

(No Model.)

M. R. GRISWOLD.
METHOD OF FORMING DENTAL PLATES.

No. 465,076.

Patented Dec. 15, 1891.

Fig. 1.

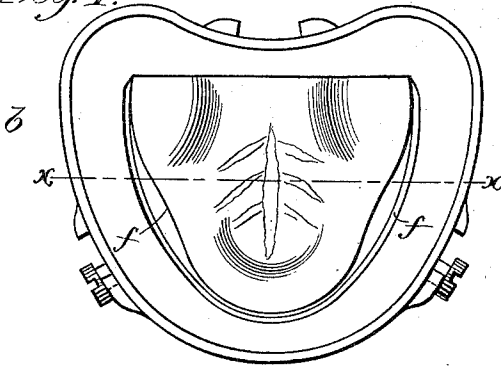


Fig. 4.

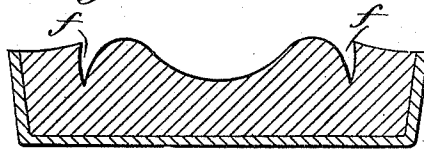


Fig. 2.

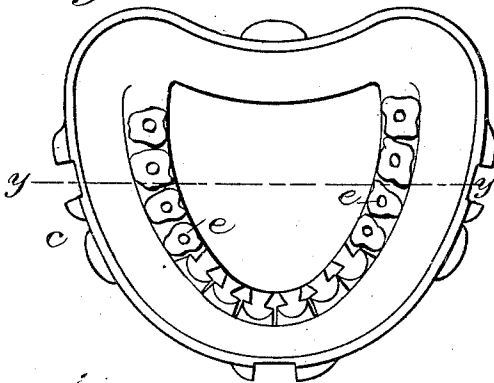


Fig. 7.

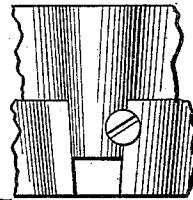


Fig. 5.

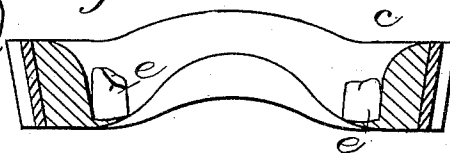


Fig. 3.

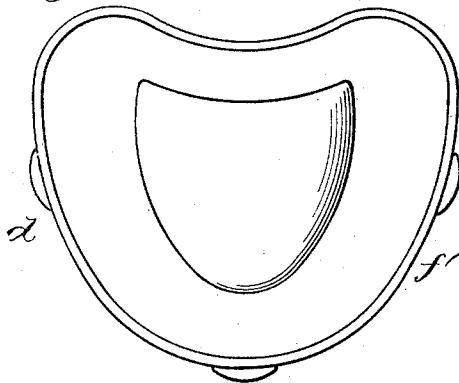


Fig. 9.

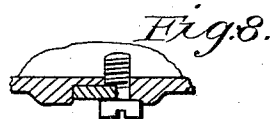
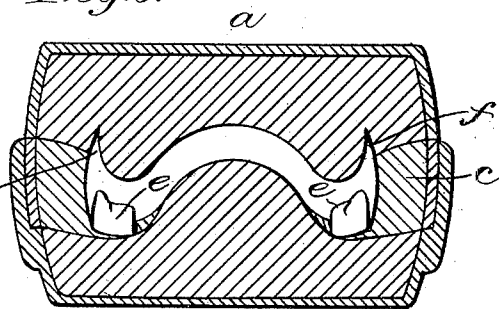


Fig. 6.



WITNESSES

Wm. Musser.
A. B. Jenkins;

INVENTOR

Malcolm R. Griswold.
by Simonds & Burdett,
Attorneys

UNITED STATES PATENT OFFICE.

MALCOLM R. GRISWOLD, OF HARTFORD, CONNECTICUT.

METHOD OF FORMING DENTAL PLATES.

SPECIFICATION forming part of Letters Patent No. 465,076, dated December 15, 1891.

Application filed February 5, 1891. Serial No. 380,384. (No model.)

