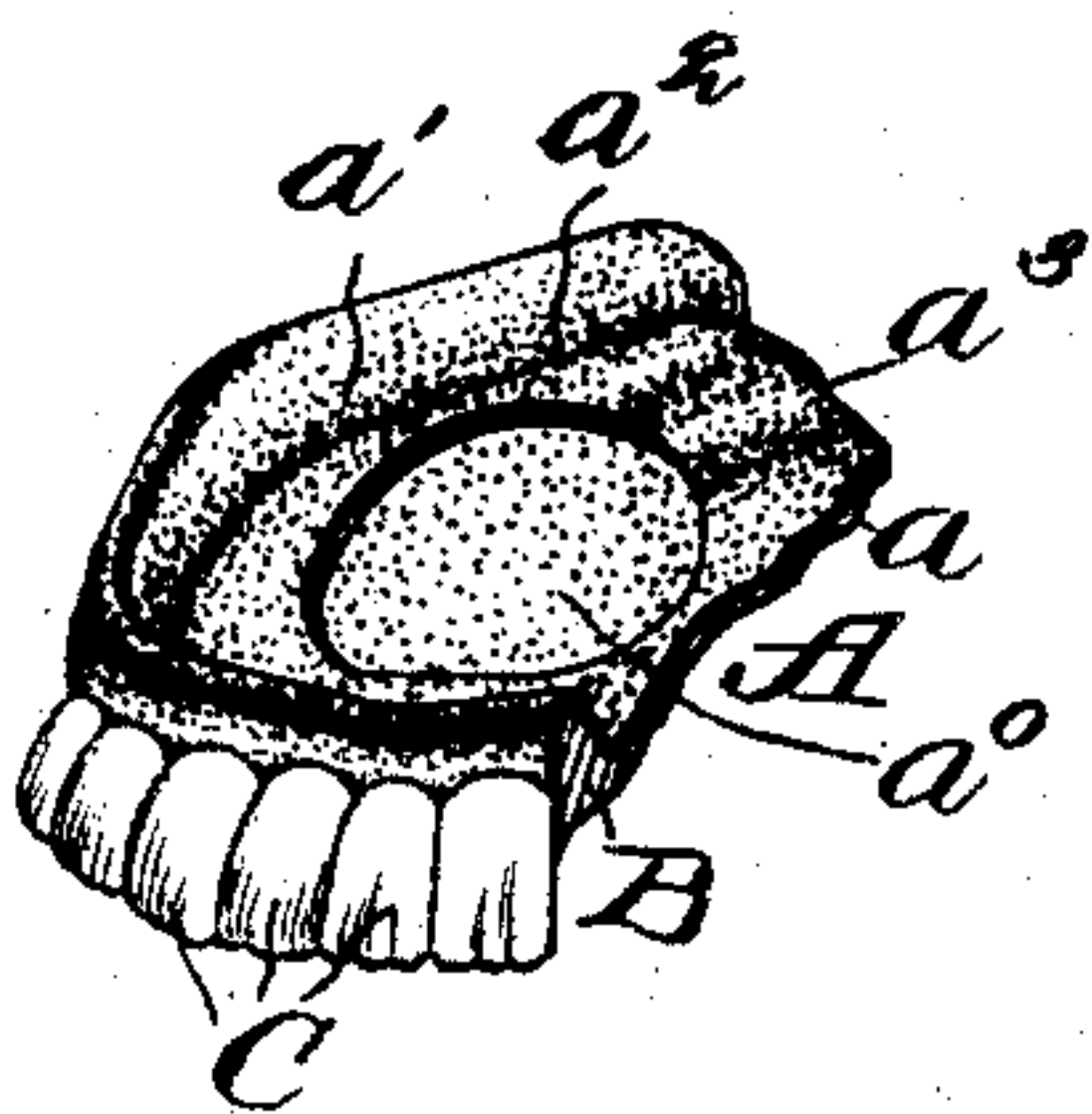


Fig. 2.

