(No Model.)

J. G. HOLLINGSWORTH.

METHOD OF FORMING TOOTH CROWNS.

No. 523,472. Patented July 24, 1894.

Fig. 1.

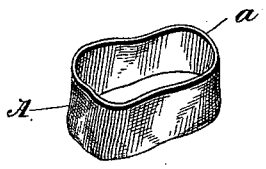


Fig. 2.

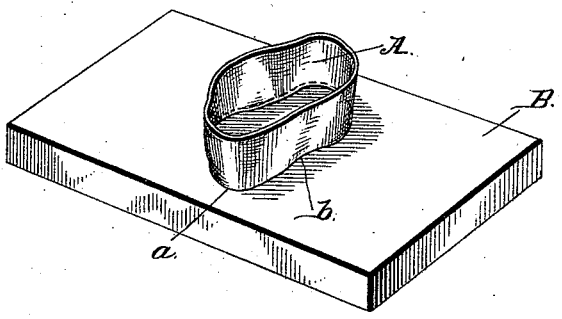


Fig. 3.

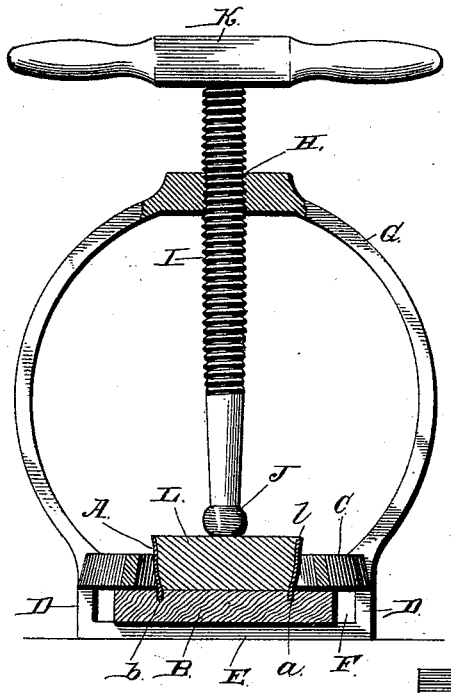


Fig. 4.

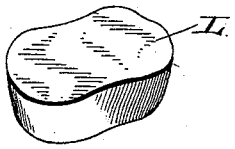


Fig. 5.

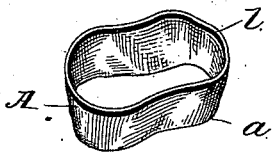
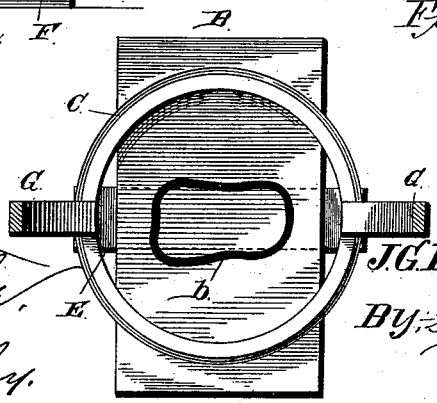


Fig. 6.



Witnesses;

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UNITED STATES PATENT OFFICE.

JEPTHA G. HOLLINGSWORTH, OF KANSAS CITY, MISSOURI.

METHOD OF FORMING TOOTH-CROWNS.

SPECIFICATION forming part of Letters Patent No. 523,472, dated July 24, 1894.

Application filed May 3, 1894. Serial No. 509,879. (No model.)

To all whom it may concern:

Be it known that I, JEPTHA G. HOLLINGSWORTH, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Methods of Contouring Tooth-Crowns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to dentistry, and more particularly to crown-work, and has for its object to produce a method whereby a band is obtained which conforms to or fits perfectly the cervical margin of the tooth to be crowned, and the crown destined for said tooth.

To this end the invention consists in the peculiar and novel method hereinafter described and claimed.

