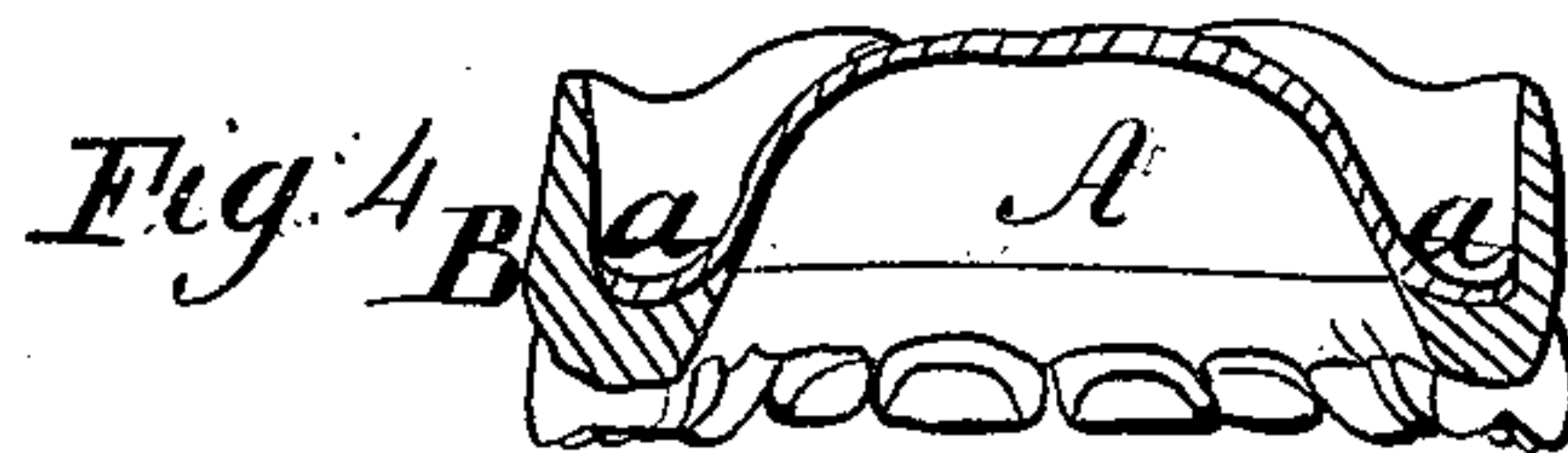
