

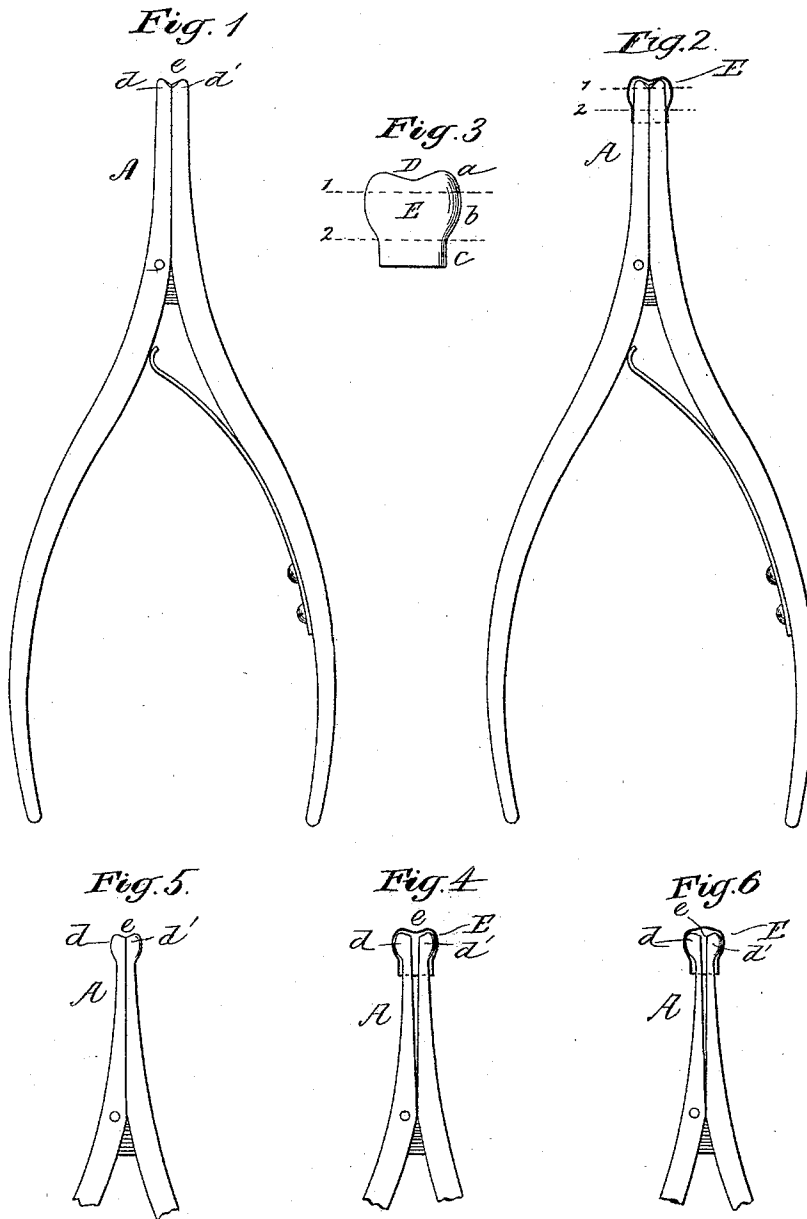
(No Model.)

G. EVANS.

DENTAL TOOL FOR SHAPING TOOTH CROWNS.

No. 449,408.

Patented Mar. 31, 1891.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE EVANS, OF NEW YORK, N. Y.

DENTAL TOOL FOR SHAPING TOOTH-CROWNS.

SPECIFICATION forming part of Letters Patent No. 449,408, dated March 31, 1891.

Application filed October 9, 1890. Serial No. 367,588. (No model.)

To all whom it may concern:

Be it known that I, GEORGE EVANS, of the city, county, and State of New York, have invented a new and useful Tool for Expanding and Shaping Dental Gold Crowns, of which the following is a specification.

This invention relates to an instrument for expanding and shaping gold dental crowns to adapt them to fit more perfectly or to conform more exactly to the part of the natural tooth to which it may be desired to apply them, and the invention is more particularly designed for use in connection with the dental gold crowns for which and for appliances and method of making the same Letters Patent Nos. 373,746, 373,747, and 373,748 were granted to me November 15, 1887. In inserting these gold crowns it frequently becomes necessary to alter the general form of the gold crown so as to permit it to slide or fit over some part of the natural crown which in conformation differs from the conformation of the interior of the gold crown, and this permits the gold crown to be closely adapted.