Previous to my invention, after a band was obtained by fitting upon the tooth to be crowned, pliers of various forms were employed to bend the band in the proper shape to conform to the contour of the desired crown, and consequently, the band, having no secure foundation or matrix to prevent a change of contour at the cervical margin, was twisted so that it would not perfectly fit the tooth; in fact, being nothing but guess-work, a band produced on artistic lines was the exception and not the rule. Bands contoured according to my method are artistically perfect in shape, and fit perfectly both the tooth and the crown, as will be readily and clearly understood from the following description.

Referring now to the drawings, which illustrate my invention, Figure 1. is a perspective view of a band after being fitted upon a tooth. Fig. 2. is a perspective view showing the said band in an inverted position, and upon a slab of wood. Fig. 3. is a vertical sectional view of an apparatus employed to contour the band so that it shall perfectly fit the crown of said tooth. Fig. 4. is a perspective view of a molar die. Fig. 5. is a perspective view of a completed band. Fig. 6. is a horizontal sectional view of the construction illustrated in Fig. 3, with the band, the die and the screw removed.

In the said drawings, A designates a band of gold or of any other suitable flexible material, which having been fitted upon the tooth to be crowned, conforms at one margin *a*, to the cervical margin of the neck of the tooth.

B designates a slab or block of wood or any other suitable material, and this slab is provided in its upper side with a continuous or endless groove *b*, which corresponds to the cervical margin *a*, of the band; said groove being formed preferably by heating the band and depositing it, with its cervical margin down, upon said slab, into which said band burns its way for a suitable distance. This recess may be made as deep as desired.

C designates the circular body-portion of a holder; said circular portion being disposed horizontally, and depending therefrom at diametrically opposite points, are vertical arms D, D, which are connected at their lower ends by a cross-bar E; thus forming a loop or space F, therebetween.

Rising vertically from the circular portion C, and preferably as a continuation of the vertical arms D, is an arch G, which is provided, at a point vertically over the center of the circular portion C, with a vertical and screw-threaded passage H; said passage being engaged by a screw I provided with a head J, preferably at its lower end, to form a substantial bearing surface, and with a handle-portion K, at its upper end.

L, designates a die, in this instance a molar die, in contour approximating the contour of the band as near as possible, and this die may be deposited or cast, ground, or formed in any other suitable manner.

After obtaining the band having the proper contour at its cervical margin by fitting it upon the tooth, the method of completing said band and causing it to correspond perfectly with the crown to be carried thereby, is as follows: The slab or wood, grooved as above explained, to form the matrix, is slipped into the space F, between the body-portion C, and the cross-bar E, of the holder. The band is then deposited upon said slab, and with its cervical margin engaging the groove or recess *b*. The die L, is now pressed into the upper end of said band, and the screw bar down upon the same so as to force it downward into the band, and said band being flexible, of course assumes a corresponding shape or contour, without changing or altering in the slightest

degree the cervical margin of said band, which is held immovably in the groove *b*, of the slab. The screw is now elevated and the band and die removed from the holder. The die is then separated from the band, which conforms at all points except at the cervical margin to the contour of the die, as shown at 1, and this completed band will now accurately fit both the crown, which corresponds in shape to the die, and the tooth to be crowned, as the cervical contour has not been altered in the slightest degree.

It is to be understood, of course, that while a molar die and a band corresponding thereto are shown, bands for bicuspids and other teeth may be formed in a similar manner.

While I have shown the holder of peculiar construction, it will be apparent that any suitable apparatus for forcing the die into the band may be employed in lieu thereof.

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

1. The method of contouring tooth-bands, the same consisting, firstly, in fitting a band of flexible metal upon the neck or cervical portion of the tooth, secondly, in securing the cervical margin of said band in a correspondingly shaped matrix, and thirdly, in forcing into said band a die corresponding in contour to the crown destined for said band, substantially as set forth.

2. The method of contouring tooth-crowns, the same consisting, firstly, in fitting a band of flexible metal upon the neck or cervical portion of the tooth, secondly, in heating the same, thirdly, in forming a matrix by burning said cervical margin into a slab of wood or other suitable material, and fourthly, in forcing a die into said band so that it shall conform at all portions above the cervical margin to the contour of said die, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JEI'THA G. HOLLINGSWORTH.

Witnesses:
CHAS. L. HUNGERFORD,
J. C. ROGERS.