

(No Model.)

C. P. GROUT.
ARTIFICIAL TOOTH CROWN.

No. 347,933.

Patented Aug. 24, 1886.

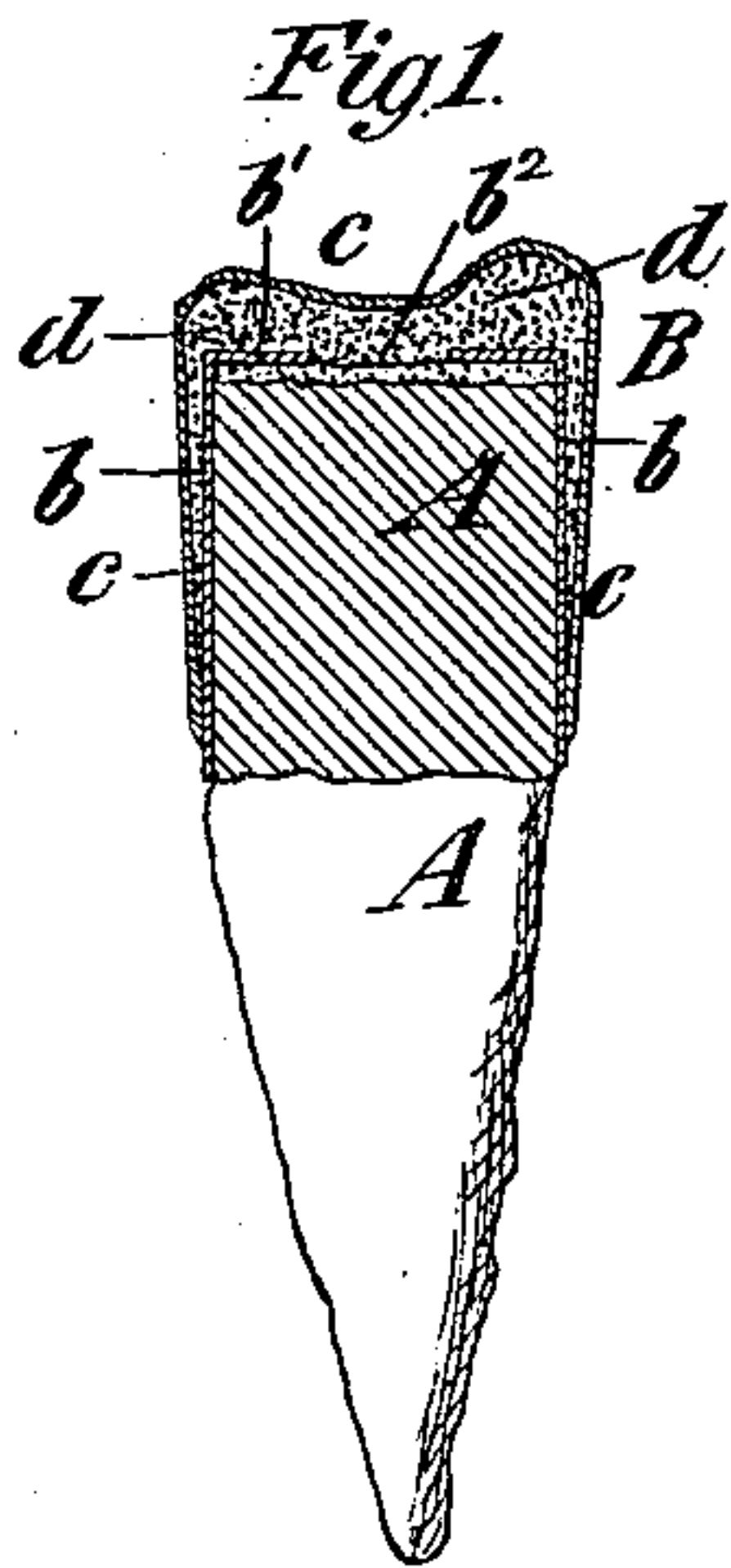


Fig. 3.

