(No Model.)

C. M. RICHMOND.

ARTIFICIAL DENTURE.

No. 277,934. Patented May 22, 1883.

Fig. 1.

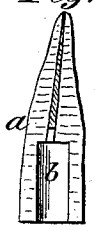


Fig. 2.

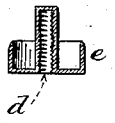


Fig. 3.

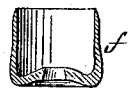


Fig. 4.

Fig. 5.

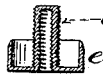


Fig. 6.

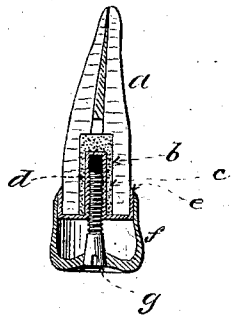
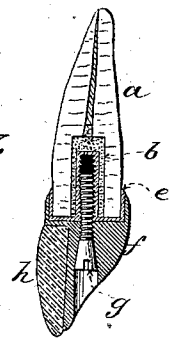


Fig. 7.



Witnesses:

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C. M. Richmond

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UNITED STATES PATENT OFFICE.

CASSIUS M. RICHMOND, OF NEW YORK, N. Y., ASSIGNOR TO THE RICHMOND TOOTH CROWN COMPANY, OF SAME PLACE.

ARTIFICIAL DENTURE.

SPECIFICATION forming part of Letters Patent No. 277,934, dated May 22, 1883.

Application filed January 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, CASSIUS M. RICHMOND, of the city, county, and State of New York, have invented a new and useful Improvement in Artificial Dentures, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

This improvement consists in a method of attaching artificial dentures by which they may be readily removed from the mouth. By processes of fixing said dentures to roots, for which I have made previous application, after the denture is fixed it has been impossible to remove it without cutting away the attachment between it and the root. By my present improvement, however, the artificial dentures may be quickly removed from their supports by removing an attaching-screw without exposing the prepared root to injury from the fluids of the mouth. In the preparation of such roots, for which I have made another application, it is very important that they should be thoroughly protected from the fluids of the mouth, as otherwise they rapidly decay; and it is therefore necessary that they be hermetically sealed or inclosed in a cup or terminal and inclosing-covering. By my improvement I attach such cup or covering to the roots, and I then attach the denture to said cup or covering by some removable contrivance, the cup or covering remaining permanently upon the root, while the denture may be removed without disturbing such cup.

My invention will be readily understood from the accompanying drawings, in which similar letters refer to similar parts.

Figure 1 represents a prepared root; Fig. 2, a cap to inclose the same; Fig. 3, a denture to be applied to the cap, and Fig. 4 an attaching-screw to attach the denture and cap together; Fig. 5, a larger view of the denture, showing the structure of the screw-thread; Fig. 6, a view of my denture applied; Fig. 7, a view of my denture applied with an artificial porcelain tooth-crown.

a represents the root. This should be prepared by closing the nerve-cavity and drilling in the manner fully described by me in another pending application. A suitable recess should be made in its end to receive a threaded tube attached to the inclosing-cup. *e* represents such cup, which has within it and passing upward centrally a threaded tube, preferably threaded both inside and out, for the reception of the screw *g*. This tube should be preferably closed at its upper end. The cup, it will be understood, is made to fit the periphery of the root exactly and to project partly under the free margin of the gum, and is the best form known to me, although such projection is not in all cases absolutely necessary, and the arrangement without such projection forms the subject of a separate application. The cup *e*, provided with the threaded tube *d*, is put in position, by means of cement *b* upon the end of the root and remains there permanently. A previously-prepared artificial denture, F, is then placed upon the inclosing-cup. This denture or artificial tooth-crown must fit accurately the permanent cup, so as to prevent the injurious effect of the introduction of any food particles or fluids within it. The upper edges, both of the cup *e* and of the tooth-crown F, are beveled and cut away fine, so as to interfere as little as possible with the overlapping gum. A screw, *g*, passes through the artificial tooth-crown and into the threaded tube *d*, and thereby holds the crown firmly in position. Instead of making the artificial crown of gold, it may have attached to it an artificial porcelain or other crown, as shown at H in Fig. 7, the other arrangements being the same. Of course other modes of attachment besides the screw *g* could be employed. I usually fill the cavity in the denture *f*, Fig. 6, with cement, so as to form a backing for it.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a prepared root, having attached to it permanently an inclosing-cup, with a removable denture or tooth-crown, substantially as described.

2. The combination of a root with an inclosing cap or covering sealing the end of said root, said cap or covering having attached to it a threaded tube projecting upward into said root, substantially as described.

3. The combination of the root *a*, inclosing-cap *e*, and closed threaded screw *d* with an artificial denture or tooth-crown, F, attached thereto by screw *g*, substantially as described.

4. The combination of the root *a*, inclosing-cup *e*, artificial crown or denture *f*, and screw *g*, the upper part of said denture *f* surrounding and fitting closely the ferrule of the cup *e*, substantially as described.

CASSIUS M. RICHMOND.

Witnesses:
OTTO BAUMANN,
WILLIAM PAXTON.