

M. H. TUTTLE.
CROWN FOR TEETH.
APPLICATION FILED MAY 10, 1910.

967,086.

Patented Aug. 9, 1910.

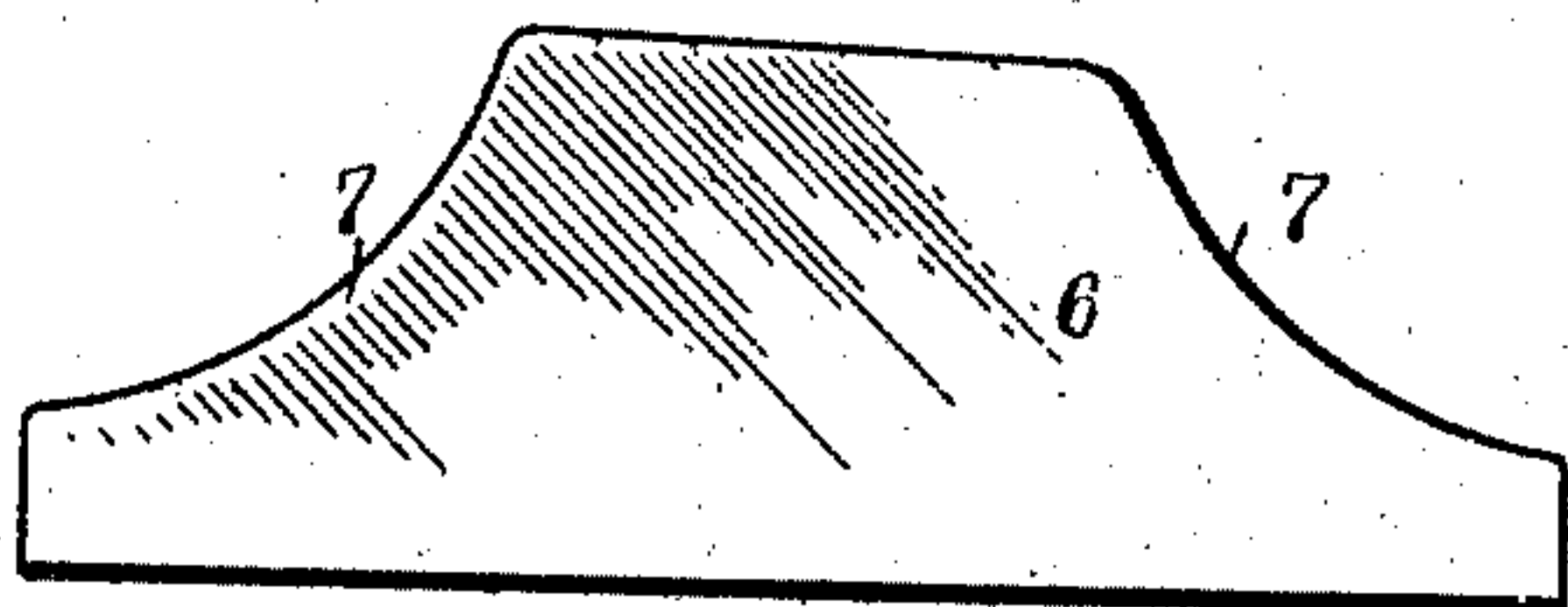


Fig. 1.

