M. NEWTON.

Improvement in Mode of Attaching Pyroxyline Base to Artificial Teeth.

No. 125,979. Patented April 23, 1872.

Fig. 1.

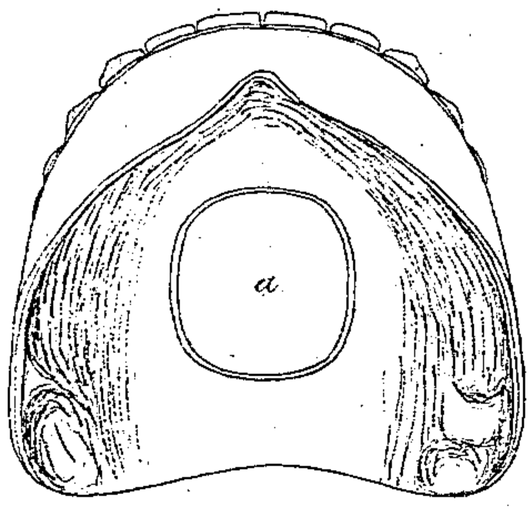


Fig. 3.

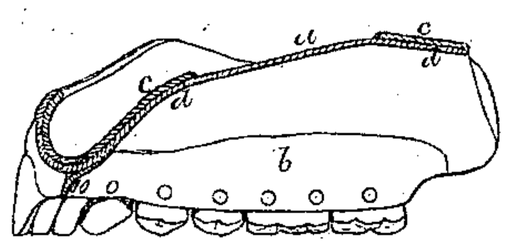


Fig. 2.

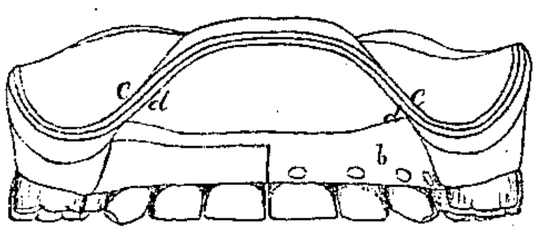
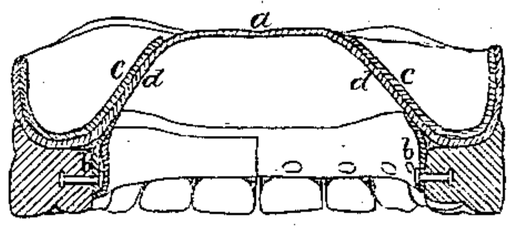


Fig. 4.



Witnesses.

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L. N. Möller

Marcellus Newton.

by his attorney.

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125,979

UNITED STATES PATENT OFFICE.

MARCELLUS NEWTON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MODES OF ATTACHING PYROXYLINE BASE TO ARTIFICIAL TEETH.

Specification forming part of Letters Patent No. 125,979, dated April 23, 1872.

To all persons to whom these presents may come:

Be it known that I, MARCELLUS NEWTON, of Boston, in the county of Suffolk and State of Massachusetts, have made a new and useful invention or Improvement in the Application of Pyroxyline to Artificial Teeth, and in the formation of mouth-plates of pyroxyline therefor; and do hereby declare the same to be described as follows, reference being had to the accompanying drawing, of which—

Figure 1 is a top view, Fig. 2 a rear view, Fig. 3 a longitudinal section, and Fig. 4 a transverse section of a mouth-plate prepared in accordance with my invention.

The first part of my said invention relates to the application of pyroxyline backings to the teeth or blocks of such.

In carrying out this part of the invention I take the pyroxyline in an indurated state and render it plastic by soaking it in alcohol until it may become of the requisite softness. Next, after forming from it a strip of the proper size for a backing or the first layer thereof, I puncture the strip with a pointed awl or needle at such points or parts where it is to receive the headed pins of the teeth, taking care not to remove any of the material, but only to displace the particles. Next I press the backing upon the pins of the teeth, so as to cause them to enter the holes of the backing, and the backing to abut closely against the teeth. In this way the backing, by its elastic property, will close upon and tightly around the pins of the teeth, after which the backing and the heads of the pins, if necessary, may be covered by another strip of pyroxyline connected to the first.

I have found this mode of applying a backing far preferable to that usually practiced, which consists in putting the pyroxyline, in a powdered or comminuted state, upon the pins and wetting it with ether, so as to dissolve it and set it together and upon them, such process rendering the backing liable to crack while setting or shrinking; whereas with my improved mode it sets firmly upon the pins, and does not warp or crack afterward.

The backing may be applied to the teeth either before or after they may be set upon the base-plate. I generally apply it after their arrangement on such base-plate.

In the manufacture of the base-plate and the fixation of the teeth thereto, I proceed in manner as follows—that is to say, I take two pieces or plates of indurated pyroxyline of the proper size, and soak them in alcohol until they may have become sufficiently softened for being molded upon a cast of the roof and gums of a person's mouth. Through one of these plates I make one or more holes of the requisite size for the formation of one or more suction cavities. One of such cavities is shown at *a* in Figs. 1, 3, and 4. The plate so treated is to be arranged upon the cast and formed thereon so as to conform thereto, after which the cavity or cavities in it are to be filled with plaster or a plate or plates of metal or other proper material. Next the second stratum or plate is to be laid on the first and cemented to it, or be caused to adhere to it, the adhesion being effected by first wetting the surface or surfaces of the plates with ether and subsequently pressing the plates into close contact. Thus I make a base-plate with one or more cavities in it, the matter or matters used in the holes of the first stratum to fill them being removed after the base-plate may have been taken from the case. Next I arrange the teeth properly on the base-plate, and, if necessary, apply the backing to them in my new way hereinbefore described. In the drawing this backing is shown at *b*, the two stratums composing the base-plate being represented at *c* and *d*. Finally, I finish the whole by strips of indurated pyroxyline softened by alcohol, as before mentioned, and applied in place, and fixed by rendering the surfaces to be conjoined wet by ether and pressing them in close contact.

The great advantage of my invention over others in use is, that by it I nearly, if not entirely, get rid of all the difficulty resulting from shrinkage and drying of the material. It is not liable to warp or twist out of shape while afterward in use.

The making of the base-plate of stratums of indurated pyroxyline, softened by means as

described, produces a much stronger and better plate than one made in the usual way of a single stratum molded upon the cast.

What I claim as my invention is as follows:

I claim the mode of attaching pyroxyline backing to teeth or blocks of teeth—viz., by softening, shaping, and puncturing the backing, and finally pressing it upon the pins of the teeth, as specified.

MARCELLUS NEWTON.

Witnesses:

R. H. EDDY,

J. R. SNOW.