

C. J. SPAIN.
TOOTH CROWN.
APPLICATION FILED NOV. 4, 1912.

1,062,048.

Patented May 20, 1913.

Fig. 1.

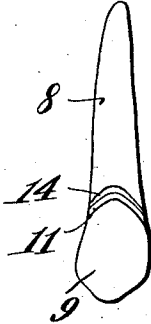


Fig. 2.

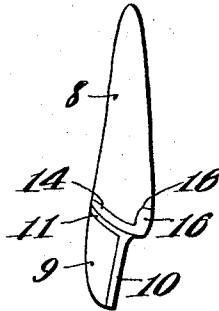


Fig. 3.

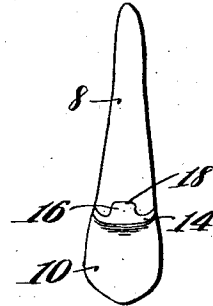


Fig. 5.

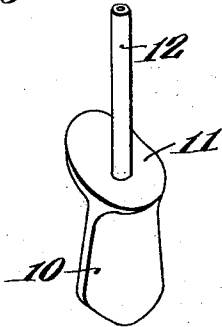


Fig. 4.

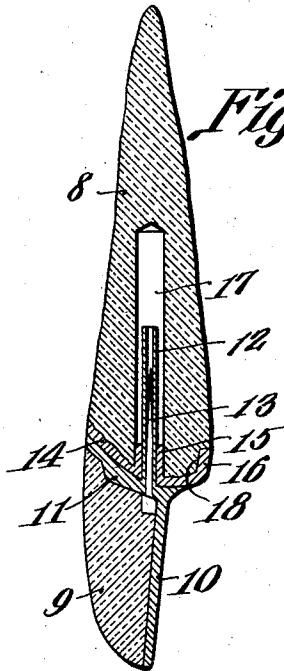


Fig. 6.

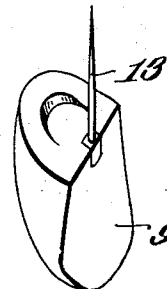
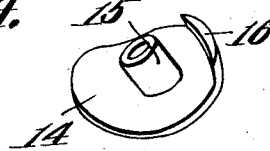


Fig. 7.

Witnesses

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TOOTH-CROWN.

1,062,048.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARROLL J. SPAIN, a citizen of the United States, residing at Beloit, in the county of Mitchell and State of Kansas, have invented a new and useful Tooth-Crown, of which the following is a specification.

The present invention appertains generally to dentistry, and particularly to an improvement in tooth crowns.

This invention aims to provide a tooth crown which may be adapted to various roots in a facile, expeditious and efficient manner, and in such a manner as to avoid the irritation of the gum tissue.

Another object of the present invention is to provide a crown embodying a backing having a tubular or hollow root entering stem and having a detachable facing, in order that when the facing is removed, it will permit of the treatment of abscesses of the root through the said stem.

A further object of the invention is to provide a crown which shall be applied to the root in such a manner as to throw the strain of mastication or pressure on the entire root.

This invention also comprehends carrying out the aforesaid objects in a simple, efficient, and inexpensive manner, so that the crown will be an effective one, and will be durable and substantial in its use.

To the above and other ends, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The preferred embodiment of the invention has been illustrated in the accompanying drawings, wherein:—

Figure 1 is a front elevation of the crown applied to a root. Fig. 2 is a side elevation thereof. Fig. 3 is a rear elevation. Fig. 4 is a longitudinal central section of the crown as applied to the root. Fig. 5 is a perspective view of the backing. Fig. 6 is a perspective view of the capping. Fig. 7 is a perspective view of the facing.

Referring specifically to the drawing, the root has been designated by the numeral 8, and the facing which is to be secured there-

to, by the numeral 9, this facing being preferably fashioned from porcelain or other suitable material and being of a desired contour.

In carrying out the invention, there is provided an angular backing 10 having the base 11, which is preferably although not necessarily, molded or otherwise fashioned of gold, it being understood that other valuable or inexpensive metals or other materials may be employed with the same propriety. The base 11 is provided with an integral upstanding tubular or hollow stem 12, the said stem opening through the base of the backing. The facing 9 is provided with an upstanding prong or tang 13 secured thereto adjacent the lingual side, the said tang being adapted to project or fit into the stem 12 of the backing. Thus, when the tang 13 is inserted into the stem 12, the facing may be cemented or otherwise secured to the backing.

The numeral 14 designates the capping which is employed for the adaptation of the backing to the butt end or base of the root and is formed with a boss or collar 15, and with a single flange or lip 16 at its lingual edge. The capping 14 is molded from a suitable cast, pattern or form obtained by means of a wax impression, or the like, as hereinafter described.