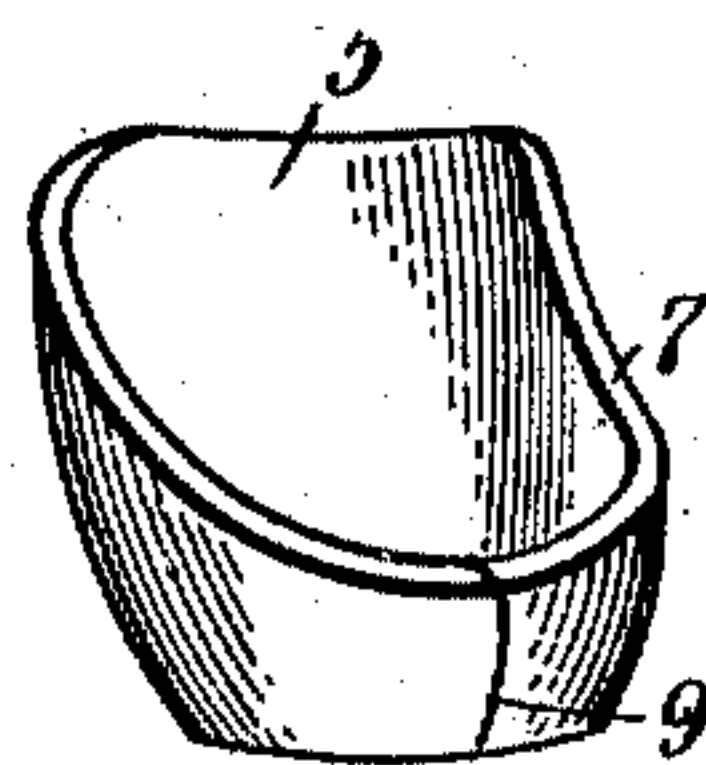


Fig. 2.

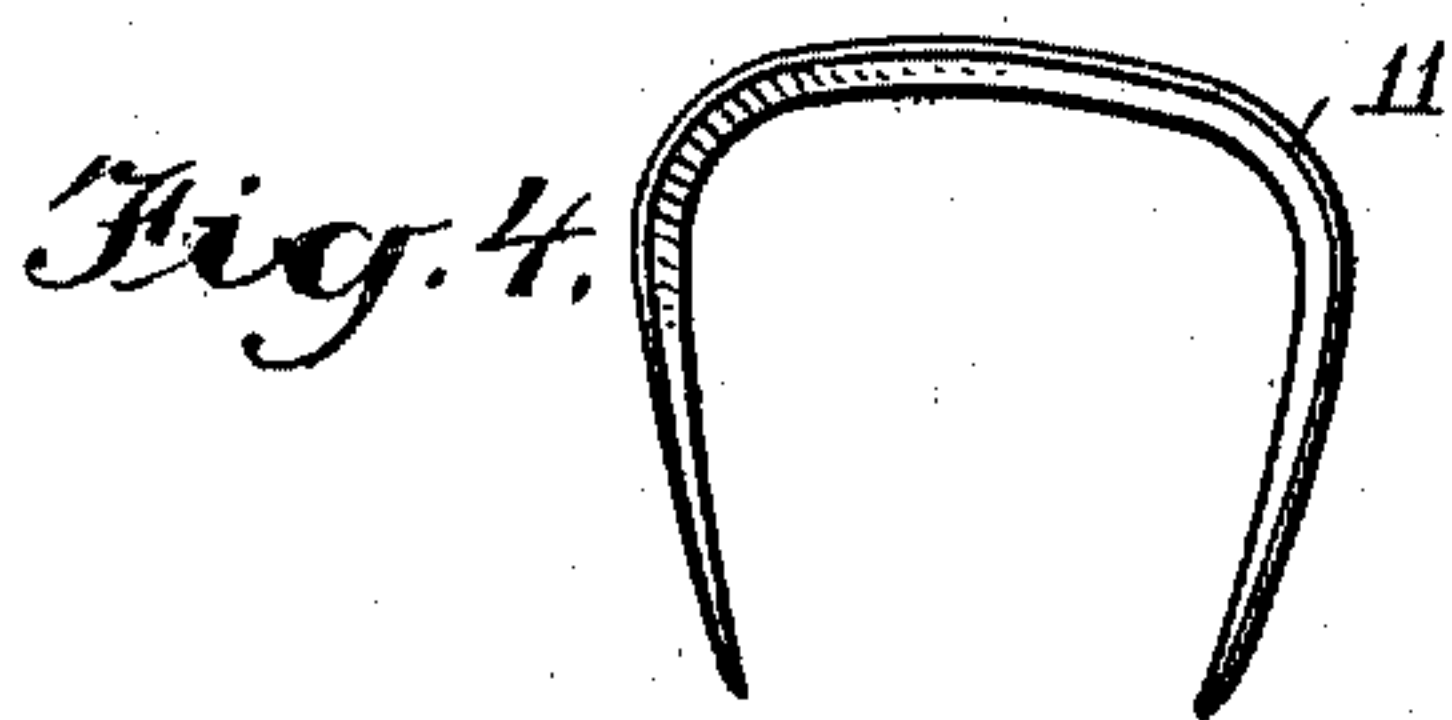


Fig. 4.

