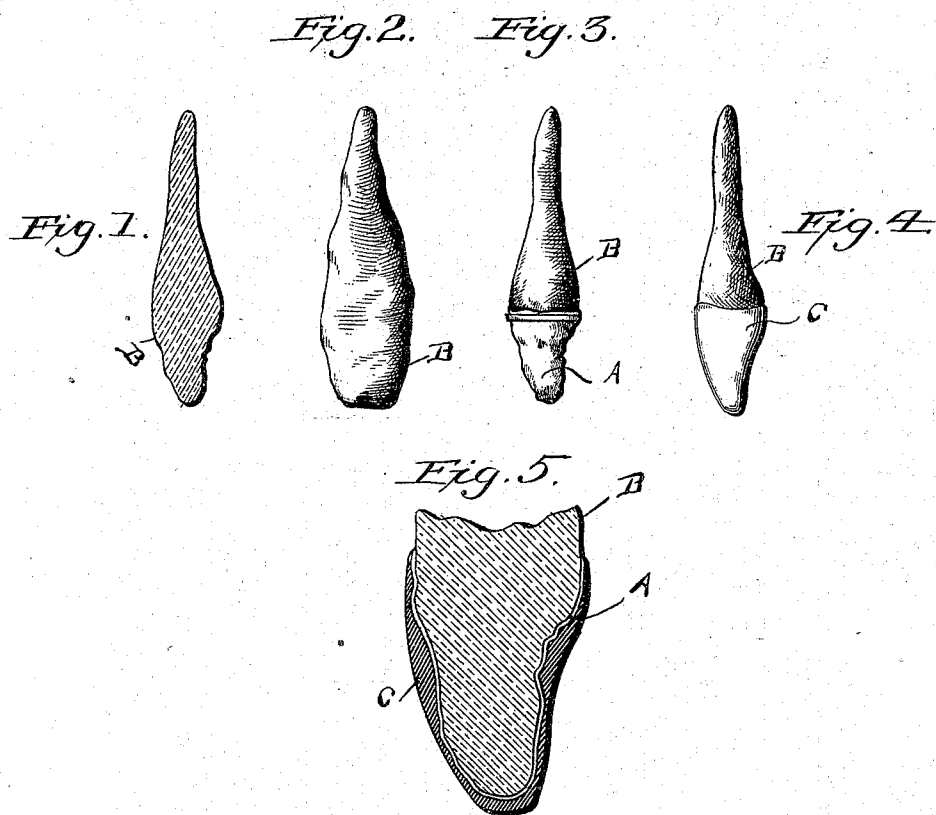


(No Model.)

J. B. WELLS.
ARTIFICIAL TOOTH CROWN.

No. 558,133.

Patented Apr. 14, 1896.



Witnesses:
L. C. Hills
A. L. Hough

Inventor:
James B. Wells,
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Atty.

UNITED STATES PATENT OFFICE.

JAMES B. WELLS, OF LOWVILLE, NEW YORK.

ARTIFICIAL TOOTH-CROWN.

SPECIFICATION forming part of Letters Patent No. 558,133, dated April 14, 1896.

Application filed February 5, 1896. Serial No. 578,156. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. WELLS, a citizen of the United States, residing at Lowville, in the county of Lewis and State of New York, have invented certain new and useful Improvements in Artificial Tooth-Crowns and the manner of constructing the same as applicable in the art popularly known as "dentistry;" and I do hereby declare the following to be a full, clear, and exact description of my invention, which will enable others skilled in the art to construct and adapt the same, reference being had to the drawings making part of this application, and in which—

Figure 1 shows a vertical section of a natural organ to whose crown it is proposed to adapt the metallic covering. Fig. 2 represents a side elevation of the tooth; Fig. 3, the tooth with the band and platinum covering; Fig. 4, a side elevation with completed crown; Fig. 5, a vertical sectional view of crown and tooth.

Similar letters represent similar parts in all the figures.

As the contour of the cuspidati are the most difficult to fit, I will describe the construction of this form of crown as an illustration, the form being shown in Fig. 1.

Selecting a piece of thin platinum plate, (about 32 Stubbs gage,) a strip of sufficient length to encircle the largest portion of the tooth-body is taken of a width equal to the length of the cusp. This strip is formed into a hoop and lightly supported in shape by a piece of fine iron wire until the upper edge can be secured by soldering under the blow-pipe, using for the purpose pure gold. The lower margin of the hoop is slit up in two or three places and partially trimmed with shears to approximate the cutting edge of the tooth-crown. The hoop is then returned to the crown of the tooth and with a proper-shaped instrument the platinum is burnished down snugly to the surface of the tooth upon all sides of its exposure, removing the platinum from time to time to trim the lower edge with plate shears or file, so that as little surplus metal may be left as possible. I now remove the conformed shell thus prepared, using due care not to alter its shape in any way, and laying it upon some proper support,

as charcoal or asbestos, and with suitable appliance for heat and with the surface of the metal properly fluxed proceed to melt upon the platinum base the metal with which it is desired to cover the same (usually gold) until the entire shell or base shall have been properly strengthened and covered, being especially careful to give the lower or biting edge its due amount of metal. The exterior of the crown so formed is now to be nicely polished and tried upon the natural tooth to see that the adjustment is perfect at the upper margin in connection with the margin of the gum, after which it is to be removed and the shell lined with a very thin preparation of oxyphosphate cement, when the shell is returned to the tooth and pressed firmly to its place, forcing the surplus cement out at the gum-margin, the setting of the cement firmly attaching the metal shell to the natural organ. The construction and adjustment of these metallic shells or coverings to the other forms of crowns do not differ except in minor details, which are easily met by any person skilled in this line of work.

My invention constitutes a new and useful covering for natural teeth and the object attained twofold: first, the complete and perfect preservation of the natural organ or what may yet remain in case of partial caries of the same, perfectly protecting it from all external effects injurious thereto; second, the production of a metallic crown-covering which may be utilized as a support for artificial substitutes to take the place of lost natural organs.

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

The process of forming a metallic crown for a tooth which consists in supporting about the tooth a thin sheet of platinum, soldering its meeting edges, burnishing the same to conform to the surface of the tooth, and then fluxing on metal to build up the tooth its circumference and biting edge, substantially as described and for the purpose set forth.

JAMES B. WELLS.

Witnesses:

J. CARROLL HOUSE,
WILLIAM T. BUSH.