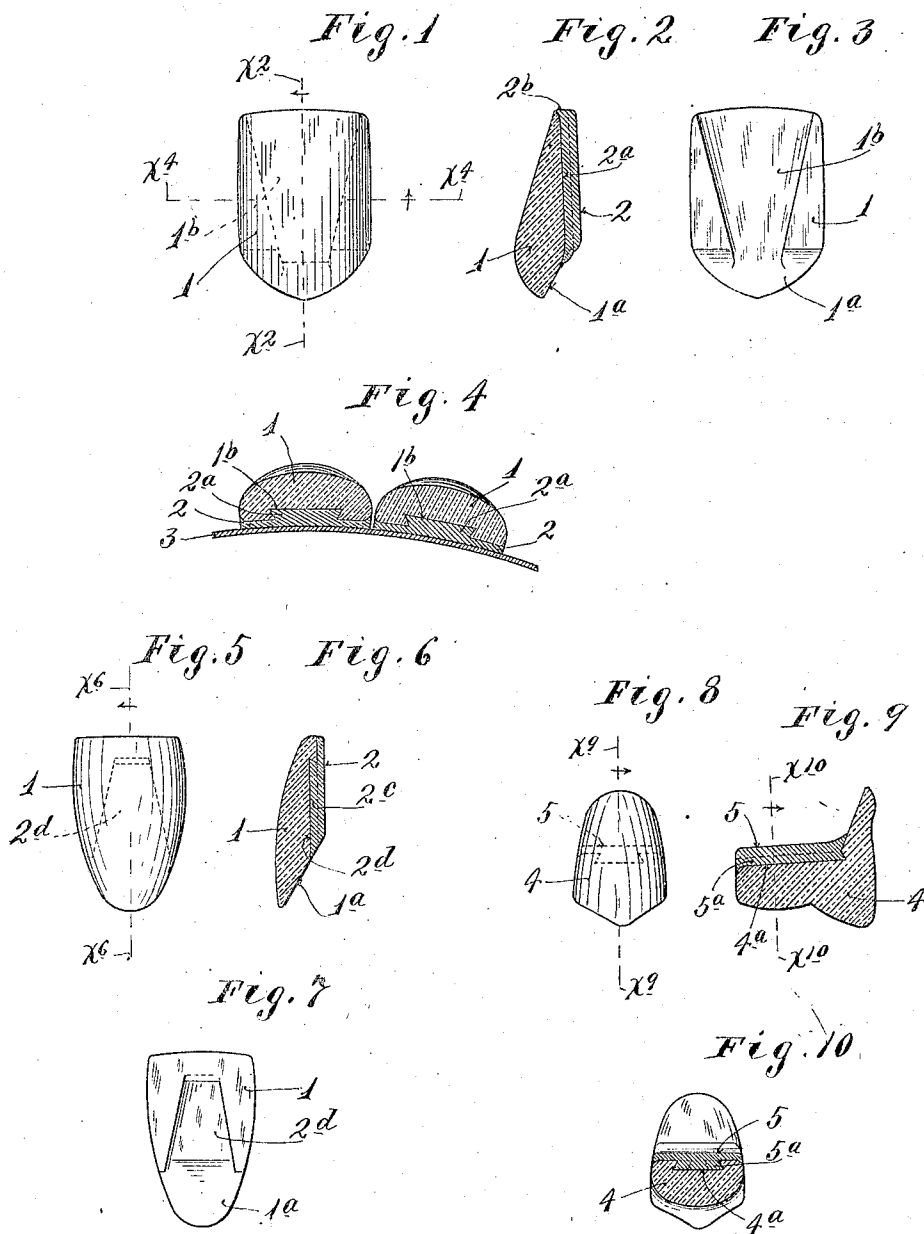


G. W. PATTEN.
DETACHABLE TOOTH FACING.
APPLICATION FILED MAY 3, 1909.

983,516.

Patented Feb. 7, 1911.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE W. PATTEN, OF MINNEAPOLIS, MINNESOTA.

DETACHABLE TOOTH-FACING.

983,516.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed May 3, 1909. Serial No. 493,495.

To all whom it may concern:

Be it known that I, GEORGE W. PATTEN, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Detachable Tooth-Facings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to the construction of artificial teeth, and is especially directed to the provision of improved means for connecting the porcelain tooth faces to metallic bridges and plates.