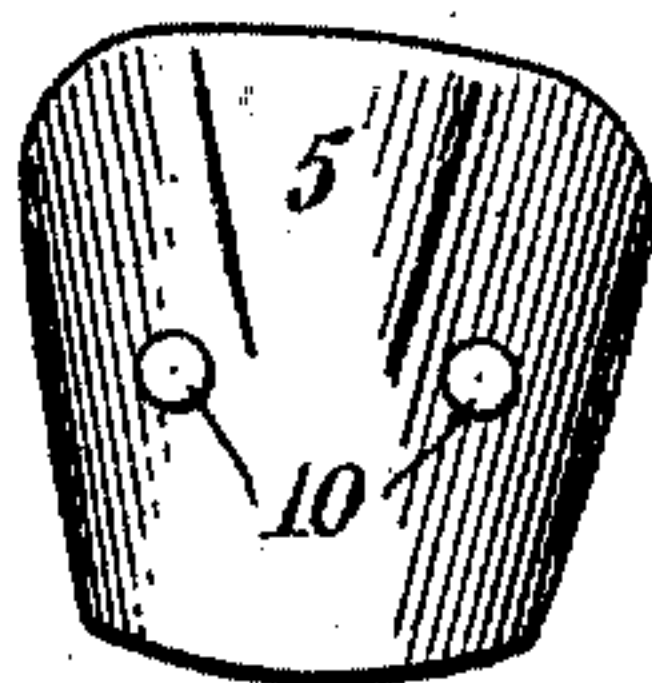


Fig. 3.

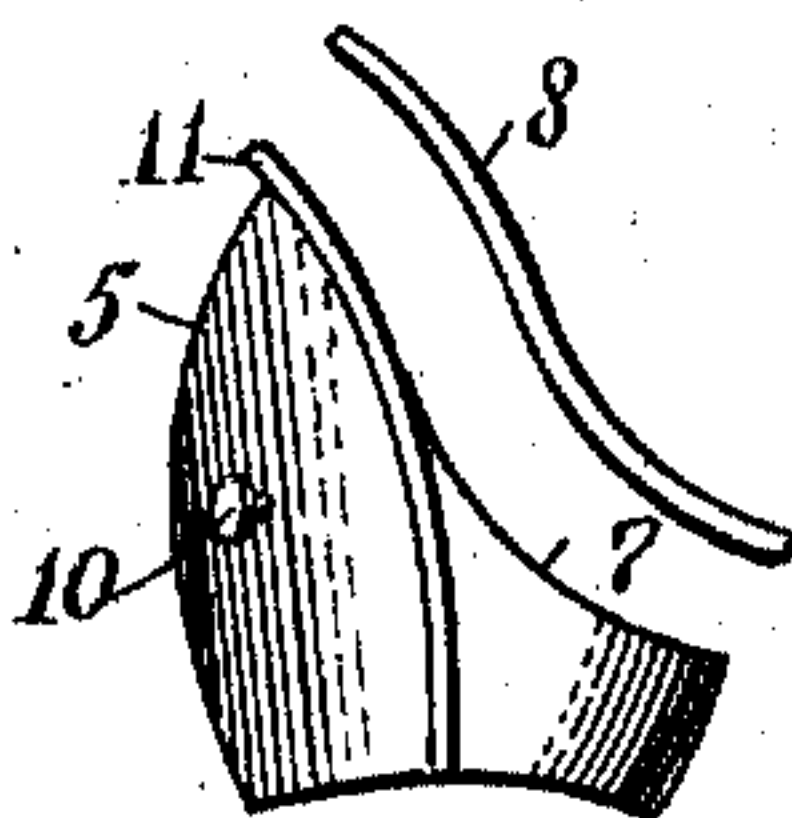


Fig. 5.

