

(No Model.)

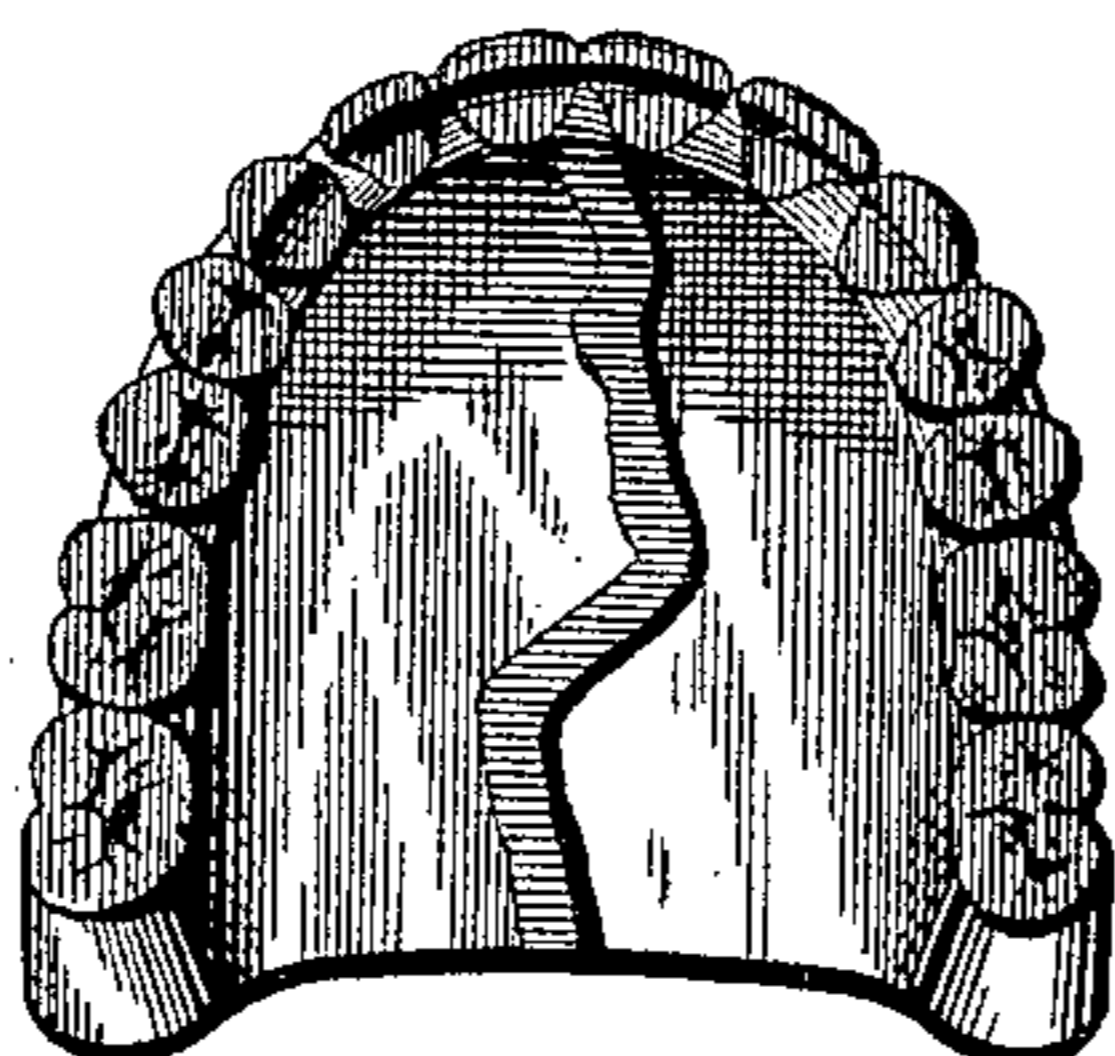
J. L. WHINERY.

DENTISTRY.

