

(No Model.)

C. M. RICHMOND.

REMOVABLE BRIDGE FOR ARTIFICIAL DENTURES.

No. 390,521.

Patented Oct. 2, 1888.

Fig. 1.

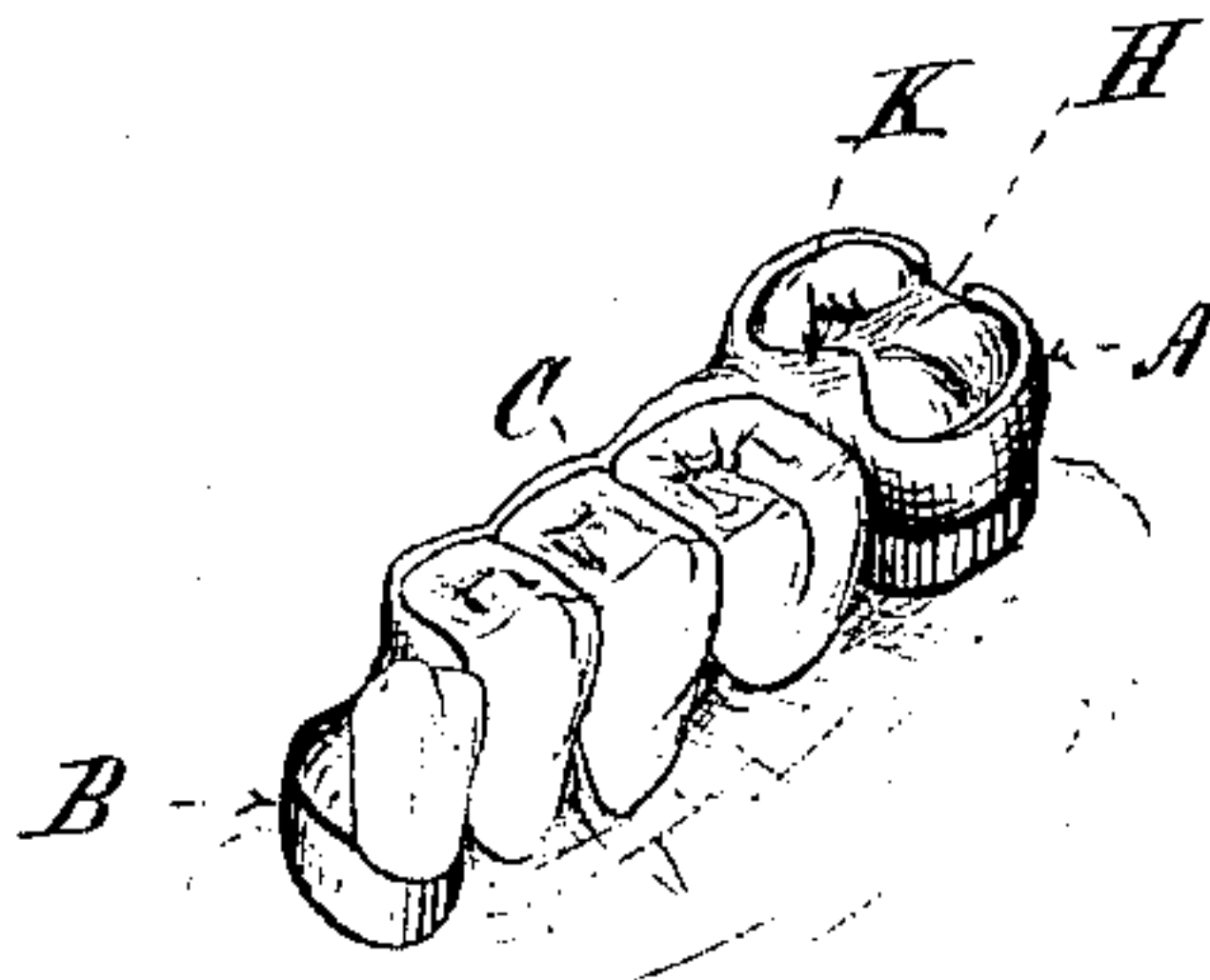


Fig. 2.