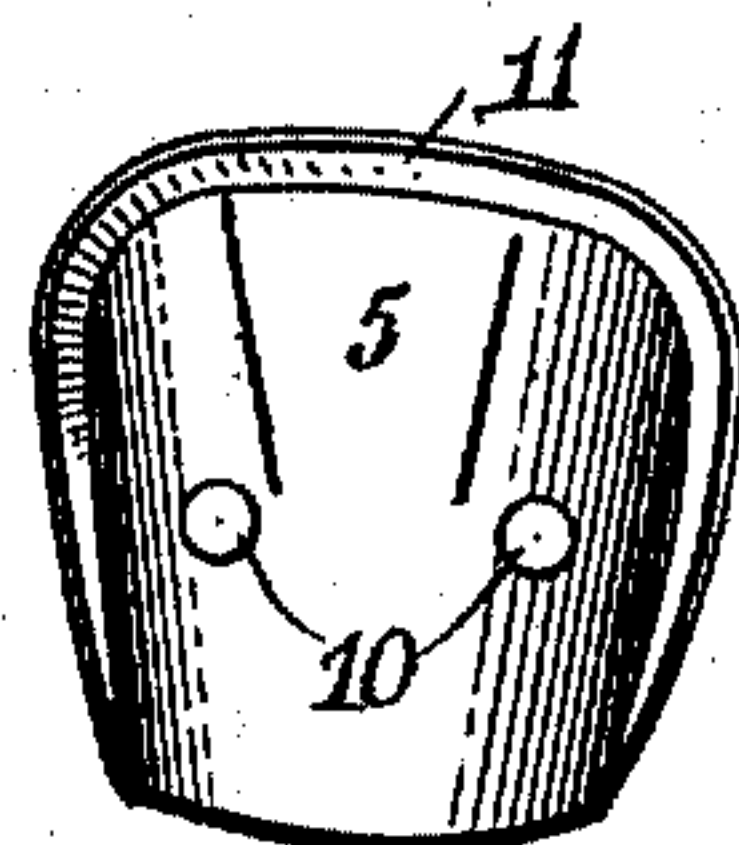


Fig. 6.

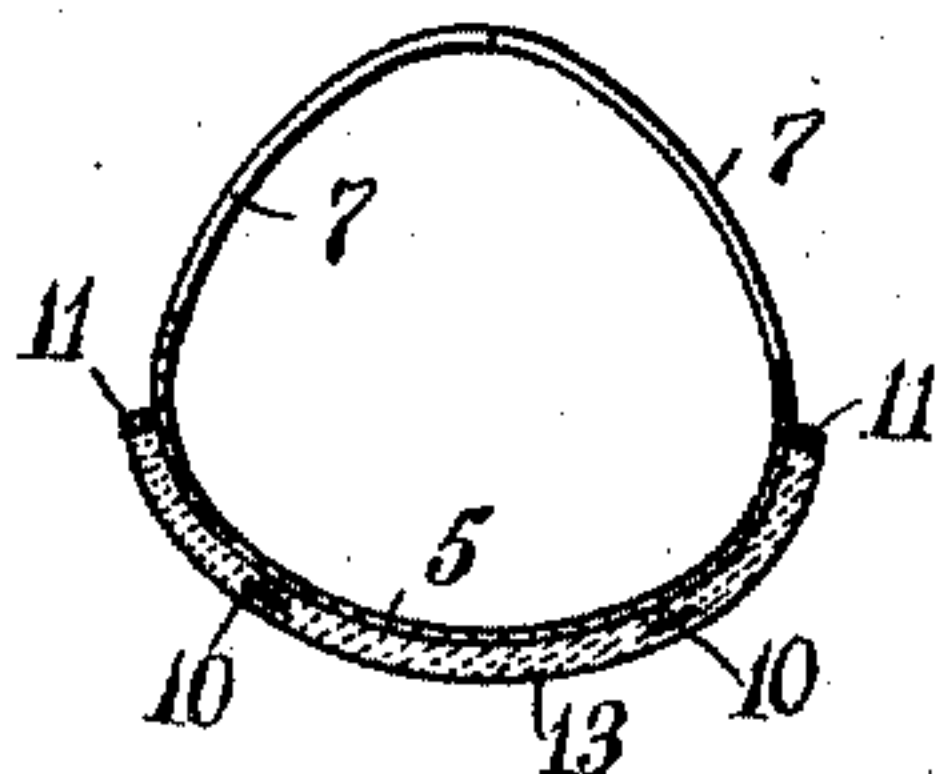


Fig. 7.