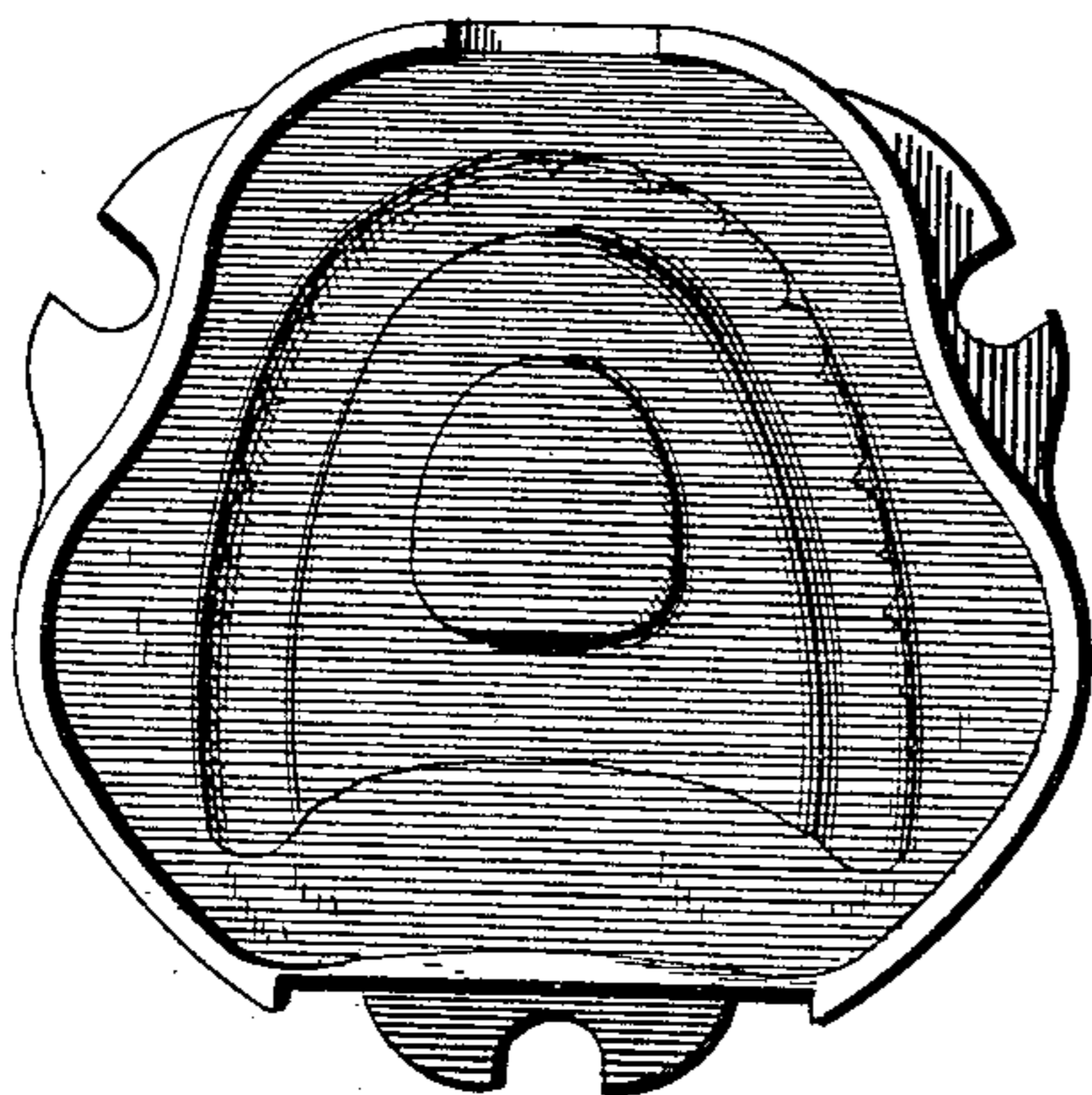
No. 328,442.

Patented Oct. 13, 1885.

