Jan. 27. 1925. 1,524,409

A. K. SIMMONS

DENTAL POST

Original Filed Aug. 24, 1922

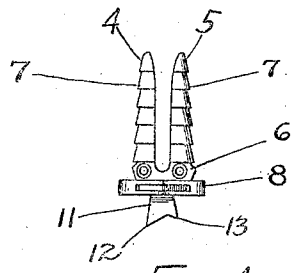


FIG. 1

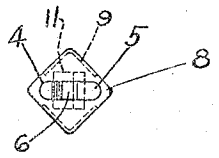


FIG. 2

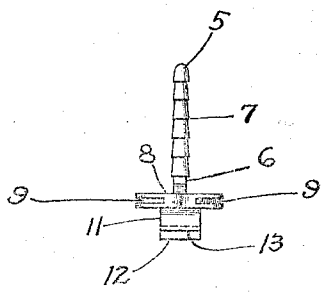


FIG. 3

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UNITED STATES PATENT OFFICE.

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DENTAL POST.

Original application filed August 24, 1922, Serial No. 584,115. Divided and this application filed January 8, 1924. Serial No. 684,993.

To all whom it may concern:

Be it known that I, ALFRED K. SIMMONS, a citizen of the United States, resident of Faribault, in the county of Rice, State of Minnesota, have invented certain new and useful Improvements in Dental Posts, of which the following is a specification.

This invention relates to dental posts employed in connection with artificial teeth or crowns which are employed to effect the replacement of extracted or decayed teeth that can not be filled. Dental posts are employed in conjunction with natural tooth roots or in conjunction with the present vulcanite or metal plates or on fixed or removable bridges.

The particular form herein disclosed is that set forth in applicant's prior co-pending application Serial Number 584,115 filed August 24, 1922, of which this application is divisional. These artificial teeth or crowns are usually formed of porcelain or similar materials and they are secured in place by means of posts and interlocking attachment made of precious or semi-precious metals commonly employed in dentistry. Among the advantages residing in the employment of this novel tooth-fastening are the use of less metal and more porcelain, the use of solidly instead of thinly constructed porcelain teeth or crowns, and the occlusal surfaces of the teeth may be of porcelain instead of gold. Further, the tooth may be accurately adapted to the root or other fixture by grinding to effect an accurate union between the fixture and the crown; and, as the crown is cemented to the post, there is afforded an interchangeability and replaceability.

The object therefore of this invention is to provide an improved dental post.

Other objects of the invention will more fully appear from the following description and the accompanying drawings and will be pointed out in the annexed claims.

In the accompanying drawings there has been disclosed a structure designed to carry out the objects of the invention, but it is to be understood that the invention is not confined to the exact features shown as various changes may be made within the scope of the claims which follow.

In the drawing:

Figure 1 is a view in side elevation of the novel post;

Figure 2 is a plan view of the same; and

Figure 3 is a view in side elevation of the post taken at right angles to that shown in Figure 1.

It is old in this art to implant posts in apertures drilled into the roots of natural teeth or formed in dental plates, and it is also old in this art to secure crowns to such implanted posts. This invention more particularly resides in the fastening means whereby the artificial teeth or crowns are held in position and this divisional case more specifically relates to such posts which are provided with a forked or bifurcated portion.

The novel form of post here shown is preferably of a suitable metal and is upwardly or inwardly tapered to facilitate its introduction into the recess or recesses provided in either a natural root or a dental plate or fixture. It has two forks 4 and 5 which are joined at the union 6. The forks are each preferably formed with corrugations 7 which extend transversely of the forks. Such shoulders or corrugations are conveniently formed by casting or by successively cutting away portions of the forks to provide individually tapered sections, each terminating in a shoulder. Each fork is substantially rounded along its major portion while the spaced opposed faces of the complementary forks are flat. The rounding outer portions of these preferably tapered forks facilitates insertion of the post in position within either a forked or single recess. When these forks are embedded in the usual cement in the recessed mounting, the angularly edged flat faces effectually prevent axial rotation of the post while the outwardly presented shoulders resist any tendency to removal.

This novel post is preferably provided with a collar 8 which may be located at the union of the forks and may be integral therewith. An advantageous shape of this collar is an angular one. However, it is preferred to avoid sharp angles at the corners of the collar as suggested in the drawings. The collar is adapted to be secured within a suitably shaped crown or similar article and the angular form prevents the disastrous rotation of the crown and resultant displacement of its occlusal surface with relation to the axis of the post when secured in operative position. The peripheral por-

tion of the collar may be provided with a groove such as the groove 9 which is here shown as sectional and not as a single completely peripheral groove. Each groove extends from a portion of one face or edge along the angled junction with the other face and a short distance along such adjacent face. These grooves are used in effecting the above-mentioned interlocking attachment of teeth or crowns by means of the precious or semi-precious metals commonly employed in dentistry. It is common in the practice of dentistry to connect adjacent teeth or dental crowns by means of such casting metals and the grooves 9 provided in this novel post are adapted for the reception of a portion of the casting metal in order to aid in securing a retentive interlocking attachment.

The end portion of this post which is adapted to be received within a suitably shaped recess in a crown or similar article may be termed the outer portion and it is here shown as provided with a preferably integral terminal means or abutment 11. This abutment is shown as bifurcated, the space between the bifurcations 12 and 13 being substantially V-shaped. This outer portion, as shown in Figure 1, preferably has its sides adjacent the forks, outwardly tapered or flaring so that, when this portion is embedded within cement, within a crown for example, the tapered side will tend to resist removal.

This novel post, while valuable for use with various natural roots, plates or other bases, is particularly useful for natural roots of the bifurcated type wherein one fork may be implanted in each root bifurcation.

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

1. The combination of a dental post having a pair of inner forked portions, each having a plurality of transverse corrugations, the corrugated forked portions being adapted to be secured within a recess or pair of recesses, and a collar on the post adjacent the union of the forked portions and adapted to be secured within a suitably shaped crown or similar article.

2. The combination of a forked dental post adapted to be secured in a recess or recesses, a bifurcated abutment projecting from the fork union in a direction opposite to that of the forks, the bifurcations of the abutment being upon the same sides of the post as the forks, and the abutment being adapted to be secured within a suitably shaped crown or similar article.

3. The combination of a forked dental post adapted to be secured in a recess or recesses, a bifurcated abutment projecting from the fork union in a direction opposite to that of the forks, the bifurcations of the abutment being upon the same sides of the post as the forks and being adapted to be secured within a suitably shaped crown or similar article, the bifurcations of the abutment being elongated transversely of the plane of the longitudinal axes of the forks.

In witness whereof, I have hereunto set my hand this 4th day of January, 1924.

ALFRED K. SIMMONS.