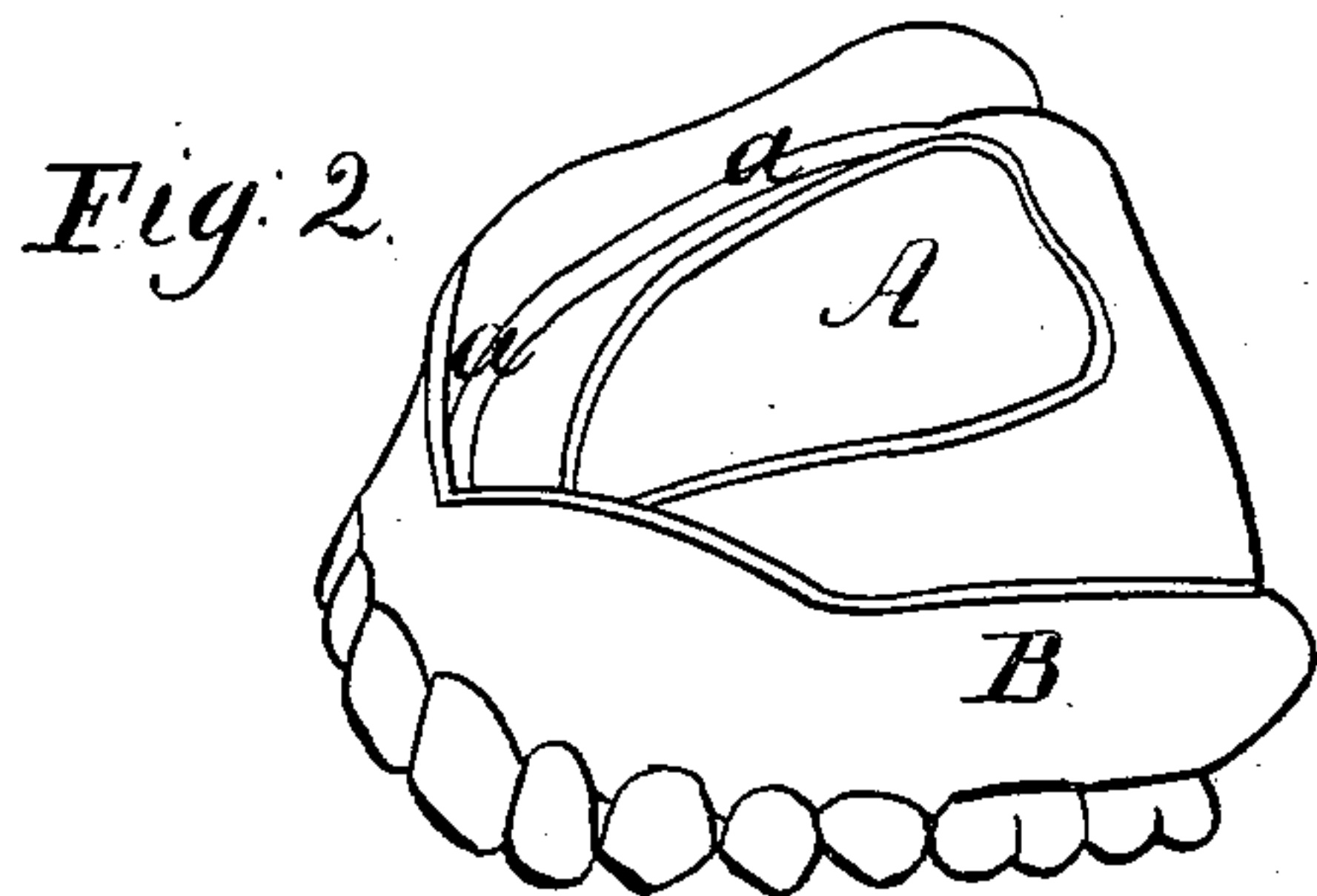
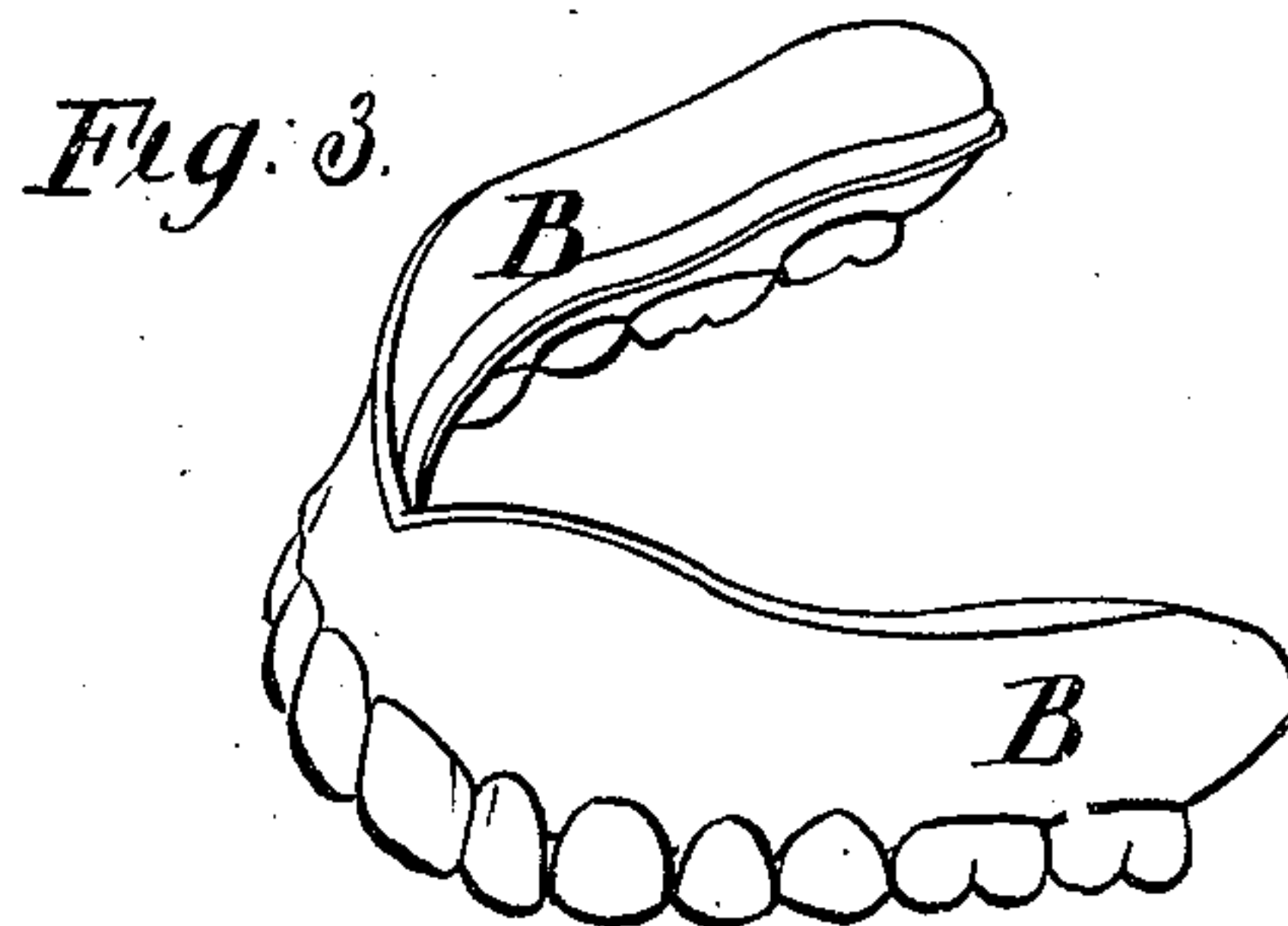
