No. 825,940. PATENTED JULY 17, 1906.

H. H. SCHUHMAN.

CROWN TOOTH ATTACHMENT.

APPLICATION FILED JAN. 24, 1906.

Fig. 1.

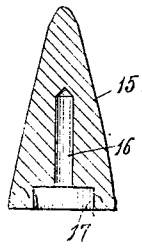


Fig. 3.

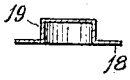


Fig. 5.

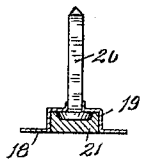


Fig. 2.

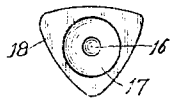


Fig. 2a.

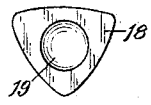


Fig. 6.

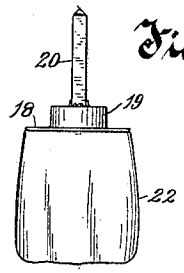


Fig. 7.

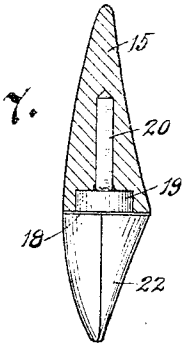


Fig. 8.

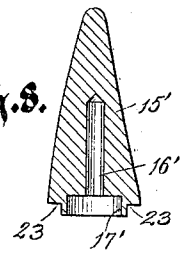


Fig. 10.

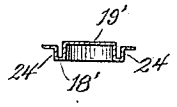


Fig. 9.

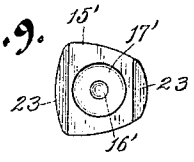


Fig. 11.

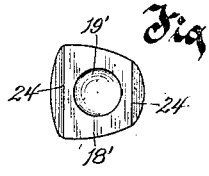
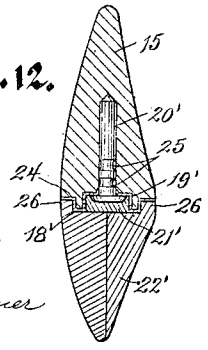


Fig. 12.



Witnesses:

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UNITED STATES PATENT OFFICE.

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CROWN-TOOTH ATTACHMENT.

No. 825,940. Specification of Letters Patent. Patented July 17, 1906.

Application filed January 24, 1906. Serial No. 297,543.

To all whom it may concern:

Be it known that I, HENRY H. SCHUHMAN, residing in Hartford, in the county of Washington and State of Wisconsin, have invented new and useful Improvements in Crown-Tooth Attachments, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to crown-tooth attachments, and has for its object to provide an attaching means for an artificial-tooth crown which will be simple in its construction and easily applied, while being strong and durable in use.

With the above and other objects in view the invention consists in the crown-tooth attachment herein described and all equivalents thereof.

Referring to the accompanying drawings, in which like characters of reference indicate the same parts in the several views, Figure 1 is a longitudinal sectional view of a tooth-root drilled and countersunk for the reception of the crown-attaching means. Fig. 2 is a plan view thereof. Fig. 3 is a sectional view of the saddle or plate made to fit in the end of the tooth-root shown in Fig. 1. Fig. 4 is a plan view thereof. Fig. 5 is a sectional view of the saddle or plate shown in Fig. 3 with the stem secured thereto. Fig. 6 is a front elevation of a tooth-crown with the attachment applied thereto. Fig. 7 is a sectional elevation of the tooth-crown secured to the tooth-root by means of the attachment. Fig. 8 is a sectional view of a tooth-root prepared for receiving a modified form of crown-attaching means. Fig. 9 is a plan view thereof. Fig. 10 is a sectional view of a modified form of saddle or plate made to fit the end of the tooth-root shown in Fig. 8. Fig. 11 is a plan view thereof, and Fig. 12 is a sectional view of a crown secured to a tooth-root by means of the modified form of crown-attaching means.

In the drawings, 15 represents a tooth-root which is trimmed down to a flat surface at the end and is drilled longitudinally to provide a narrow bore 16 and a considerably-larger countersunk portion 17. A saddle or plate 18, of sheet metal, usually gold or platinum, which is of the same shape as the section of the tooth at the faced end, is first swaged to produce a cup-like projection 19 to fit within the countersunk portion 17 of the tooth-root. A headed stem 20, which may be square, round, or of other cross-section, is driven through the cup-like projection of the saddle or plate 18 from the inside thereof, so as to project, as shown in Fig. 5. The cup-like portion of the saddle or plate is then filled in with a gold or platinum solder 21 or other desirable filling material to embed the head of the stem 20. The crown-attaching means thus produced is made to exactly fit within the cut-out portions of the tooth-root and is then securely cemented to a crown 22, and finally is coated with cement and placed within the tooth-root to complete the operation. During the formation of the device the parts are repeatedly fitted to the tooth-root, so that the final product is a crowned tooth exactly matched and continuous in its outlines without projecting shoulders. The reënforcement of the stem connection 21, produced by the base 19 of larger diameter, greatly strengthens the attaching means and results in a strong and rigid tooth structure which will be highly durable and efficient.

In the modification shown in Figs. 8 to 12, inclusive, the tooth-root 15′, in addition to the bore 16′ and the countersunk portion 17′, is provided with a pair of parallel grooves or rabbets 23 at the front and rear edges of its faced end. The plate or saddle 18′, besides its cup-like projection 19′ and stem 20′, has its front and rear edges bent to form shoulders 24, exactly fitting the grooves 23 of the tooth-root and also fitting between parallel upstanding flanges 26, formed on the front and rear edges of the tooth-crown 22′. With this form of attaching means the stem 20′ is round in crosss-section instead of being square, as shown with the other form, and is provided with surrounding grooves 25, in which the cement may fill to more tightly secure the stem in the tooth-root. The tongue-and-groove connection between the tooth-root and the crown as produced by this form of the invention materially adds to the strength of the tooth, and as the irregular lines of connection between them come at the sides of the tooth they are unnoticeable. This modified form of attaching means is produced and applied to the parts in the same manner as described in connection with the other form.

What I claim as my invention is—

1. A crown-tooth-attaching means, comprising a saddle or plate having a cup-shaped projection thereon, and a headed stem passing

through the projection with its head secured in the hollow thereof, said projection and stem being adapted to fit in a countersunk bore of the tooth-root and said saddle or plate being adapted to have a tooth-crown secured thereto.

2. A crown-tooth-attaching means, comprising a saddle or plate having a cup-shaped projection thereon, a headed stem passing through the projection, and a filling in the cup-shaped projection embedding the head of the stem, said projection and stem being adapted to fit in a countersunk bore of the tooth-root and said saddle or plate being adapted to have a tooth-crown secured thereto.

3. A crown-tooth-attaching means, comprising a saddle or plate having a cylindrical projection thereon, and parallel shoulders on the saddle or plate adapted to fit in corresponding grooves in the tooth-root and against parallel flanges on the tooth-crown, said stem and projection being adapted to fit in a countersunk bore of the tooth-root

4. A crown-tooth-attaching means, comprising a saddle or plate having a cup-shaped projection thereon, a headed stem passing through the projection, a filling in the cup-shaped projection embedding the head of the stem, parallel shoulders formed on the saddle or plate adapted to fit in corresponding grooves of the tooth-root, and a tooth-crown secured to the saddle or plate and provided with parallel flanges to engage the shoulders of the saddle or plate, said projection and stem being adapted to fit within a countersunk bore of the tooth-root.

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

HENRY H. SCHUHMAN.

Witnesses:
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ANNA F. SCHMIDTBAUER.