To all whom it may concern:

Be it known that I, MALCOLM R. GRISWOLD, of Hartford, in the county of Hartford and State of Connecticut, have invented certain
5 new and useful Improvements in Methods of Making Plates for Artificial Teeth, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

10 My invention relates to the art of manufacturing plates for false teeth and to the use of dental flasks for such a purpose; and my object is to provide a flask and a method of using the same by means of which a more
15 perfect result in production of the plate and teeth attached thereto in the act of vulcanizing can be obtained.

To this end my invention consists in the method of making the plate and the building
20 up of the same preparatory to vulcanization and in details of the method or process, as more particularly hereinafter described, and pointed out in the claim.

Referring to the drawings, Figure 1 is a
25 plan view of the bottom section of a dental flask, as filled with a molded form. Fig. 2 is a detail plan view of the lower side of the middle section. Fig. 3 is a detail plan view of the under side of the upper section, also
30 filled. Fig. 4 is a detail view in cross-section on plane *xx* of Fig. 1. Fig. 5 is a detail view in cross-section on plane *yy* of Fig. 2. Fig. 6 is a detail view in central cross-section of the flask and contents, as secured together in
35 proper manner preparatory to vulcanizing the plate. Fig. 7 is a detail face view of the flask-locking means. Fig. 8 is a detail view in section of the flask adjacent to the locking device. Fig. 9 is a view showing a modified
40 form of fastening device.

In the accompanying drawings, the letter *a* denotes a dental flask as a whole, that is composed, usually, of metal cast to shape.

b denotes the bottom section, *c* the middle
45 section, and *d* the upper section, of the flask, the utilization of the new feature—that is, the middle section *c*—in connection with the other parts, forming the main feature of my within-described invention.

50 In the ordinary flask composed of two parts, after a cast has been taken of the mouth, the flask is filled with a mass of plaster-of-paris

or like material, forming a mold that conforms in shape precisely to the outline of the
cast made of the mouth. Such flasks have
55 been made in two parts, the lower part containing all that is included in the sections *b* and *c* of my improved form, while the upper section includes what is embodied in the upper section of my improved form. When
60 such a two-part flask of the old art has been used, the pink rubber used to make the gum has been packed into the mold about the teeth *e*, and then the central portion, forming the roof or main portion of the plate, is next
65 packed into the mold and the upper part closed down upon it, the result being that the black rubber in this closing of the flask and in the act of vulcanization is forced through the mass of rubber and presents an unsightly
70 appearance along the front of the teeth, destroying in a great measure the desired effect, which is the perfect imitation of the natural gum.

By the method employed of separating the
75 flask into three sections I first pack the groove *f* in the lower flask with the india rubber. Then place the middle section *c*, that contains the teeth, over the bottom section *b*, (in a reverse position from that shown in Fig. 2 of
80 the drawings.) Then pack the black rubber over the top directly upon the central portion of the mold that forms the main portion of the tooth-plate. Then the upper section is placed upon the middle section and the several
85 sections are securely clamped together in any desired manner. When so clamped the flask is placed in the vulcanizer and treated in the ordinary manner for producing the
90 rubber set.

The several parts or sections of the flask
may be clamped together by means of a leg *g* on one part that extends into a socket *h* on the opposite part, this socket being preferably
95 formed between projections *h'*, cast upon the outer body part of the section, and in one of these legs there is formed a screw-socket *i*, in which a clamping-screw *i'* is located. In
one edge of the leg *g* there is a locking-socket *g'*, semicircular in outline, and the clamping-
100 screw *i'* is mutilated on one side, so as to allow the leg *g*, when the screw is turned in a certain position, to enter the socket *h*, and the sections may then be securely clamped

together by giving the screw a half-turn. In place of this locking device the screw may be made with an eccentric head, as shown in Fig. 9, and used with a similar socket, as described above, the head serving as the leg-engaging part.

I claim as my invention—

The method of manufacturing a false-tooth plate of india-rubber, that consists in first
10 packing into a groove *f* in the lower section of a dental flask made in at least three sections india-rubber of the required color for representing the gum, then placing the mid-

dle section of the mold containing the teeth over the lower section, then packing into the
15 flask containing the mold the rubber that forms the main portion of the tooth-plate, then placing the upper section upon the middle section and clamping the several parts securely together, and then vulcanizing the
20 plate in the usual manner, all substantially as described.

MALCOLM R. GRISWOLD.

Witnesses:

LEONARD C. DANIELS,
A. B. JENKINS.