O. S. BIXBY.

Securing Pins to Artificial Teeth.

No. 160,075 Patented Feb. 23, 1875

Fig. 1.

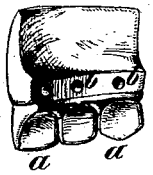


Fig. 2.

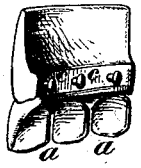
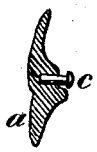


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ORIN S. BIXBY, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN SECURING PINS TO ARTIFICIAL TEETH.

Specification forming part of Letters Patent No. **160,075**, dated February 23, 1875; application filed January 25, 1875.

To all whom it may concern:

Be it known that I, ORIN S. BIXBY, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in the Manufacture of Artificial Teeth, of which the following is a specification:

The present invention relates to the construction of artificial teeth whether singly in blocks or full sets; and consists in the mode of fastening or fixing in the teeth the metallic pins, by which the teeth are fastened to the plate, by means of which mode other metal than platinum may be employed, thereby greatly reducing the cost of artificial teeth.

In the accompanying drawing, Figure 1 represents a block of teeth, showing the cavities on the inside prepared for the reception of the metallic pins. Fig. 2 is an inside view of a block having the pins fastened. Fig. 3 is a section of a single tooth, showing the pin fixed or fastened therein.

Similar letters of reference indicate corresponding parts.

It is well known that in the manufacture of artificial teeth platinum is employed as the material of the pins that fasten the teeth to the plate, because it is the only commercial metal that will not fuse or oxidize in the heat and ventilation to which the teeth must be subjected in baking them.

By my invention the pin-cavities are made in the inner or back side of the teeth before the latter are baked, and the pins are not set in the cavities until after the teeth are baked.

a represents the teeth; *b*, the cavities, and *c* the pins. The cavities may be cylindrical, or of the form of a truncated cone, with the base toward the center of the tooth, but must be large enough to leave a space around the pins when inserted for the reception of a cement. The pins may be of any suitable form, made of iron or any suitable metal; but my invention does not relate to the form of pins to be inserted. After inserting the pins in the cavities, the remainder of each cavity is filled with a cement, or a material resembling the porcelain of which the teeth are composed, but more fusible, by reason of the flux or alkali contained.

The teeth, with the pins and cement thus applied, are now placed in a suitable refractory receptacle, and covered with a layer of charcoal, or other substance having a strong affinity for oxygen, to prevent oxidation of the pins, when a cover is luted onto the receptacle, and the whole subjected to a temperature that will fuse the cement and combine it with the teeth, and cause it to adhere to the pins.

The mode of fixing the pins in the teeth, as described, if conducted carefully, also serves to anneal them and render them less liable to fracture.

I am aware that numerous attempts have been made to avoid the use of platinum in connection with artificial teeth; but I am not aware that metallic pins have heretofore been fixed in the teeth in the manner described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The above-described method of inserting and fasting metallic pins in artificial teeth, substantially as specified.

ORIN S. BIXBY.

Witnesses:

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LUTHER F. WHITE.