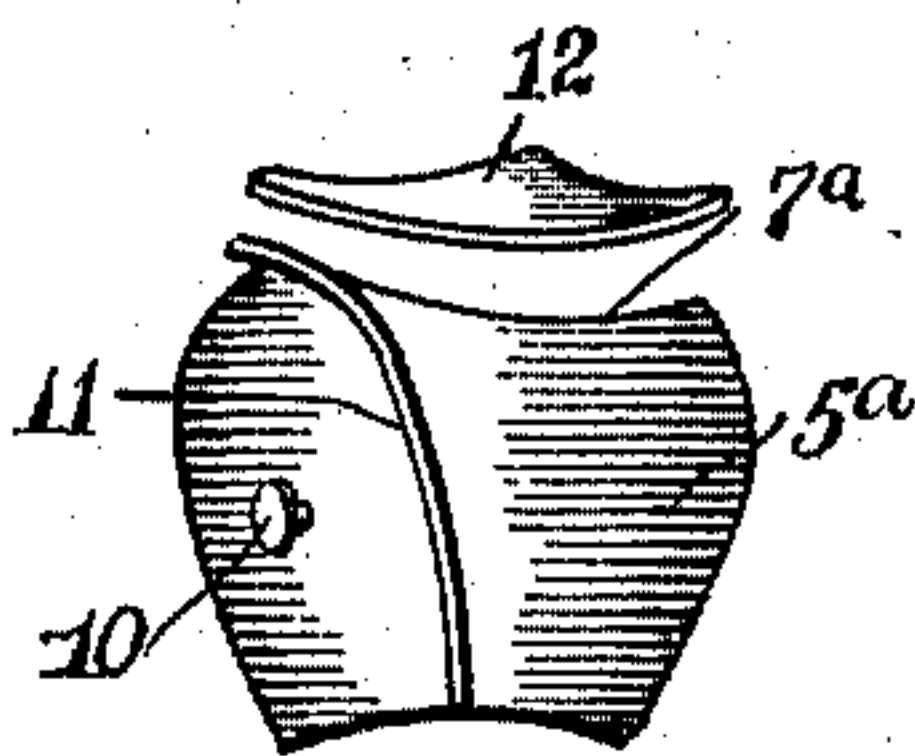


Fig. 8.

WITNESSES:

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UNITED STATES PATENT OFFICE.

MONTAGUE HART TUTTLE, OF ATLANTA, GEORGIA.

CROWN FOR TEETH.

967,086.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed May 10, 1910. Serial No. 560,455.

To all whom it may concern:

Be it known that I, MONTAGUE H. TUTTLE, a citizen of the United States, and a resident of Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Crowns for Teeth, of which the following is a full, clear, and exact description.

My invention relates to crowns for teeth, and it has for one of its objects to provide a crown which is durable, serviceable and natural in appearance.

The crown is a hollow, telescopic one, adapted to be adjusted to a stump of a tooth with cement.

Another object of the invention is to provide a crown which may be held in place without the necessity of using anchorage pins, thus obviating the necessity of destroying the nerves in the teeth.

The crown may be readily and easily adapted to any tooth in the mouth. Inasmuch as the crown has an all metal, telescopic base or cap and as it is natural in appearance, it forms a most valuable substitute for broken-down teeth. The doing away with the anchorage pins makes the crown exceedingly more valuable for the two reasons: that there is no necessity of destroying the nerves of the tooth and no danger of injuring the roots of the tooth which is crowned.

Still another object of the invention is to provide a crown strong and durable, with a metal exposure lingually for soldering purposes, which makes it exceedingly valuable as an abutment crown in the construction of bridge work.

Still other objects of the invention will appear in the following complete description.

In this specification I will describe the preferred form of my invention, it being understood that the scope of the invention is defined in the appended claims.

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

Figure 1 is a view showing a platinum plate of any suitable gage, with its upper corners scalloped out to form the lingual slope; Fig. 2 is a perspective view showing the platinum plate after it has been formed into a band, with its terminals soldered to-

gether, the lingual curve of the band formed by the scalloped corners being clearly shown; Fig. 3 is a view showing the labial surface of the band, with the pin heads thereon; 60 Fig. 4 is a view showing a piece of platinum cut into a horseshoe shape, to be soldered on the band to form a box on the labial face of the band for receiving a porcelain veneer; Fig. 5 is a side view of a band with the 65 horseshoe shaped piece of platinum soldered in place, completing the box, the lingual cap being shown cut and shaped in position ready to be seated and soldered to the band; Fig. 6 is a view taken from the labial side 70 of the band shown in Fig. 5; Fig. 7 is a sectional plan view of the band as shown in Fig. 6, after the porcelain enamel has been applied to the labial face of the band and before the lingual cap has been soldered in 75 place; and Fig. 8 is a side view of a molar, or bicuspid, crown, embodying my invention, a cusp being shown above the band, this cusp being substituted for the lingual cap shown in Fig. 5, which is used for an- 80 terior teeth.

The body, or metal form, of my crown may be made of any suitable material and the box-like labial surface may be veneered with any suitable enamel, but I prefer to 85 construct the bands of platinum and the cap piece of gold, although the cap piece may also be manufactured of platinum with good results.