The object of my present invention is to provide an instrument by which the necessary alteration in the general form of dental gold crowns for the purpose stated may be easily and successfully accomplished; and the invention consists of instruments—say expanding forceps—having points or parts adapted to be inserted inside of gold dental crowns, and the said points or parts so shaped as to conform approximately to the conformation of the inside walls or surfaces of the gold crowns the said instruments are to be used to alter.

My invention is fully illustrated in the accompanying drawings, in which—

Figure 1 represents an instrument adapted for carrying out my invention. This instrument is an expanding forceps and the points of the jaws it will be observed are shaped to conform as nearly as practicable to the occluding or grinding third or part of a bicuspid gold dental crown. Fig. 2 is a sectional view of a bicuspid gold crown with the point of the instrument inserted and with the crown divided into three parts by broken divisional lines 1 2—viz., the grinding or occluding *a*,

the middle *b*, and neck or cervical third *c*. Fig. 3 is a bicuspid gold crown enlarged and the several parts indicated in the same manner as in Fig. 2. Fig. 4 represents an instrument adapted to fit the general conformation of the grinding-surface and also the conformations of the sides of the crown termed the “middle third,” and which is intended to expand the crown at the grinding-surface and middle third without expanding the neck. Fig. 5 represents the instrument out of the crown, and Fig. 6 represents it inserted in the crown in another position.

Referring to the drawings, the jaws *A* of the forceps are formed at the extremities of the usual handles, which are pivoted together in the usual manner and provided with a spring for holding the jaws closed. As represented in Fig. 1, the jaws taper toward their extremities; but this is not essential, for, as shown in Figs. 4, 5, and 6, they may be enlarged exteriorly just below their points and the enlargement made to conform in shape both laterally and longitudinally to the inside surface of the middle section or third of a crown. The grinding surface or third of a crown, as shown, for example, in Fig. 3, consists of raised points and depressions, the raised points or parts on the exterior forming the depressions of the inside surface and the depressions of the outside forming the raised parts or points of the inside surface. It is sometimes necessary to stretch or expand and shape the grinding surface or third without altering the middle third and at other times to operate on both or on the middle section alone. The tool herein described is intended to be adapted to perform either operation, or both, as may be necessary, and avoid as much as possible perceptibly changing the neck of the crown. For this purpose the exterior of the points of the jaws are shaped to form a counterpart of the grinding third or section of the crown. Thus the point of one jaw fits into the depression in one half and the crown and the point of the other jaw into the depression in the other half, as shown in Figs. 1 and 2, so that when the jaws are closed together the raised portions of the inside surface of the crown rest between the extremi-

ties of the points. Thus in Figs. 1 and 2 the points d d' of the jaws are shaped to fit into the two depressions in the inside grinding-surface of the crown by giving them an irregular inverted-V shape, thereby forming a groove e between them, when closed, into which the raised point or portion of the inside grinding-surface enters when the tool is inserted in the crown, as shown in Fig. 2. In other cases it may be necessary to operate on both the grinding and middle sections or the middle section alone. In the former case the parts below the points are enlarged and shaped to conform to the inside surface of the middle section, as shown in Figs. 4, 5, and 6, the enlargement running up into the points d d' just as the middle section joins with the grinding-section—*i. e.*, so that the point of junction is imperceptible. In all forms that may be given to the jaws for this purpose the two parts are preferably substantially alike—that is, as nearly alike as the two parts of the crown on each side of a middle vertical line are like each other.

Fig. 6 shows the points of the jaws at right angles to the position they occupy in Fig. 4—that is, with the groove e at right angles to the groove D , (see Fig. 3,) thus illustrating how the instrument may be manipulated to

expand and shape the crowns in any desired way.

I claim—

1. As a new article of manufacture, the herein-described tool for expanding and shaping tooth-crowns, consisting of forcep-jaws provided with handles in the usual manner and having their ends shaped to form counterparts of the surface of the crown they are designed to work upon, substantially as specified.

2. In expanding or shaping tools for operation on the interior of tooth-crowns, forcep-jaws having the points that come in contact with the grinding section or third of the crown shaped to form a counterpart of the said grinding section or third, and the parts that come in contact with the middle section or third shaped to form counterparts of the said middle section or third, substantially as specified.

In testimony that I claim the foregoing as my invention I have hereunto subscribed my name this 1st day of October, 1890.

GEORGE EVANS.

In presence of—

CHAS. B. KENNEY,
CHAS. H. DARE.