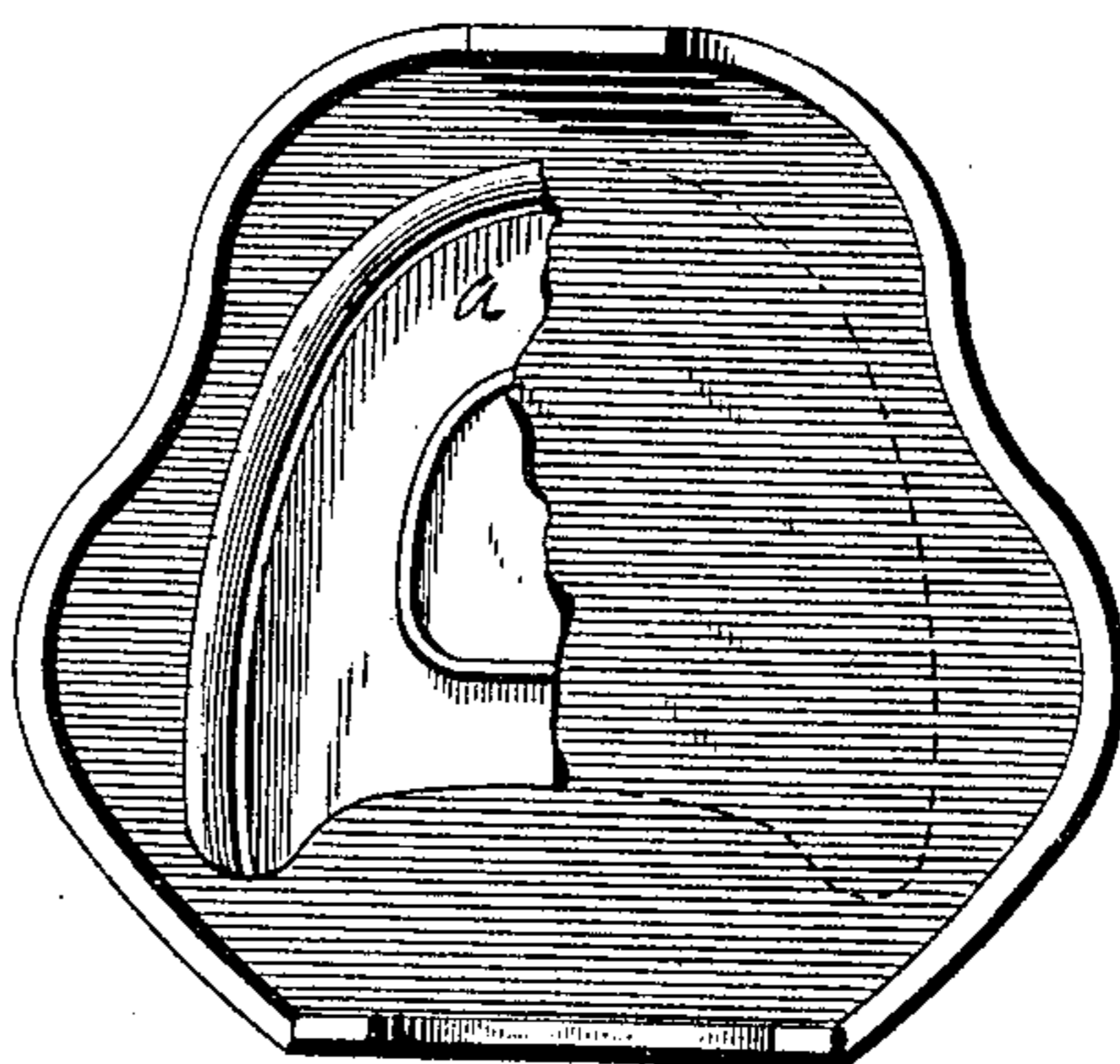
*Fig. 1.*



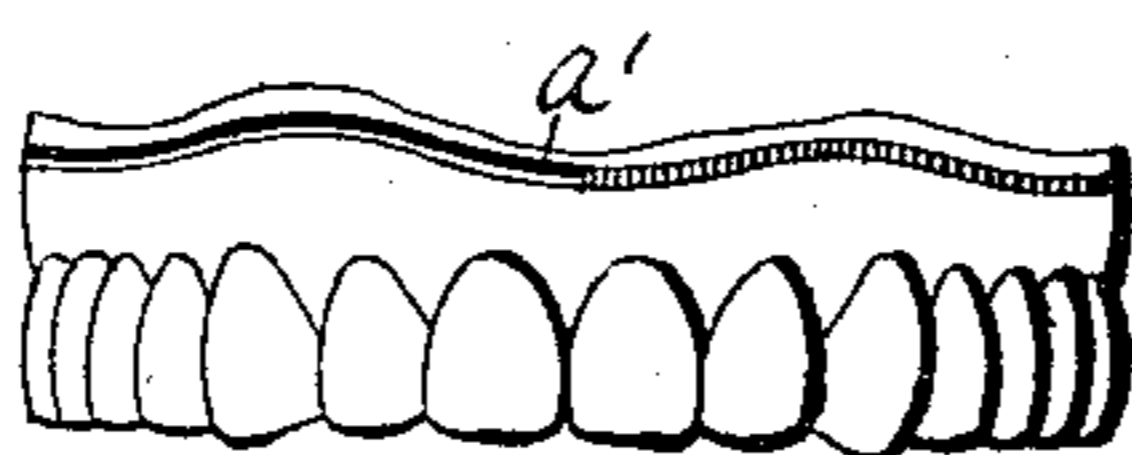
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



WITNESSES

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INVENTOR

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# UNITED STATES PATENT OFFICE.

JAMES L. WHINERY, OF UNION, IOWA.

## DENTISTRY.

SPECIFICATION forming part of Letters Patent No. 328,442, dated October 13, 1885.

Application filed August 6, 1885. Serial No. 173,731. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES L. WHINERY, a citizen of the United States of America, residing at Union, in the county of Hardin, in the State of Iowa, have invented a new and useful Improvement in Dentistry, of which the following is a specification.

