

S. S. WHITE.

Improvement in Pins for Artificial Teeth.

No. 131,381.

Patented Sep. 17, 1872.

Fig.1.



Fig.2.



Fig.3.



Witnesses.

J. Snowden Bell.

Wm. S. Lynn

S. S. White

by his Atty

Henry Baldwin Jr.

UNITED STATES PATENT OFFICE.

SAMUEL S. WHITE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PINS FOR ARTIFICIAL TEETH.

Specification forming part of Letters Patent No. **131,381**, dated September 17, 1872.

To all whom it may concern:

Be it known that I, SAMUEL S. WHITE, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Artificial Teeth; and I do hereby declare that the following is a specification of my said improvements, reference being had to the accompanying drawing.

My invention relates to molded mineral or porcelain teeth, such as are supplied to the dentist ready to be fitted with a vulcanite base without any manipulation of the pins on which the teeth are mounted; and it is the object of my improvements to secure a firmer, stronger, and more perfect attachment between the pin and the tooth than had been attained in this manufacture prior to my said invention; and my improvements, moreover, afford greatly enhanced resistance against the forces to which the teeth are subjected in use, and render it almost impossible for the pins to be drawn out of the teeth, thus altogether constituting a much nearer approach to perfection in serviceable and durable qualities than has characterized any prior state of the art. My said invention consists in an improved pin, upon which the tooth is molded; and in the accompanying drawing—

Figure 1 represents the pin; Fig. 2 represents the pin cut off at a miter through the instep and heel; and Fig. 3 is a section through a mineral tooth molded upon the improved pin, showing the position of the pin in the tooth, as hereinafter more particularly described.

The outer end *a* of the pin, which is to be embedded in vulcanite, is, by preference, headed, as in the Letters Patent granted to me under date of January 21, 1862; but my present improvements do not relate to this end of the pin, and are independent of any preferred attachment of the teeth to a base or setting.

Platinum wire is universally recognized as the material best adapted in every particular for tooth-pins, and for this reason my improved pins are made of such wire. The wire is cut off at a length suitable for the pin to be made, and driven up so as to form a toe or hook upon one end, and in being thus cut off and driven

up the wire is upset and appreciably enlarged or swelled at and near the instep of the toe or angle of the hook, so that if cut off at a miter through the instep to the heel the end of such a section would be larger than the body of the wire and show a taper from the miter toward the other end of the pin. (See Fig. 2.)

The advantages gained by this improved foot-shaped or bent and swelled pin will be readily perceived by those making, mounting, or using molded mineral teeth. The swell at the instep and in the body of the wire, together with the toe or hook being embedded in a thick and strong part of the tooth, secures the greatest firmness and an entire exemption from liability to any withdrawal or breaking away of the pin, and there being no projection below the heel of the pin I avoid the cutting into the material of the tooth at its weaker part, which is unavoidable in the use of a pin having a head on the inner end, while, in respect to the disturbing motions, which operate in biting and masticating, the improved form of the pin secures much greater resistance and consequent usefulness.

Merely to bend up the end of the pin at an acute angle, or to curve it at an obtuse angle, would not make a useful tooth-pin, nor accomplish the results which I attain. A sharp angle on plain wire would be likely to break in the curve under the retractive forces to which the tooth is subjected, and the bend of an obtuse angle would be liable to straighten out under such retractive force; but it will be observed that in my improved pin the wire is cut off and driven up, so that the angle of the hook or the instep of the toe is re-enforced by being appreciably swelled or enlarged, while the heel or lower side of the pin scarcely deflects from its original line, so that not only is the toe or hook itself provided with great strength at the angle to resist retractive force, but, by reason of the swell and taper in and about the angle, these forces are mainly sustained by the swelled or tapering portion of the pin, which is thereby tightened in the tooth and not only relieves the toe or hook in this direction, but also protects it against any liability to be turned or twisted in the tooth. The pin is held by the outer end in a hole provided for this purpose in the mold in which

the tooth is formed, while the plastic material that constitutes the tooth is packed or molded around the inner or hook-shaped end, as is well understood; and it is unnecessary to describe this process of molding the teeth, as it forms no part of the improvements herein claimed. The molder should see, however, that the inner end or foot of the pin is so placed in the mold that the toe will be turned toward the crown of the tooth.

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

A pin for the mounting of molded artificial teeth, that part of the pin which is to be embedded in the tooth having an upturned toe, a rounded heel, an enlarged or swelled instep, and a taper from the instep toward the outer end of the pin, substantially as and for the purposes described.

SAMUEL S. WHITE.

Witnesses:

WM. B. DAYTON,
WM. E. MORGAN.