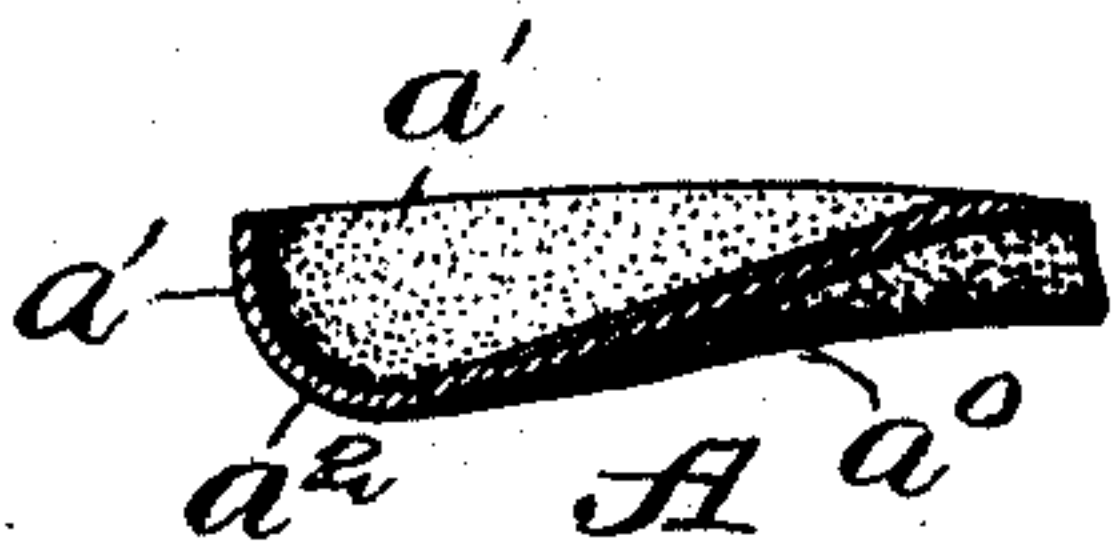


Fig. 3.

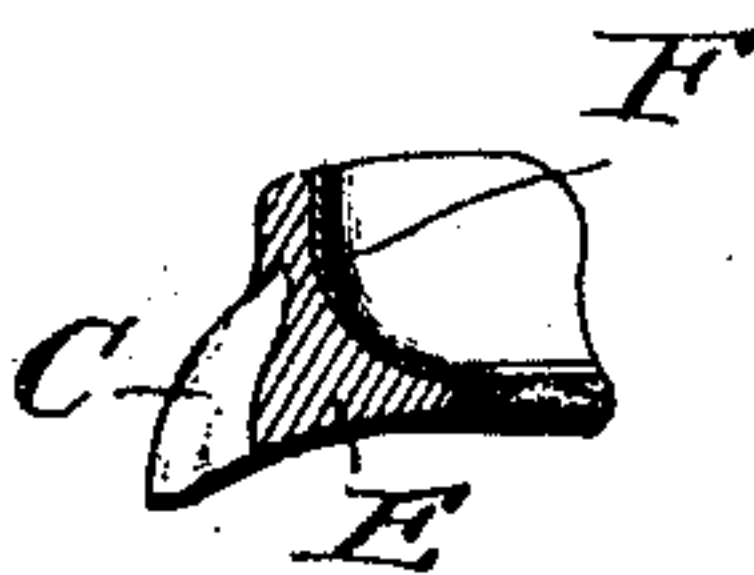
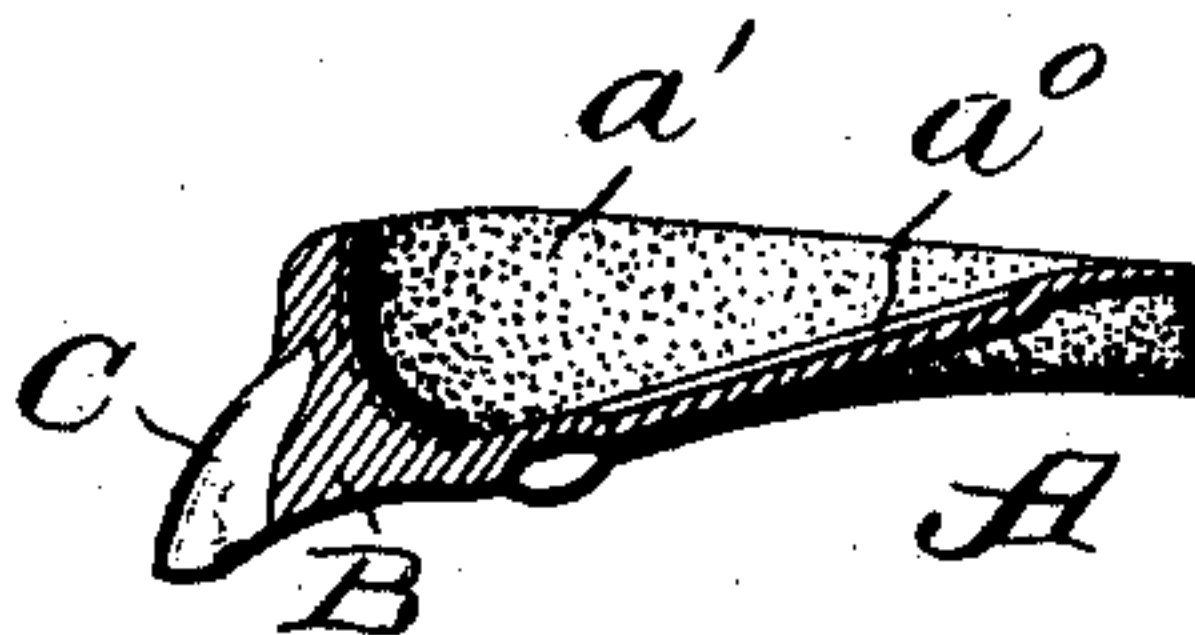