My invention relates to improvements in processes for replacing or repairing vulcanized rubber dental plates.

Heretofore the practice has been to repair vulcanized dental plates by patching them, or uniting to the impaired plate by vulcanization a new piece of material, the fit and incorporation of which depended largely on the skill of the professional. Blocks of teeth were reset and fractures united by means of applied coatings of rubber cemented by vulcanizing, which always thickened or distorted the surface of the plate to which applied.

It is the object of my invention to provide a simple, certain, and cheap method, whereby a broken or impaired rubber dental plate can be duplicated or replaced. My invention is also adapted to resetting detached teeth to the plate.

My invention therefore consists in the process or method hereinafter set forth, and specifically pointed out in the claim.

I accomplish the purposes of my invention by a series of successive steps or acts wherein are used certain means or appliances common to the profession, but which I have illustrated in the accompanying drawings in order that the progressive acts may be fully demonstrated and practically understood.

Reference being had to the drawings as a part of this specification, Figure 1 shows a view of an upper set of teeth with a fractured plate, the pieces of which have been temporarily united by a cement of wax. Fig. 2 shows the same after the impression-mold has been flaked and taken out. Fig. 3 shows the plate and teeth in the reverse mold, and Fig. 4 shows the plate with the grooves cut about its rim or gums, one of the sides being represented as filled with the wax.

To consummate the purposes of my invention I take the impression of the plate to be replaced or duplicated by spreading a thin mixture of plaster-of-paris in the plate and then insert the plate in position in the mouth

of the patient, pressing it in place, and for the purpose of obtaining a well-defined impression I have the patient bring the teeth together with pressure sufficient to effect the purpose, and also that the articulation may not be changed when the plaster hardens. When induration of the plaster-of-paris is effected, the plate is taken out of the mouth and the impressed plaster-of-paris trimmed about the edges to give it the shape it is desired the new plate shall have when finished. The appearance of the plate with the thin impression-coating is shown in Fig. 3 of the drawings, wherein the thin impression is shown with a part broken away, as indicated at *a*. I then paint the impression with a coating of shellac varnish, and also apply a coating of oil, so that the mold-plaster to be deposited in the plate will not adhere to that constituting the thin impression-mold already in the plate. I then fill the impression with plaster to obtain the mold of the mouth, and trim the plaster nicely. I then cut a groove in the gum or rim of the plate, substantially as shown in Fig. 4 of the drawings at *a'*, the object being that the plate shall bend easily, and thus lessen the danger of breaking the mold when taking it out of the plaster. This groove *a'* is then filled with wax, which is trimmed to the contour of the plate or down to the surface of the rim. I then flask the teeth the same as though a wax plate were being used, and let the plaster harden. The closed flask containing the teeth is then put in the vulcanizer and treated until the mercury runs up to 320° Fahrenheit. This treatment must be done with dry heat. During this treatment the wax in the groove will be absorbed by the plaster. When the treatment has been accomplished as stated, the flask is taken from the vulcanizer and separated. The mold will be found in one part and producing a fac-simile of the impression-plate, substantially as seen in Fig. 2 of the drawings, and the teeth and plate will remain in the other, substantially as seen in Fig. 3 of the drawings, which shows the teeth fixed in the plaster and the thin impression-plate adhering to the plate. I then carefully remove the rubber while hot, it being quite soft then. I also remove all pieces of the thin impression-plaster, most of which will be adhering to the rubber plate. When the rubber and

thin impression-plaster have thus been removed, the teeth are ready for the new rubber, and this is put on by packing it where the old has been removed from. When thus  
5 packed, the flasks are united, put into the vulcanizer, and treated as is usual, the result reached being that the teeth have been reset to a new plate.

Should the plate to be replaced be fractured,  
10 the parts may be held together by a wax cement and the plaster poured into the plate, which gives the mold of the mouth, and then the process is carried out as heretofore described.

15 The invention, it will be seen, is equally applicable to resetting blocks of teeth which have been broken from the plate.

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

20 The process for replacing, duplicating, or repairing rubber dental plates, which consists

in first depositing in the plate to be renewed or replaced a thin impression-cast of suitable plastic material, then filling in the plate on the thin impression-cast with a plastic mold, 25 then cutting a groove in the exterior rim of the rubber plate and filling said groove with wax, then flasking the teeth in a plaster mold, then subjecting the closed flask and contents to dry heat to devulcanize the rubber, then 30 removing the devulcanized plate and replacing its mold with packed rubber, and then vulcanizing the same, all substantially as set forth.

In witness whereof I have hereunto set my 35 hand in the presence of two attesting witnesses.

JAMES L. WHINERY.

Witnesses:

B. J. PARRISH,  
J. H. McDILL.