

No. 762,289.

PATENTED JUNE 14, 1904.

F. H. DAVIS.
CROWN TOOTH.

APPLICATION FILED APR. 10, 1903.

NO MODEL.

Fig. 1.

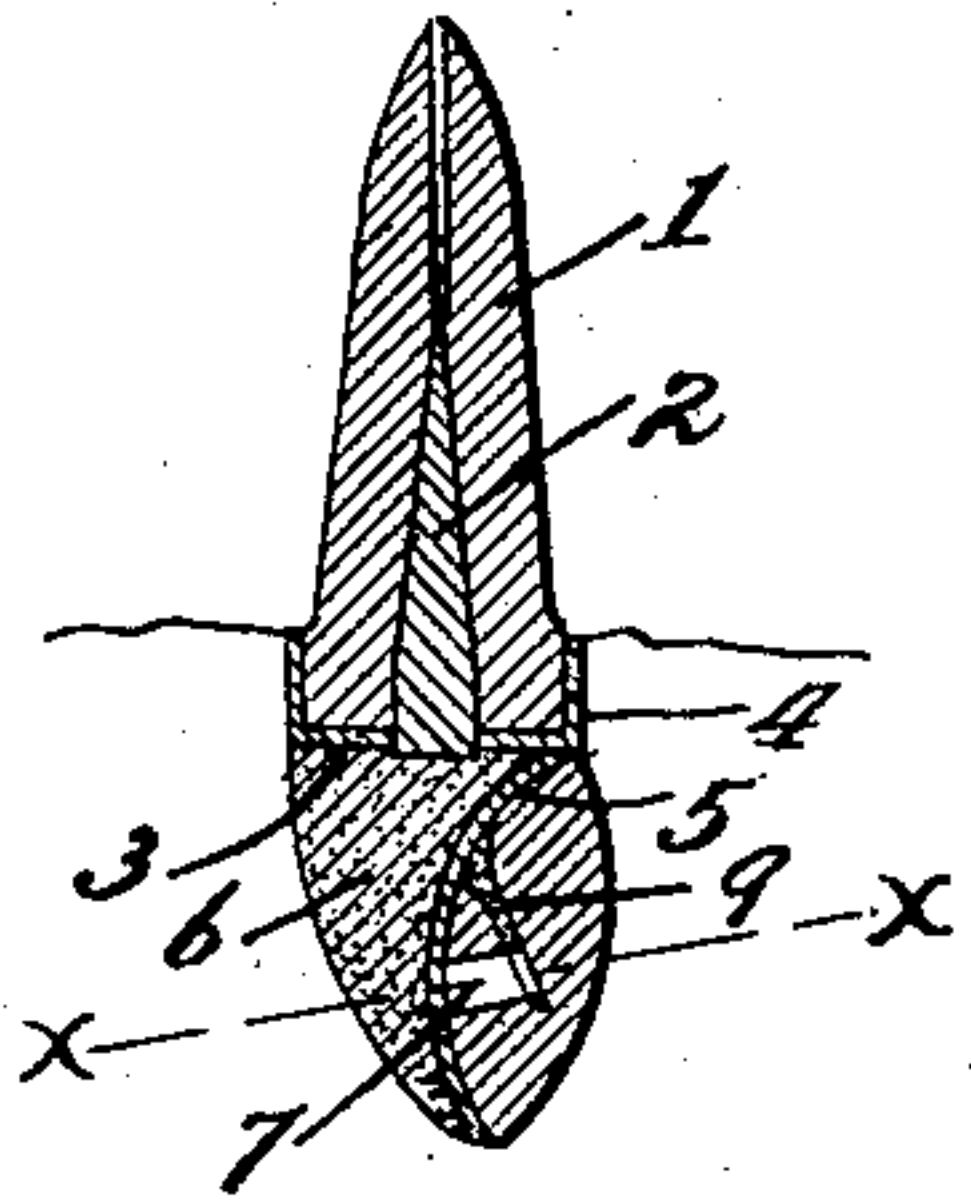


Fig. 7.