Fig. 4.



Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWIN TELLE, OF NEW ORLEANS, LOUISIANA.

DENTAL PLATE.

No. 909,038.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Original application filed March 26, 1908, Serial No. 423,341. Divided and this application filed June 24, 1908.
Serial No. 440,187.

To all whom it may concern:

Be it known that I, EDWIN TELLE, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Dental Plates; 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.

My invention relates to improvements in dental plates, and it consists primarily in providing a thin and more or less flexible plate proper, which is fitted to the shape of the mouth of the prospective wearer, and to which the teeth are subsequently attached, after the fitting referred to, as will be hereinafter more fully described.

This application is a division of my application for the hereindescribed method, filed March 26, 1908, Serial No. 423,341, entitled "Dental plates and methods of manufacturing same," allowed June 8, 1908.

My invention will be understood by reference to the accompanying drawings, in which the same parts are indicated by the same letters throughout the several views.

Figure 1 is a perspective view of a plate adapted to carry a full set of teeth, parts being broken away. Fig. 2 is a detail showing a portion of the plate before the teeth are attached. Fig. 3 is a sectional view of the wax pattern carrying the teeth. Fig. 4 is a sectional view showing the segment carrying the teeth before it is attached to the plate proper. Fig. 5 is a sectional view showing the teeth segment attached to the plate, and the whole ready for use.

A represents the plate proper, which is preferably made of thin flexible celluloid or other suitable material, which plate is fitted to the mouth of the wearer, before the segment carrying the teeth is connected thereto.

In the device shown in Figs. 1, 2 and 5, the plate A is provided with a diaphragm a , fitted snugly to the roof of the mouth, and provided with corrugations a^3 , to fit protrusions in the mouth with flange a' to go over the side of the gums, and with the recess a^2 to fit loosely over the gums, and the said diaphragm a fitting snugly up against the wall of the mouth as above stated. A suction chamber a^0 may or may not be provided and frequently such chamber will not

be needed. The plate A is preferably constructed in the following manner:—

A good cast of the mouth is obtained, a good celluloid plate is made in any well known and suitable manner, which has, when fitted in position, a slight clearance over the various bumps, ridges or other projections in the mouth and thus not only insures a comfortable fit, but also provides such a close fit, except over the bumps or ridges aforesaid, as to do away with the necessity in many instances of a suction chamber, such as shown in a^0 Fig. 1. In fact the clearance over the bumps or ridges will in effect constitute a series of suction chambers. It will be noted that the celluloid plate so formed is thin and more or less elastic, and can be more readily and accurately adjusted to the mouth before the teeth are applied to the plate than afterwards. The plate being so formed, trimmed, and adjusted to the mouth, the segment or segments bearing the teeth are prepared and applied, as will now be described.

