

(No Model.)

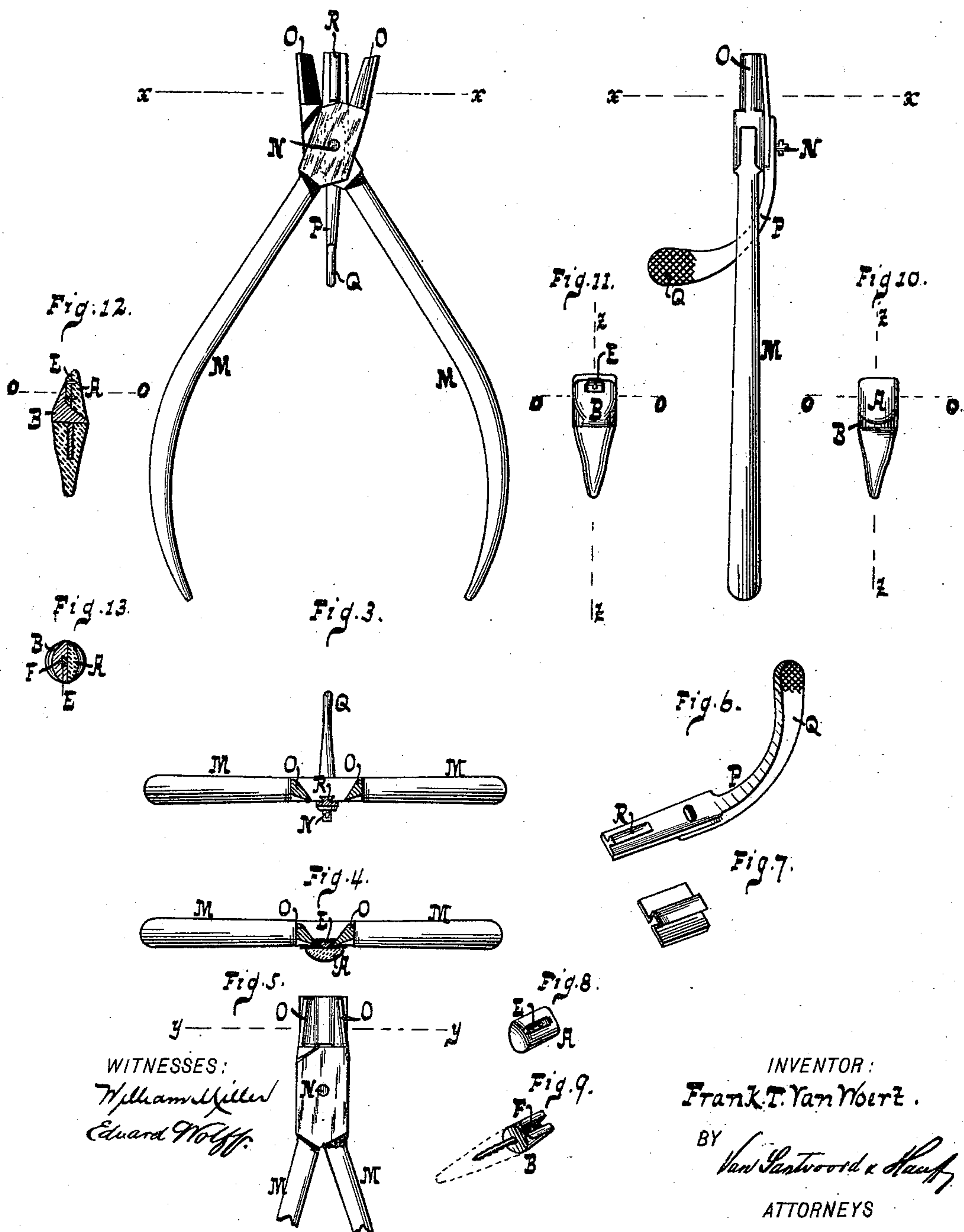
F. T. VAN WOERT.
DENTAL TOOL.

No. 438,566.

Patented Oct. 14, 1890.

Fig. 1.

Fig. 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANK T. VAN WOERT, OF BROOKLYN, NEW YORK.

DENTAL TOOL.

SPECIFICATION forming part of Letters Patent No. 438,566, dated October 14, 1890.

Application filed January 14, 1890. Serial No. 336,890. (No model.)

To all whom it may concern:

Be it known that I, FRANK T. VAN WOERT, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Dental Instruments, of which the following is a specification.