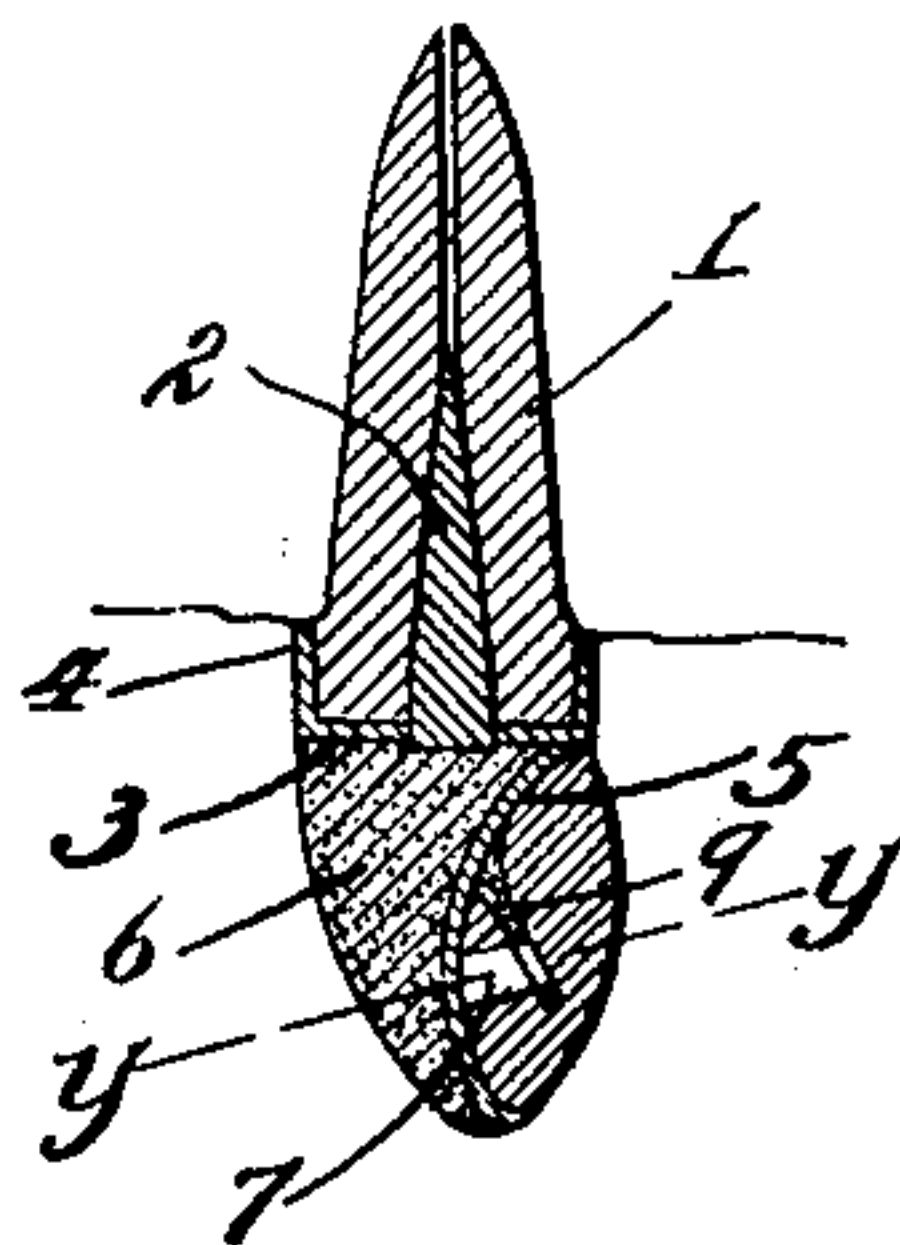


Fig. 2.

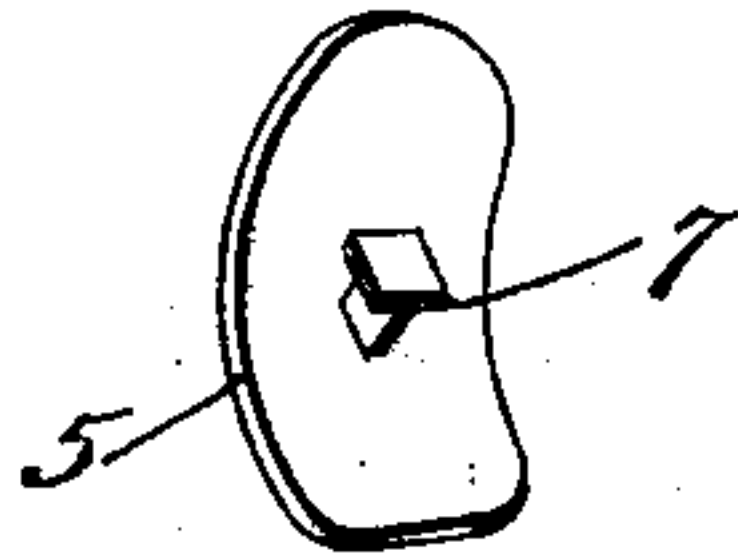


Fig. 3.