In adapting or applying the crown to a root, a wax or other plastic cast is seated on the base 11, and the stem 12 is inserted into the nerve cavity or root canal 17 of the root. The backing is then pressed slightly in order that the base or butt end of the root will be embedded in the plastic material. The wax impression is also worked into a notch or rabbeted portion 18 provided in the lingual side of the root, and after the edges of the impression have been properly worked, the backing is withdrawn, and the impression which has formed itself to the configuration of the end of the root, is removed. Using said plastic impression as a pattern, a gold or other capping of a permanent character is molded. This permanent capping is engaged on the stem 12 and is seated on the base, said capping and base being made to have a snug fit by filing or otherwise, if they have any slight imperfections. The capping is then cemented or otherwise secured to the backing, so as to be solid therewith, and after the facing has been secured to the backing, the crown is

in condition to be applied and secured to the root. When the crown is applied to the root, the stem 12 enters the cavity 17 of the root together with the boss or collar 15 of the capping, and the lip 16 will fit or engage in the single rabbeted portion 18 at the lingual side of the root. The capping is cemented or otherwise secured to the root, in which event, the crown will be made rigid or fast to the root.

The facing 9 may be loosened from the backing at any time, so that the facing may be removed for purpose of repair, replacement or cleaning. The lip 16 in fitting in the rabbeted portion at the lingual side of the root will throw the strain of mastication or pressure on the entire root, or in the most effective manner. The capping 14 permits of the most effective adaptation of the crown to the root, in such a manner as to avoid the irritation of the gum tissue.

It occasionally happens that after the crown has been permanently set into position, the tooth becomes abscessed at the root, and with the ordinary or prevailing type of crown, the entire crown must be removed when it is necessary to treat the abscess. With the present invention, it is merely necessary to remove the facing 9, in which event, the stem 12 will be exposed, and the abscess may be treated through the stem 12, the said stem being tubular or hollow. After the abscess has been properly treated, the facing or a new facing is again secured to the backing. It will therefore follow, that the present crown provides for readily treating abscess or other kindred troubles without removing the entire crown, the crown remaining in its set position.

The present crown may also be adapted to various roots, notwithstanding the particular size of the root or the figuration thereof.

According to present day or prevailing practice, in attaching a crown to a root, it has been the custom to provide a cap to fit over the butt end and sides of the root, the butt end of the root being filed or shaped to accommodate the cap. Thus, the cap in fitting over the end of the root, although it serves to throw the strain of mastication on the root, presents a flange or rim around the sides of the root, which will interfere with the gum tissues. Instead of employing a cap of the said character and adapting the root to the cap, the present invention embodies a reversal thereof, and employs a capping which is adapted to the root, so that the root need not be filed or shaped to accommodate the capping. In the manner above indicated, it will be noted that the present capping is so adapted to the root, that it will be of an outline equal to the outline of the root, and will have one face so formed as to fit the irregularities of the butt end of the root, the other face of the capping

being secured to the base of the backing. The capping is not provided with the usual peripheral flange engaging all of the sides of the root, and in order that the forward or outward strain of mastication may be properly thrown onto the root, the capping has been provided with a lip adapted to engage the rabbeted portion of the lingual side of the root. Inasmuch as the strain of mastication will occasionally tend to swing or force the crown forwardly, it will be noted that the lip 16 engaging the lingual side of the root, will properly transmit the strain of mastication to the root.

With the employment of the capping above described, it will be noted that there is no unnecessary protuberance and that the gum tissues will not be injured, as is the case with the ordinary cap above referred to. The present capping may therefore be conveniently termed as being an "impression" capping adapted for the root, in contradistinction to the ordinary cap to fit over the end and sides of the root which has been trimmed to accommodate the cap.

From the foregoing, taken in connection with the drawings, the advantages and capabilities of the present invention will be apparent to those versed in the art, it being noted that the objects aimed at have been carried out in a satisfactory manner, and that the present crown provides a desirable one for the purposes for which it is designed.

Having thus described the invention, what is claimed as new is:—

1. A tooth crown embodying an angular backing having a root entering stem, and a molded impression capping secured to the base of the backing and adapted for the irregularities of the butt end of the root.

2. A tooth crown embodying an angular backing having a root entering stem and an impression capping secured to the base of the backing and adapted for the root, the capping having a single flange to engage a single rabbeted portion at the lingual side of the root.

3. A tooth crown embodying a backing having a tubular root entering stem, and a facing secured to the backing and normally closing the passage through the stem.

4. A tooth crown embodying a backing having a tubular root entering stem and a facing having a tang secured thereto to enter the stem.

5. A tooth crown embodying an angular backing having a tubular root entering stem, an impression capping secured to the base of the backing and adapted for the root, and a facing secured to the backing and normally closing the passage through the stem.

6. A tooth crown embodying a backing having a root entering stem, and an impression capping secured on the backing around the stem and adapted for the root, the cap-

ping having a collar around the stem to enter the root canal.

7. A tooth crown embodying an angular backing, the base of which has a tubular root
5 entering stem, an impression capping secured on the base of the backing and adapted for the root, the capping having a collar around the stem to enter the root canal, and a facing secured to the backing and having
10 a tang secured thereto entering the stem, the

capping having a lip to engage a rabbeted portion on the lingual side of the root.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CARROLL J. SPAIN.

Witnesses:

C. P. BARTLETT,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