This invention relates to dental instruments; and it consists in the matters herein-
after described, and pointed out in the claim.

Figure 1 is a front view of a forceps constructed according to my invention. Fig. 2 is a side view thereof. Fig. 3 is a cross-section taken on the line $x x$ of Figs. 1 and 2. Fig. 4 is a cross-section on the line $y y$ of Fig. 5, showing the porcelain face or crown with its gib and the bent metal plate when placed thereon to be readjusted by the forceps. Fig. 5 is a plan view of Fig. 4. Fig. 6 shows the removable gib-templet of the forceps. Fig. 7 is a perspective view of the metal plate after it has been shaped by the forceps on the gib-templet. Fig. 8 shows the crown of a tooth provided with a gib on its inner face. Fig. 9 shows the inner face of the backing for an artificial tooth detached from the crown. Fig. 10 is a front view of an artificial tooth provided with a crown secured to the backing by means of a dovetailed gib. Fig. 11 is a rear view thereof. Fig. 12 is a longitudinal section taken on the line $z z$ of Figs. 10 and 11. Fig. 13 is a cross-section taken on the line $o o$ of Figs. 10, 11, and 12.

This invention embraces an instrument by means of which I am enabled to form a gib-recess in the backing for artificial teeth from thin gold, silver or platinum plate or other suitable material, as hereinafter described.

In applying and securing crowns to the backing of artificial teeth, both in the case of bridge-work and plate-work, and also in the case of single teeth, I have invented a method of accomplishing the object by means of a dovetailed gib and a corresponding recess or groove, which are caused to engage each other and thereby fasten the parts to each other, which invention will form the subject of a separate application for Letters Patent of the United States, and is not claimed in the present application, although in part referred

to herein. The porcelain crown or face A of the tooth shown in Figs. 8, 10, and 12, is provided with a tapering dovetailed gib E, which fits into a tapering dovetailed recess F, formed in the backing for the tooth, and thereby secures them together.

My present invention relates to the formation of the tapering dovetailed recess and the instrument employed therefor. This recess I have made in the backing for the tooth or part to which the crown or face is to be secured.

Referring to Fig. 1, the letter M designates the handles of a forceps, which are pivoted to each other by a pivot N. Beyond the pivot are two jaws O O, which are operated by the handles. The jaws O O are beveled downward, and they are so made and arranged that in the closed position of the handles the lower edges of the jaws do not come together, but are separated by a space which in this example is of the same width as the narrow part of the removable gib-templet. The removable gib-templet (seen detached in Fig. 6) consists of an arm P, mounted upon the pivot N of the forceps in such a manner that it can be removed and replaced at pleasure, and behind the pivot it is provided with a handle Q, by which it can be manipulated. When the templet P is on the pivot N, it extends beneath the jaws O O, and on its upper face is formed a dovetailed gib R, which is so made and arranged that the inner and lower edges of the jaws when brought together as near as can be engage the dovetailed sides of the gib. When the forceps is opened, the jaws are separated, leaving the gib-templet P projecting midway between them. If now metal plate of proper character is laid upon the templet with the edges of the plate extending at each side under the jaws and the jaws are moved toward each other, the plate will be pressed by the jaws against the dovetailed sides of the gib R, and the sheet-metal plate will consequently at that part take the form and shape shown in Fig. 7. I then open the jaws and remove the gib-templet and the bent-metal counterpart, taking care not to bend or change the shape of the latter; but if the shape of the latter is changed I slide it over the gib on the porcelain facing A and place

the same between the jaws of the forceps and correct and readjust the derangement of the metal, in this way obviating the necessity of replacing the metal on the templet for read-
5 justment. The metal when bent and formed in this manner is used as a backing for porcelain facings in the construction of crown and bridge teeth.

10 The shape and form of the gib and jaws may be varied so long as they embody the principle of securing separate parts of a denture by means of a dovetailed connection or its mechanical equivalent.

15 It is obvious that the same gib and forceps can be used for work on teeth of different forms and sizes.

My invention can be applied to the formation of recesses for locking-keys in other articles where two or more parts are to be se-

cured to each other by sliding joints or con- 20 nections.

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

The forceps provided with beveled jaws O O, in combination with a removable gib- 25 templet or arm P, mounted on the pivot of the forceps and provided with a dovetailed gib, the jaws O O being adapted to engage the sides of the gib, substantially as shown and described. 30

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRANK T. VAN WOERT.

Witnesses:

J. VAN SANTVOORD,

WM. H. JANES.