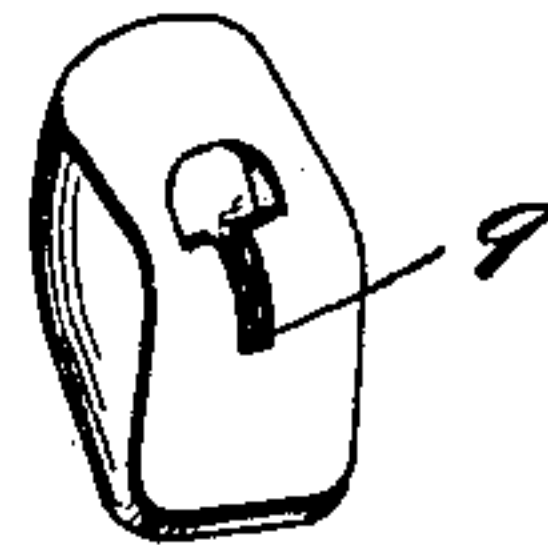


Fig. 4.

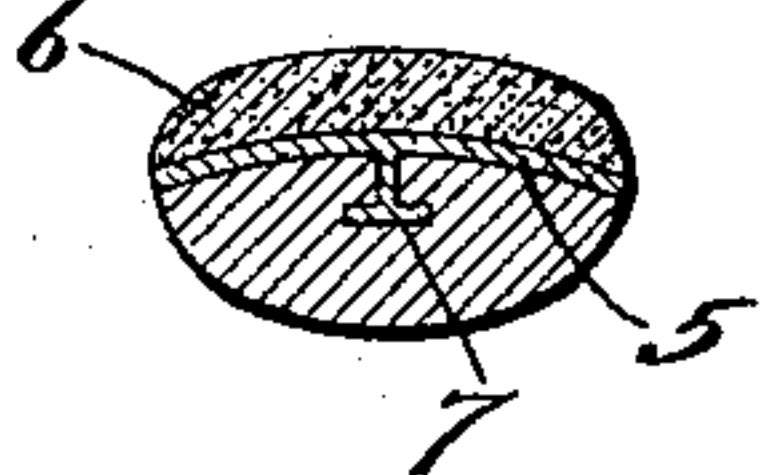


Fig. 5.

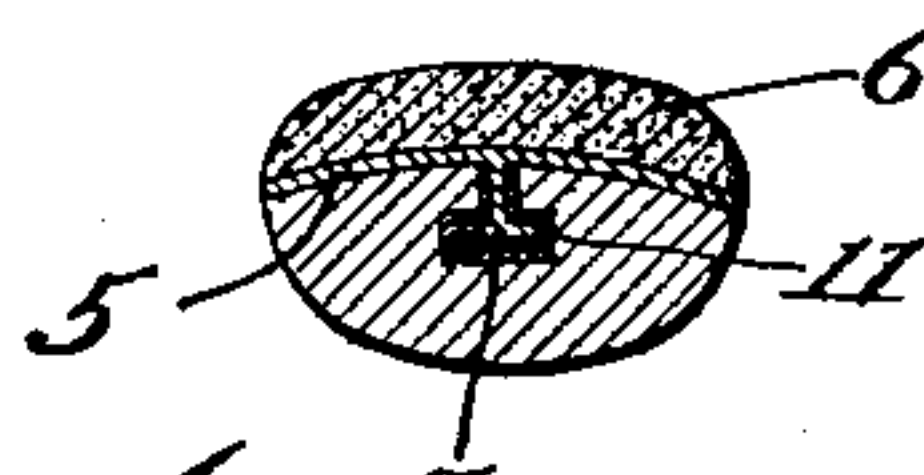


Fig. 6.