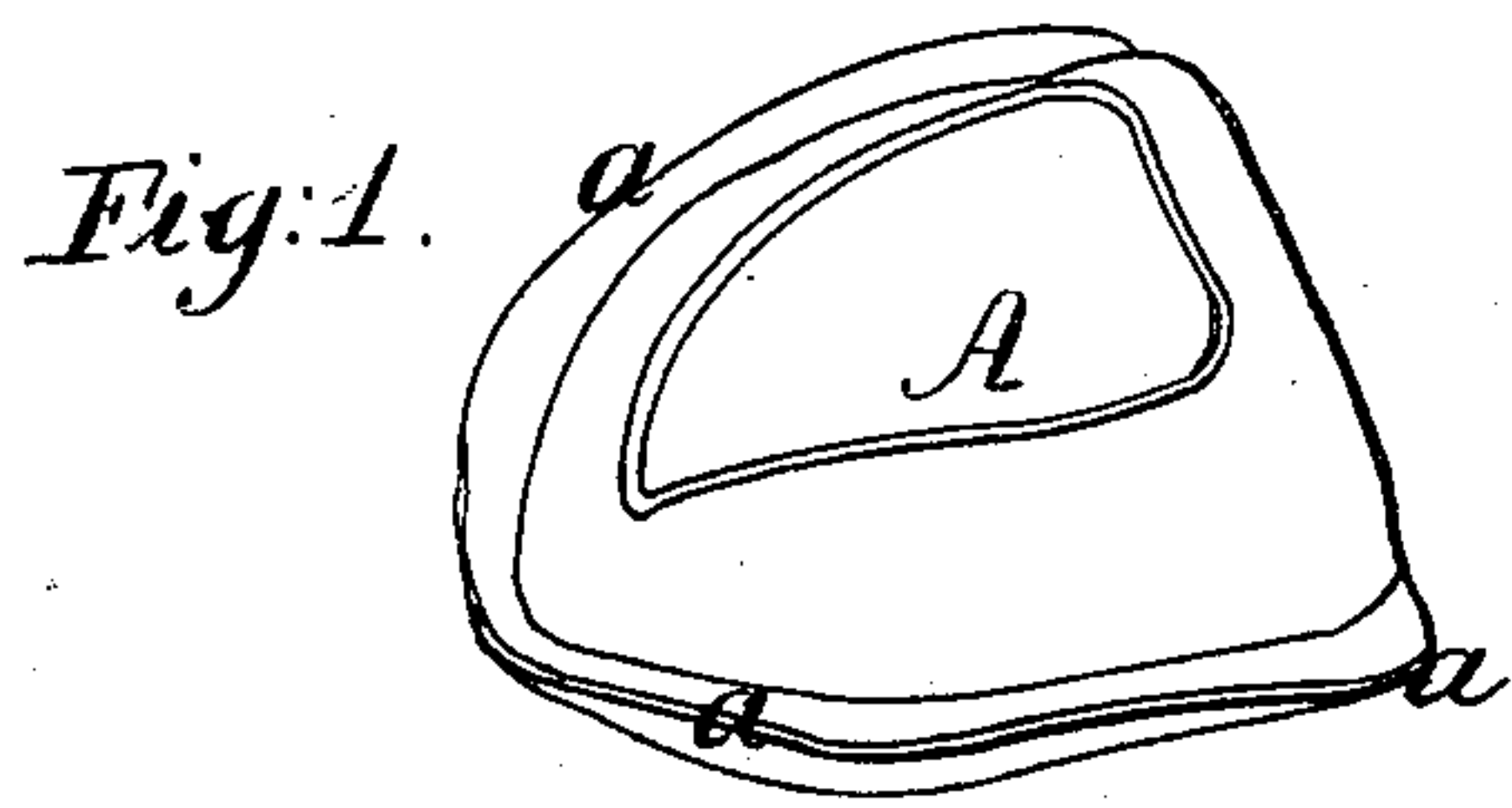


