

(No Model.)

B. B. BRAY.
DENTAL BRIDGE WORK.

No. 542,138.

Patented July 2, 1895.

Fig. 1.

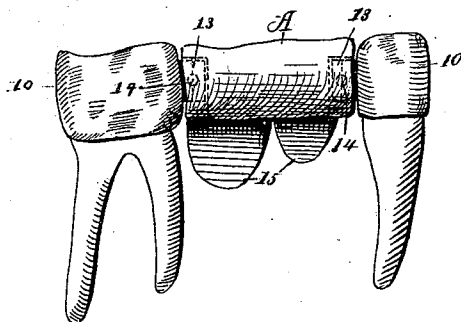


Fig. 2.

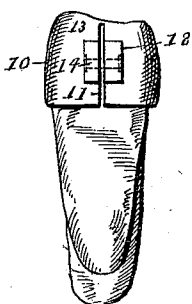


Fig. 3.

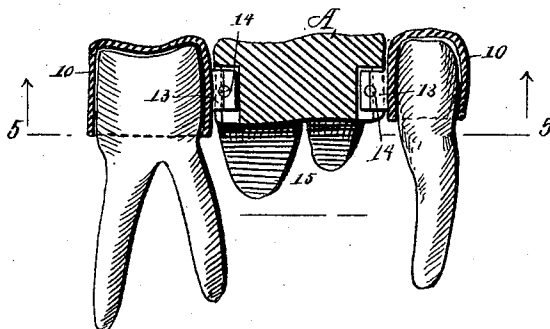


Fig. 4.

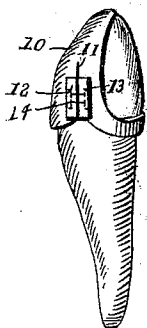


Fig. 5.

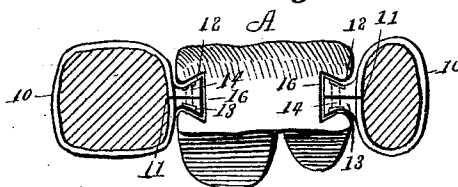
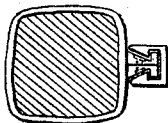


Fig. 6.



WITNESSES:

J. M. Andle.
J. H. Aker.

INVENTOR

B. B. Bray.

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

BERNARD B. BRAY, OF AXTELL, TEXAS.

DENTAL BRIDGEWORK.

SPECIFICATION forming part of Letters Patent No. 542,138, dated July 2, 1895.

Application filed September 4, 1894. Serial No. 522,088. (No model.)

To all whom it may concern:

Be it known that I, BERNARD B. BRAY, of Axtell, in the county of McLennan and State of Texas, have invented a new and Improved Dental Bridge, of which the following is a full, clear, and exact description.

My invention relates to improvements in dental bridges, and has for its object to provide an improved crown, cap, or band for attaching the bridges to the natural teeth.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is an inner face view of an artificial bridge and two natural teeth with which the bridge is connected. Fig. 2 is a side elevation of a natural tooth provided with a cap or crown, illustrating the principle of the cap or crown before it is clamped to the tooth. Fig. 3 is a vertical section through the bridge and likewise a vertical section through the caps or crowns for the natural teeth with which the bridge is connected. Fig. 4 is a perspective view of a tooth, illustrating a cap or crown applied thereto, exposing a portion of its natural surface. Fig. 5 is a horizontal section taken essentially on the line 5 5 of Fig. 3, and Fig. 6 is a horizontal section of a modified construction.

In carrying out the invention a cap or crown 10 is employed to cover the exposed surface of a natural tooth in the event that the said surface is not perfect, and the cap or crown upon that side which is to face the bridge is provided with a slot 11 therein extending preferably from its lower edge to a point at or near the top, as illustrated in Fig. 3, and at each side of this slot 11 a lug 12 is formed; and the said lugs upon their opposing faces are preferably made flat, so that they may be drawn in close contact with one another, while ordinarily the outer side edges of the lugs are more or less concaved or inclined, the inclination or concavity being such that when the two lugs are brought together they will form jointly a tenon 13 dovetailed in cross-section;

but the shape of the tenon may be changed if in practice it is found desirable. The two lugs forming a tenon when brought together are held in close contact through the medium of a screw 14, pin, or the equivalent thereof passed through them and countersunk in their outer surfaces, as shown in the drawings. Thus it will be observed that a cap or crown may be placed over a tooth and made to fit to the convolutions of its surface and may be clamped firmly around its neck by drawing the lugs together, and that at the same time a tenon is formed as a support for the bridge A, and the cap or crown of each tooth may be finished off in a convenient manner at its lower edge.

The bridge A may be constructed in any approved manner, and the teeth 15 may be attached thereto as may be found desirable; but in each end of the solid portion of the bridge a socket 16 is produced which is of the same cross-sectional shape as the tenons of the caps or crowns, the said sockets being preferably made of metal, and they are fastened in the bridge structure in any manner known to the trade.

After the bridge is completed its sockets are made to receive the tenons of the caps or crowns, as shown in Fig. 3, and the bridge is then cemented, screwed, or otherwise fastened to the tenons, making the structure, while substantially permanent, capable of being readily removed from the mouth for repairs, when desired.

In Fig. 4 I have illustrated a cap or crown in which one surface of the natural tooth, being perfect, is left exposed; and it will be understood, further, that when a tooth is perfect a band may be substituted for the cap or crown, being placed around the tooth and fitted snugly beneath the bulge thereon, whereby it cannot work either up or down. By this method the crown may be so placed as to leave the face of the tooth visible in its natural shape and yet have a perfect fit around the neck of the tooth. When two teeth lean toward each other, it is very difficult under the ordinary method of bridge construction to make a bridge and put it in place when it is all made together; and when it is accomplished a great deal of the tooth must necessarily be ground away, which is very

painful to persons with sensitive teeth or teeth badly worn, while under the system shown in the drawings this difficulty is entirely avoided.

5 If at any time a cap or crown becomes loose or any portion of the bridge becomes impaired, it can easily be taken out and the necessary repairs made at small cost.

10 Gold tips are not necessary on artificial teeth in this bridgework, as a tooth can easily be put in in case one should break away, and it therefore dispenses with the large quantity of gold usually shown in this character of work, and the artificial teeth look much more
15 natural. I desire it to be understood that the tenons may be of any desired shape, a modification thereof being illustrated in Fig. 6.

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

1. The combination of a slotted crown, cap or band provided with a lug on each side of the slot, the said lugs forming a tenon and a bridge provided with a recess open at the bot-
25 tom and adapted to receive the tenon, substantially as and for the purpose specified.

2. A split dental cap, crown or band, provided with a lug at each side of the split

therein, the opposing faces of the lugs being fitted for engagement with each other, and a
30 fastening device adapted to be introduced into the lugs for the purpose of binding them together, whereby the said lugs form combinedly a tenon, as and for the purpose specified.

3. The combination of a slotted crown, cap, or band provided with a lug on each side of the slot, means for binding the lugs together to bind the crown, cap or band on a tooth and cause the said lugs to form a tenon, and a
40 bridge provided with a recess open at the bottom and adapted to receive the said tenon, substantially as described.

4. A split dental cap, crown or band, provided with a lug at each side of the split por-
45 tion, the two lugs facing one another, the said lugs being provided with inclined outer side faces, and a pin or screw, adapted to enter the lugs and draw the same together, forming substantially a dove-tail tenon, and imparting
50 to the band, cap or crown a clamping action, substantially as and for the purpose set forth.

BERNARD B. BRAY.

Witnesses:

THOS. W. WATERS,
HARRY COHN.