Where a full set of teeth are to be supplied, it will be more convenient to make the teeth segment as a single piece to be afterwards fitted to the plate proper, and united thereto, as will be hereinafter described; while where scattered teeth are to be used, it would be preferable to construct a plurality of teeth segments, each segment to be fitted to the plate separately and to be united thereto, as will be hereinafter described. Similarly also new teeth segments may be added to an otherwise already manufactured plate.

In order to construct a tooth segment, the teeth are mounted in wax inlaid with tin foil, as shown in Fig. 3, where C represents the tooth, E represents the wax, and F represents the tin foil. This wax with the tin foil is snugly fitted to the plate, and the arrangement of the teeth is provided for in the well-known way known to dentists as getting "the bite." This is done by attaching wax or other suitable plastic material to the plate A, which is put in the patient's mouth, and an impression of the opposite teeth is secured. The reproduction of the print secured by this impress, together with the plate, are put in an articulator, the wax is removed from the plate after it has been adjusted in the articulator, and the teeth are then fitted to the plate in the usual way,

with wax mounted on tin foil, to prevent
adhesion. The teeth so fitted are removed
from the plate and put in a flask, the wax
is boiled out, and celluloid is substituted
5 therefor, under heat and pressure, as before
stated. The completed tooth segment is
shown in section, in Fig. 4, where C repre-
sents one of the teeth, and B represents the
celluloid holding the teeth. There is thus
10 formed a segment bearing the teeth, which
is to be attached to the plate proper, as will
be hereinafter described. The teeth on this
segment are finished up, and the celluloid
surface at their base fits snugly against the
15 outer surface of the plate, and the two are
cemented together by using a solution of
celluloid, which dissolves the faces of the
walls of the plate and tooth segment. This
dissolved section on solidifying again, forms
20 a weld, so that the two become in effect an
integral structure, as shown in Fig. 5.

It will be obvious that two or more seg-
ments can be applied to the same plate at
the same time or at different times, and thus
25 the plate already made may have additional
tooth segments attached to provide for
changes, owing to subsequent loss or break-
ing of teeth, in the mouth of the wearer.
Thus it is possible to prepare additional
30 teeth to be affixed to an old plate, or a plain
segment to natural teeth requiring it; and to
accurately apply the same without necessi-
tating the surrendering of the plate by the
wearer for more than a few minutes at a
35 time.

By making the plate proper thin and
more or less flexible, with clearance over the
bumps or ridges of the mouth, it is possible
to get a very close, snug, and at the same
40 time comfortable fit, and the plate being so
thin, takes up very little room in the mouth;

while the celluloid being tough and flexible,
does not tend to crack or break off like the
vulcanized rubber plates, which are so much
in use.

While I have described celluloid as the
preferable material for use in the manufac-
ture of the plate and tooth segments, for
reasons already stated, it will be obvious
that any other suitable material may be
50 adopted, and any other suitable cement for
joining the two parts together may be used
if desired.

It will be obvious that the process of
forming and adjusting the plate and the
55 tooth segment or segments may be varied
in many ways, according to the skill of and
the facilities available to the operator.

The hereindescribed method of fitting the
plate to and securing it in the mouth is es-
60 pecially suited for what are technically
known as "difficult mouths," which as a
rule may be comfortably and accurately
fitted, as hereinbefore described.

Having thus described my invention, 65
what I claim and desire to secure by Letters
Patent of the United States, is:—

A dental plate comprising a thin plate
portion of tough elastic material fitted to
the mouth of the patient, and a tooth seg-
70 ment of similar material carrying one or
more teeth and cemented to the plate por-
tion by means of a vaporizable solvent for
the adjacent parts, whereby the two are
welded together after the solvent has dried 75
out, substantially as described.

In testimony whereof, I affix my signa-
ture, in presence of two witnesses.

EDWIN TELLE.

Witnesses:

B. Y. WOLF,
ROBT. P. UPTON.