*J. A. McClelland.*  
*Dental Plate*  
*Nº 90,765. Patented Jun. 1, 1869.*



*Witnesses;*  
*R. T. Campbell*  
*A. Hoermann*  


*Inventor;*  
*John A. McClelland*  
*by*  
*Marion. Smith & Lawrence*

# UNITED STATES PATENT OFFICE

J. A. McCLELLAND, OF LOUISVILLE, KENTUCKY.

## IMPROVED DENTAL PLATE.

Specification forming part of Letters Patent No. 90,765, dated June 1, 1869.

*To all whom it may concern:*

Be it known that I, JOHN A. McCLELLAND, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Improvement in Dental Plates; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the improved base-plate for teeth before the teeth and gums are formed on or applied to it. Fig. 2 is a perspective view of a full set of teeth applied to the improved base-plate. Fig. 3 is a perspective view of a full set of teeth attached to the gums without the base-plate. Fig. 4 is a transverse section, taken through the posterior portion of the base-plate and gums.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in the manufacture of full and partial sets of artificial teeth, wherein plastic compositions are employed in the production of the gum and base-plates and the attachment of the teeth.

The invention relates more particularly to the production of dental plates of a composition described in my Letters Patent dated on the 28th day of April, 1868, as I prefer to employ this composition to any other with which I am acquainted, although I do not confine myself thereto, as other well-known compounds adapted for the manufacture of dental plates may be used.

The object of my invention is to provide for the production of the base-plates and gums of full or partial sets of artificial teeth, so that those parts lying next the gums and roof of the mouth shall be exact counterparts thereof, by the complete formation of and finishing the base or palatal plate in a suitable mold previous to the attachment thereto of the teeth and gums, thereby preventing the base or palatal plate from warping or being pressed out of proper shape during the process of forming the gums and teeth and attaching the same to said plate, as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe one practical mode of carrying it into effect.

In the accompanying drawings, A, Fig. 1, represents the palatal or base plate of a full

upper set of teeth, which is constructed in a mold suitably adapted to the purpose, with the margin or edge to which the gums are to be attached turned upward, as shown at *a*. This upturned margin presents a surface on its lower side which admits of the attachment, by welding or cementation, of the gums B to the base-plate in a very secure manner. To produce the plate A an impression is taken of the mouth in the usual well-known manner, and from this impression molds are made, presenting surfaces corresponding exactly to the upper and lower sides of the plate to be produced, including the upturned margin *a*. I then take a sheet of the substance of which it is desired to make the plate, and adjust it between the molds, and by the application of heat and pressure produce the base-plate described. This plate A should be allowed to remain in the mold under pressure until it is thoroughly dry, or until the substance has so completely set that there will be no further shrinking of the plate. The gums B are then produced in a suitable mold containing the plate A, properly adjusted in place; and, by the application of a suitable solvent of the substance of which the gums and plate A are made to the margin *a* of this plate, the gums will be firmly welded or cemented thereto in the process of molding them. When the work is complete the upper concave surface formed by the upturned margin *a* will form the base of the channel or groove for receiving the natural gums.

By my improved mode of producing dental plates it will be seen that I first produce the palatal or base plate A in a suitable mold, and retain it in the mold until it is freely set and hardened.

The second operation is to mold the gums about the teeth, and at the same operation attach the gums to the adhesive margin of the palatal or base plate. During this operation the substance forming the gums will shrink closely about the matrix, and become an exact counterpart of the same; but this shrinking operation will not in any manner change the original shape of the palatal plate.

If the dental compound described in my Letters Patent above referred to is employed in the production of the plates and gums above described, it may be reduced to a plastic state by its proper solvent, and molded in this state;



or it may be used in sheets of proper thickness to form the palatal or base plates, by the application of heat and pressure to the sheets while in the molds.

In the process of forming the gums and attaching the same to the margin of plate A, a mixture of sulphuric ether and alcohol is the solvent used, which will cause the gums to adhere strongly to said plate and form a perfect union of the two parts.

It is apparent that my mode of forming a set of teeth for the upper jaw is also applicable to the formation of a set of teeth for the lower jaw.

Having described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. A palate or base plate, A, having an upturned margin, *a*, and produced substantially as described, as a new and improved article of manufacture.

2. Making the gums and attaching them to the prepared palate or base plate at one and the same operation of pressing, substantially as described.

J. A. McCLELLAND.

Witnesses:

R. T. CAMPBELL,  
A. HOERMANN.