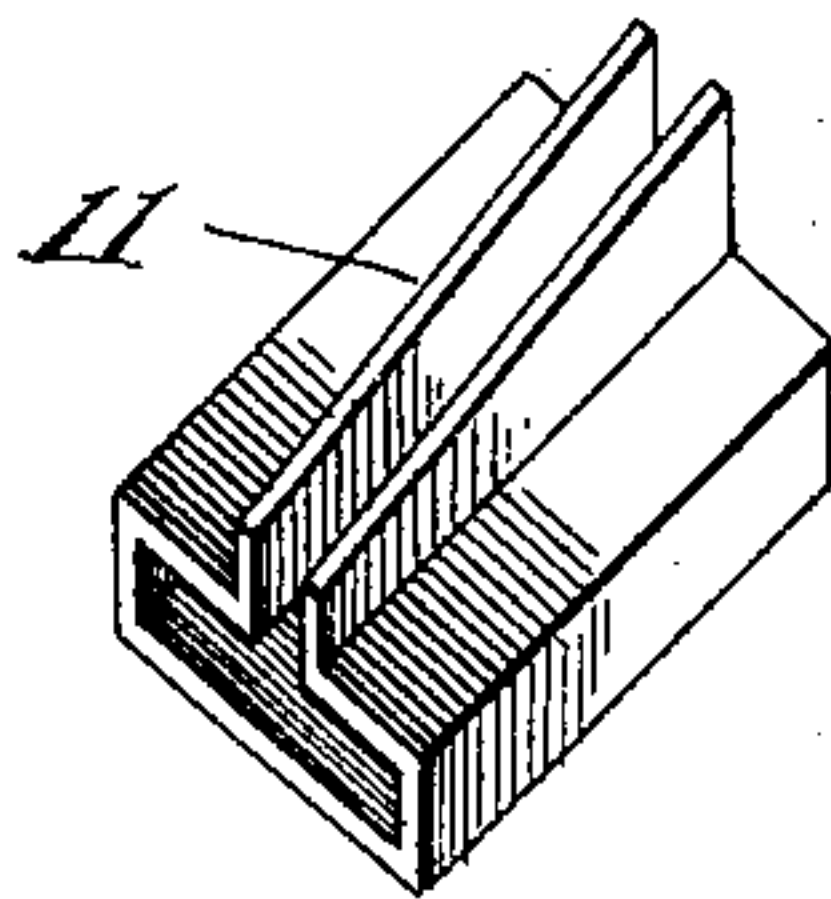
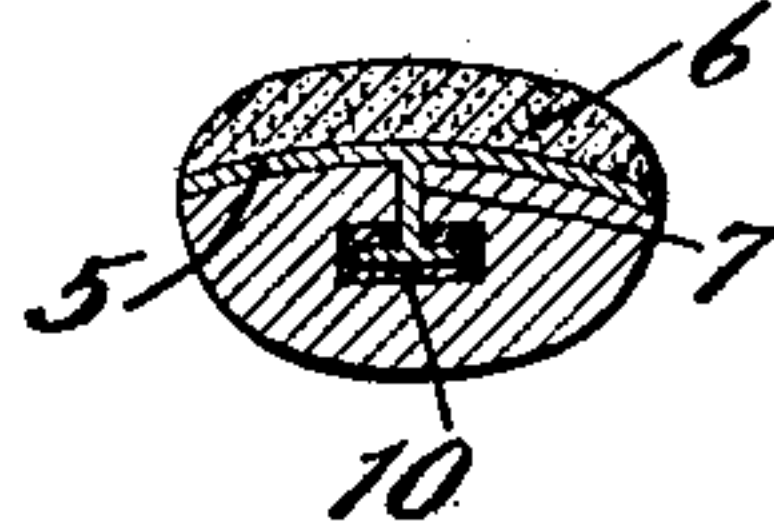


Fig. 8.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK H. DAVIS, OF CHICAGO, ILLINOIS.

CROWN-TOOTH.

SPECIFICATION forming part of Letters Patent No. 762,289, dated June 14, 1904.

Application filed April 10, 1903. Serial No. 151,992. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. DAVIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Crown-Teeth, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to certain improvements in crowns for teeth, more particularly to the manner of securing the face-plate of said crown to the backing.

The object of my invention is to provide an artificial tooth in which the connection of the facing with the backing is facilitated and the former firmly held upon the latter when placed in position.

In the accompanying drawings I have illustrated the preferred manner of carrying out my invention. Therein the several views are as follows:

Figure 1 is a sectional elevation of my preferred form of artificial or crown tooth placed in position on the root of a tooth. Fig. 2 is a perspective view of the backing-plate. Fig. 3 is a perspective view of the rear of the facing. Fig. 4 is a sectional view taken on the line *x x* of Fig. 1. Fig. 5 is a similar sectional view showing the slot or keyway in the porcelain facing provided with a metallic boxing. Fig. 6 is an enlarged perspective view of a boxing of metal or other similar material for walling the keyway or slot. Fig. 7 is a vertical sectional view of a slightly-modified form of my improved crown in position on the root. Fig. 8 is a sectional view taken on the line *y y* of Fig. 7.