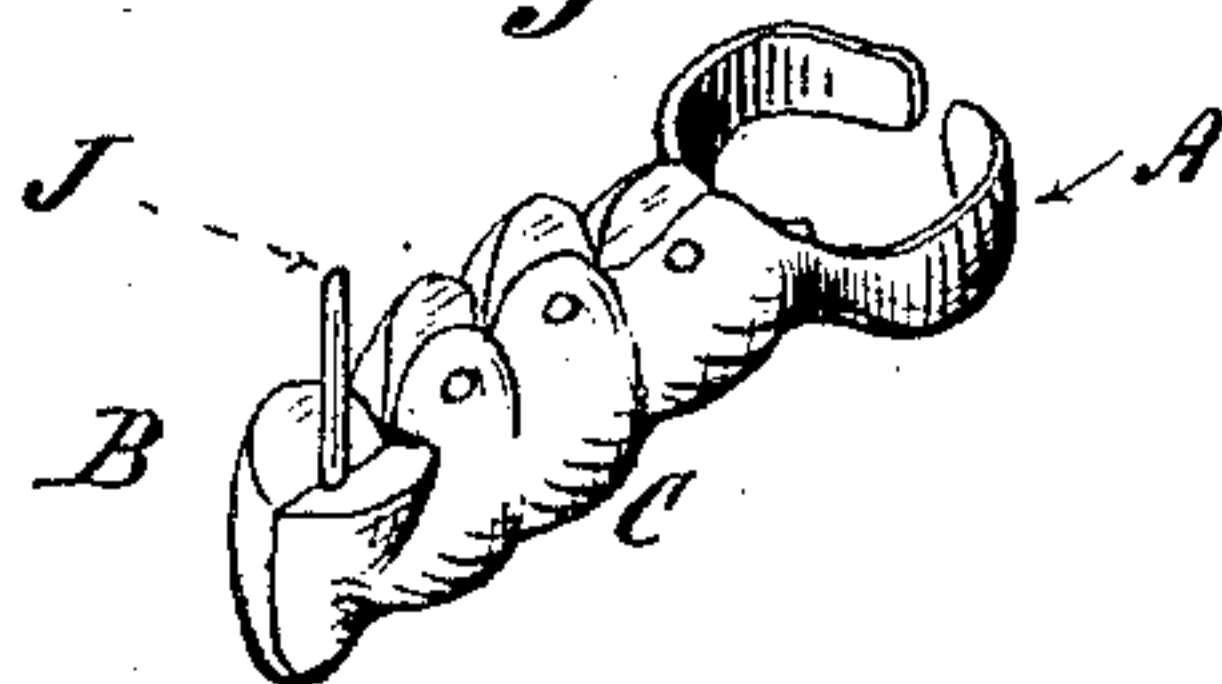


Fig. 3.



Fig. 4.

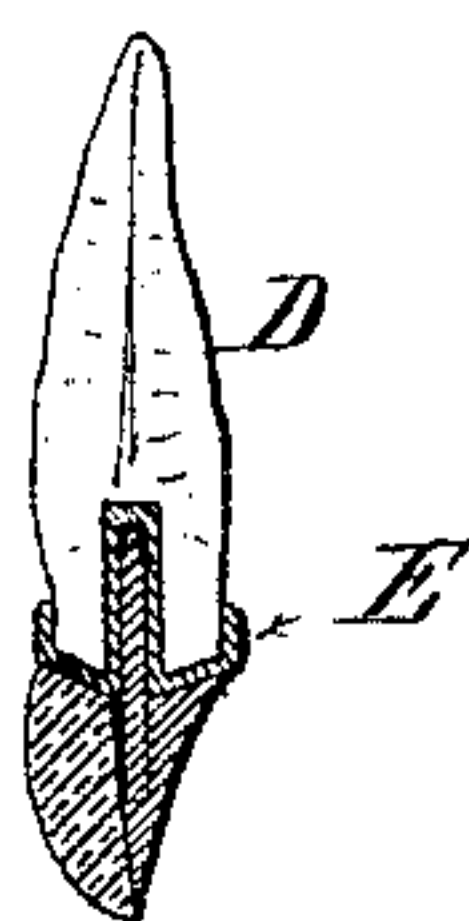


Fig. 5.



Witnesses:

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By
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UNITED STATES PATENT OFFICE.

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

REMOVABLE BRIDGE FOR ARTIFICIAL DENTURES.