To the above ends, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claim.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings: Figure 1 is a view in front elevation, showing the porcelain face and metallic back of an incisor tooth; Fig. 2 is a vertical section taken on the line $x^2 x^2$ of Fig. 1; Fig. 3 is a rear elevation of the porcelain face shown in Figs. 1 and 2; Fig. 4 is a horizontal section taken through several teeth on the line $x^4 x^4$ of Fig. 1, and showing the said teeth secured to a metallic bridge; Fig. 5 is a view corresponding to Fig. 1, but illustrating a modified construction; Fig. 6 is a vertical section taken on the line $x^6 x^6$ of Fig. 5; Fig. 7 is a rear elevation of the tooth face shown in Figs. 5 and 6; Fig. 8 is a front elevation of a bicuspid tooth; Fig. 9 is a vertical section taken on the line $x^9 x^9$ of Fig. 8; and Fig. 10 is a vertical section taken on the line $x^{10} x^{10}$ of Fig. 9.

Referring first to the construction shown in Figs. 1 to 4 inclusive, the numeral 1 indicates the porcelain tooth face, the root end of which is provided with a gingival bevel 1^a to make room for the gums. In its back, this porcelain facing 1 is provided with a dovetailed seat 1^b that is cut or extended through the gingival bevel 1^a, and flares from the latter toward the incisor edge of the tooth facing, and where it joins the latter, is nearly, but not quite, as wide as the said tooth facing.

The metallic back of the tooth is in the form of a thin metallic plate 2, preferably of gold,

which is the same width as the tooth facing, and is provided with a dovetailed tapered flange or key 2^a that fits the dovetailed seat 1^b of the tooth facing 1. This metallic back 2 is provided at one end with a laterally extended flange 2^b that overlies and reinforces the incisor edge of the tooth facing 1, and forms a stop which limits the movement of the key or dovetailed flange 2^a within the dovetailed seat 1^b of the tooth facing. This reinforcing or protecting flange 2^b preferably extends completely over or across the incisor edge of the tooth facing, and transmits biting strains directly to the body of the metallic back 2, although, it will, of course, be understood that the dovetailed key 2^a should be of such size and taper, that it will tightly fit the seat 1^b when the flange 2^b is engaged with the incisor edge of the tooth facing. These dovetailed parts and the flange 2^b very firmly connect the tooth facing to the metallic back of the tooth, and at the same time, they permit both the tooth facing and the back to be ground off to fit the tooth to a bridge or plate without damaging or weakening the dovetailed connection between the said facing and back. It will also be understood, that it is important that the dovetailed groove or seat 1^b be extended through the gingival bevel 1^a, so that this latter portion will not act as a stop to prevent the dovetailed key 2^a from being tightly seated within the seat 1^b.

In Fig. 4, the metallic tooth backs 2 are shown as secured by solder or other suitable material to a bridge bar or plate 3.

In the tooth construction illustrated in Figs. 5, 6 and 7, the flange 2^b for engagement with the incisor edge of the tooth facing 1 is omitted, and the tooth facing is connected to the said back 2 solely by a tapered dovetailed key 2^a, that engages a tapered dovetailed seat 2^a in the back of the tooth facing 1.

In the tooth construction illustrated in Figs. 8, 9 and 10, a bicuspid tooth 4 is shown, and this tooth facing is provided on its horizontally cut upper portion, with a tapered dovetailed seat 4^a that receives a tapered dovetailed key 5^a of a metallic back plate 5.

As a common feature to all the tooth structures shown, the tooth facings are provided with tapered dovetailed seats, and the metallic tooth backs or back plates are provided with tapered dovetailed keys or ribs, that fit the said seats in such manner that

the sides of the tooth facing and back plate may be ground away without interfering with the dovetailed connection between the said facing and back.

5 What I claim is:

10 The combination with a tooth facing having a gingival bevel, and provided with a dovetailed seat extending from the incisor edge thereof through said gingival bevel, and flaring in a direction from said gingival bevel toward the incisor edge of said tooth, and a metallic back provided with a tapered dovetailed key fitting the tapered dovetailed seat of said facing, and provided at one edge

with a laterally projecting flange adapted to 15 cover and reinforce the incisor edge of said tooth facing, said flange and dovetailed key being substantially of the same width at the incisor edge of the tooth to brace the flange throughout its width by said key, substan- 20 tially as described.

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

GEORGE W. PATTEN.

Witnesses:

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