The band 5, shown in Fig. 2 of the draw- 90 ings, is manufactured from the piece of material 6, shown in Fig. 1 of the drawings, with scalloped corners 7 which form the lingual slope and a base for the lingual cap 8, as shown in Fig. 4 of the drawings. The 95 terminals of the band 5 are soldered together at 9 with platinum or gold solder. To the labial side of the band are secured pin heads 10. When this has been done, a piece of platinum 11 of horseshoe shape, as shown in 100 Fig. 4 of the drawings, is disposed across the top of the band 5 and at each side, the piece of platinum 11 dividing the labial surface of the band from the lingual surface. This piece of platinum 11 forms a rim 105 at the top and the sides of the labial surface of the band, which I will refer to as the box to receive the porcelain veneer. After the piece of platinum has been soldered in place with platinum or gold solder, the whole 110 labial surface of the band is thoroughly scarified to form a suitable surface to re-

ceive the porcelain veneer, this being done in addition to providing the pin heads 10, which assist in holding and supporting the porcelain veneer on the band 5.

5 The horseshoe shaped piece of platinum 11 divides the band labia-lingually in half, thus providing a metal surface lingually and a surface which is veneered with porcelain labially. The band having been made and
10 thoroughly adapted to the tooth and the box being formed in this labial surface as has been described, the porcelain is applied in the form of an impalpable powder made into a thin paste with water, the paste being
15 brushed on to the labial surface of the band until the box is thoroughly filled and the porcelain is flush with the edges of the box; that is, the outer surfaces of the piece of porcelain 11 all around. The porcelain body
20 may be trimmed and shaped with the ball of a finger to suit all requirements. The band, to the labial surface of which the porcelain has been applied, is then inserted into a furnace and the porcelain is properly
25 baked in a well-known manner. After the porcelain has been baked onto the band, the lingual cap 8 is secured to the band, this lingual cap 8 being cut to fit and being burnished on the lingual slope. The lingual
30 cap is soldered to the band by platinum or gold solder. This lingual cap piece 8 may be made of platinum, but I prefer to make the lingual cap of gold about 22 K. fine, 28 or 30 gage. In soldering this cap on the band,
35 the porcelain or labial surface should be protected with any of the good investment compounds. This lingual cap 8 may be extended slightly above the porcelain front at the cutting edge of the crown, and after
40 soldering it may be trimmed down to form a tip or shoe to protect the porcelain. It is, of course, understood that if this lingual cap piece 8 is made of gold, it must be soldered on after the porcelain has been baked,
45 for otherwise the gold would fuse by reason of the intense heat required in the furnace to bake the porcelain. The band being made of platinum, it will withstand the furnace heat.

50 In Fig. 8 of the drawings is shown a molar, or bicuspid, crown embodying my invention. In this embodiment the band 5^a is formed to fit the molar, or bicuspid, stump

with the scalloped portions 7^a so cut as to form an opening which is covered by a cusp 55 12, which is soldered in place after the porcelain has been baked. This is the only difference between the crown for the molar or bicuspid teeth and the crowns for the anterior teeth where the opening made by 60 the scalloped portions is covered by the lingual cap.

After these crowns are baked and soldered and thoroughly finished by polishing, they are ready to be set on the stump of the 65 tooth. They can be as thoroughly articulated in the process of construction as any other crown. The metal box on the labial surface of the crown, affords a sure means of forming a smooth joint between the por- 70 celain front and the metal cap where they join.

It is, of course, understood that the porcelain may be tinted and shaded with the different porcelain colors, to match perfectly 75 any tooth.

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

1. In a crown for teeth, a cap, a member 80 disposed therearound and dividing the cap labia-lingually and forming a box on the labial surface, and an enamel disposed in the box.

2. In a crown for teeth, a metal cap hav- 85 ing a member forming a box on its labial surface, and an enamel disposed in the box.

3. In a crown for teeth, a metal band having a box on its labial surface, an enamel disposed in the box, and a cap secured to the 90 metal band for inclosing its incisive edge.

4. In a crown for teeth, a metal band having cutaway portions on its lingual side, a U-shaped member disposed across the incisive edge of the band and dividing the 95 metal band labia-lingually, an enamel affixed to the labial surface of the band, and a cap for inclosing the end of the band.

In testimony whereof I have signed my name to this specification in the presence of 100 two subscribing witnesses.

MONTAGUE HART TUTTLE.

Witnesses:

A. J. HALTIWANGER,
BARRINGTON J. KING.