SPECIFICATION forming part of Letters Patent No. 390,521, dated October 2, 1888.

Application filed November 1, 1887. Serial No. 253,955. (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 Removable Bridges for Artificial Dentures, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

My invention relates to an improvement in that part of the dental art known as the "manufacture of bridge-work," and in which the attempt is made to supply artificially the place of natural teeth which have been removed from decay or other causes. The principle of these bridges consists in carrying the intermediate tooth or teeth on the support of the adjacent teeth or roots, so as not to interfere with the natural action of the gum or irritate the same. A type of such bridge work is shown in the patent to A. S. Richmond of May 22, 1883; but that bridge, when once placed in the mouth, cannot practically be removed without its partial destruction, and it is sometimes important in this class of bridge-work that the artificial denture may be capable of entire removal from the mouth for purposes of repair or cleansing, or other necessary operations. I have devised a bridge which is capable of ready application in the mouth, and at the same time can be removed when it is desired to repair or cleanse the same.

My invention will be readily understood from the accompanying drawings, in which—

Figure 1 represents the completed operation in position; Fig. 2, a top perspective of the same; Fig. 3, a view of a modification; Fig. 4, a section showing the method of supporting one end, and Fig. 5 the method of attaching the tooth to the bridge.

In the operation shown the bridge is supported between a molar and cuspid, the molar tooth remaining in the mouth, but being protected, as will be presently described, and the cuspid having been cut off in the manner well known in preparing this class of operations, and described in the patent to A. S. Richmond hereinbefore referred to.

In preparing the operation shown in the drawings I in the first place prefer to cover the molar H with a suitable surface of gold; or it may be partly built up of gold, and in

some cases I may use the natural molar without such preparation. The front of the operation is supported upon the prepared cuspid root. This root is prepared in the well-known manner hereinbefore described. This operation is also described in the patent to myself, May 22, 1883, No. 277,943; but the end of it is protected by a cap, which completely seals not only the end of the root, but likewise the central nerve-channel, making a continuous metallic cover for the same, as shown. A pin, J, is provided, as in the old operation, but is made to fit exactly the gold-lined nerve-cavity of the cuspid. The two supports on the cuspid and molar shown are connected together by the bridge of gold; but I prefer to arrange the artificial teeth upon it in a somewhat different manner, as shown in Fig. 5, in which case the pin is shown as projecting into the artificial tooth F on an angle, which tooth is backed with gold on its lingual and palatine surfaces, but is not provided with gold wearing-surfaces. I do not claim this particular method of attachment in this application, having filed a separate application therefor; nor is it essential for the successful carrying out of my operation.

The front end of the denture is made to fit exactly the lower end of the prepared capped root D, as shown in Fig. 4. The back end is provided with a clasp or ring, A, which is preferably provided with a spud, K, overlapping the surface of the molar and serving to aid in the support of that end of the denture. It serves likewise as a stop in adjusting the denture in position. The clasp A is made of heavy metal, sufficiently strong to firmly retain the denture in position when placed upon the molar. A ring, A, (shown in Fig. 3,) may be substituted for the clasp.

It is obvious that the bridge shown can be removed from the mouth and replaced without injury or risk to the supporting teeth or roots.

In my invention set forth in Letters Patent No. 277,942 the bridge is secured detachably, but in such manner that part of the securing means must be destroyed to effect the removal. By the use of separable fastening devices at each end instead of cement, the denture may be removed and replaced at pleasure.

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

1. The combination of the prepared root, having a sealing metallic cap hermetically sealing the same, and a removable bridge fitting the face of said metallic cap, and provided with a pin permanently secured thereto and entering within the metallicallly-sealed cavity of the tooth, substantially as described.

2. The combination of a prepared root having its end metallicallly hermetically sealed, a dental bridge adapted to fit the same at one end, and provided with a support at the other adapted to rest upon the supporting-surface of a tooth or root, substantially as described.

3. The combination, in a removable dental bridge, of a prepared root, having its end metallicallly hermetically sealed, with a suitable terminal support on the said bridge fitting said root, the said bridge being provided at its other end with a clasping attachment connecting it to a supporting tooth or terminal, substantially as described.

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

CASSIUS M. RICHMOND.

Witnesses:

ANTHONY GREF,
H. COUTANT.