Throughout the drawings like reference characters designate similar and corresponding parts.

Referring now to the drawings by reference characters, therein is illustrated the root 1 of a tooth the nerve-canal of which has been enlarged for the reception of the supporting-pin for the artificial crown. The crown consists of a pin 2, which is secured at its lower end to a base-plate 3. This base-plate 3 has

secured thereto a coping or band 4, adapted to fit upon the cervical or lateral margins of the root. The backing-plate 5 for the porcelain crown is secured to the base-plate by a metallic filling 6, forming the lingual surface of the tooth. The base-plate and the backing-plate are preferably formed separately and then connected by said filling; but of course a single piece might constitute the two.

The backing-plate has formed thereon a key or retention post 7, which preferably has a shank provided with flat sides and a rectangular head which is disposed at an incline to the backing-plate.

The facing for the tooth is preferably formed of porcelain, but may be formed of any other desirable material, and is provided with a keyway or slot 9, extending from the surface thereof and adapted to receive the key or retention post. This slot or keyway is of such form that when the key is passed therein the facing cannot be withdrawn outwardly from the backing, thereby preventing separation of the facing from the backing-plate, except by sliding the facing upon said backing-plate.

The rear surface of the facing is preferably rounded outwardly and the backing-plate thereof is formed to fit the same. The keyway or slot in said backing extends obliquely downward into the facing toward the cutting edge and labial surface thereof from the rear and upper surface of the facing, and the walls of said slot are inclined with respect to the rear wall of the facing in such manner that the farther the key is inserted into the slot the closer the facing will be drawn to the backing-plate. The head of the key is preferably arranged at an incline to the backing-plate, as shown, with its lower end arranged farther away from said backing-plate than its upper end, whereby when the facing is pushed into position the inclination of said head will cooperate with the inclination of the walls of the slot to clamp the facing to the backing-plate. This of course may be accomplished in other ways, if desired, as by inclining the slot or making the contacting faces of the backing and facing of various forms.

The facing as herein constructed is placed upon the backing-plate after the latter has been secured to the base-plate of the crown by sliding the key on the backing-plate into the keyway of the facing. This may be done, it will be observed, by sliding the facing upwardly upon the backing-plate—that is to say, toward the root of the tooth. When the facing is put in position, cement or other suitable material is placed within the keyway or slot to prevent withdrawal of the facing from the key and backing. By shaping the lug or key in the manner described the facing cannot turn upon the key or retention post, and by providing said key with a head which has flat under sides a cushion of gutta-percha or other material, as shown in Fig. 8, may be interposed between said head and the walls of the keyway, which will make a resilient bearing for the key upon the facing, whereby the danger of the facing being cracked by direct contact with the key itself will be avoided.

In some instances it may be desirable to provide the facing of the tooth with a boxing as illustrated in Figs. 5 and 6, for forming the slot in said facing. In such cases the boxing is shaped in a manner to receive the key at its end and retain it from withdrawal transversely and is baked within the porcelain. In Fig. 7 another modification of my invention is shown, in which the backing or lingual surface of the crown is extended to project around and under the cutting edge of the porcelain facing so as to protect the porcelain.

Various changes and modifications may of course be made in the details of construction herein shown and described without in any way departing from the spirit of my inven-

tion and the same yet remain intact and be protected.

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

1. An artificial crown for a tooth comprising a facing having a suitable keyway or slot with walls inclined inwardly from the back of said facing, a backing for supporting said facing, and a key fastened upon said backing and having an inclined head and slidably fitted in said keyway to hold the facing in position.

2. An artificial crown for a tooth comprising a facing having a suitable keyway or slot with walls inclined inwardly from the back of said facing, a backing for supporting said facing and a key fastened upon said backing and slidably fitted in said keyway to hold the facing in position.

3. An artificial crown for a tooth comprising a facing having a suitable keyway or slot with the walls inclined inwardly from the back of said facing, a backing for supporting said facing and a key fastened upon said backing and having an inclined head and slidably fitted in said keyway to hold the facing in position, and a filling of resilient material placed in said keyway or slot between the key and the walls of said keyway to provide a resilient bearing for said key upon the walls of the slot.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

FRANK H. DAVIS.

Witnesses:

M. R. ROCHFORD,
HOWARD M. COX.