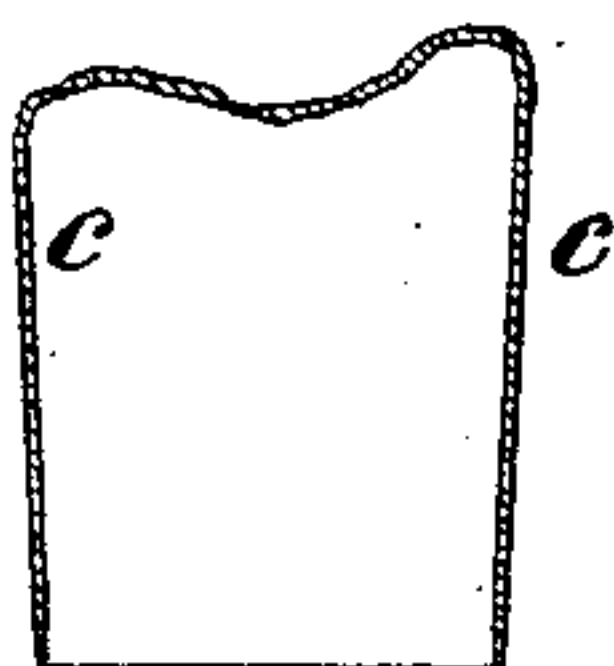
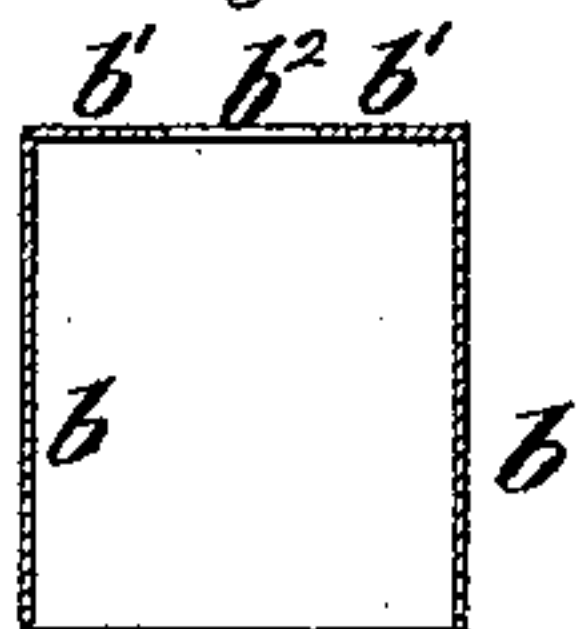


Fig. 2.



Witnesses.

Emil Herter.

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Inventor.

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by his attys
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UNITED STATES PATENT OFFICE.

CHARLES P. GROUT, OF NEW YORK, N. Y.

ARTIFICIAL TOOTH-CROWN.

SPECIFICATION forming part of Letters Patent No. 347,933, dated August 24, 1886.

Application filed March 30, 1886. Serial No. 197,123. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. GROUT, of the city and county of New York, in the State of New York, have invented a new and useful
5 Improvement in Artificial Tooth-Crowns, of which the following is a specification.

The metallic tooth-crowns usually employed are made of thin metal comprising a band portion fitted to the tooth-root or tooth, and
10 a cap or top secured on the band portion, the crown having a filling of gold or solder within its top to give it the necessary thickness and strength, and also to bring the crown to proper height or projection to form an occluding-surface. When such a crown is to be set in
15 place, a quantity of amalgam or quick-setting cement is placed in it, and the crown is then forced to its place on the tooth or tooth-root.

Important objects of my invention are to reduce the labor and expense of making crowns in the usual way, and to enable a crown equally as good and better fitted to the tooth or tooth-root to be produced at less cost, also to enable the form and position of the top of the crown,
20 which forms the occluding-surface, to be accurately and permanently fixed while the crown is in position on the tooth or tooth-root, and then after removal of the crown to properly fill the same with solder or other filling material to preserve the exact form of the top or
25 occluding-surface and its proper relation to the band portion of the crown.

My improved crown consists of an inner band portion open at the top, fitted to the tooth or tooth-root, and an outer shell or cap closed at the top and fitted snugly around or outside of the band portion, and a solder or other permanent filling between the band portion and the outer shell or cap. The upper
35 edge or margin of the inner band portion is preferably turned inward over the top of the previously-prepared tooth or tooth-root, leaving a hole or opening at the center through which the solder or other filling is introduced.

In the accompanying drawings, Figure 1 represents a sectional elevation of my improved crown as applied to a tooth or tooth-root, and Figs. 2 and 3 are vertical sections, respectively, of the inner band portion and
40 the outer shell or cap, which, with the solder or other filling, constitute the crown.

Similar letters of reference designate corresponding parts in the several figures.

A designates the previously-prepared tooth or tooth-root, and B designates the metallic
55 artificial crown secured thereto. This crown is composed of an inner band portion, *b*, an outer shell or cap, *c*, and a solder or other permanent filling, *d*, introduced between said two parts.

The parts *b c* may be made of gold or platinum, or of a bi-metallic plate of gold or silver and platinum.

The band portion *b* preferably has its upper edge or margin turned inward, so as to
60 form an inwardly-projecting flange, *b'*, in which is a central opening, *b²*, leaving the band portion open at the top, for a purpose hereinafter described. This band portion *b* should be closely fitted to the tooth or tooth-root A, and
65 the flange *b'* just overlies the top thereof, as shown in Fig. 1. The band portion *b* is the only part of the crown requiring any careful fitting.

The outer shells or caps, *c*, may be struck
75 up complete with closed tops and of several standard sizes, by means of suitable dies, and may be thus very cheaply produced. The shell or cap *c* surrounds and at the lower edge is burnished inward closely against the
80 band portion *b*, after a suitable quantity of wax or analogous plastic filling has been introduced to fill the space between the inner band portion and the outer shell or cap. The crown is then placed on the tooth or tooth-
85 root, and by closing the jaws the outer shell is brought to proper position, and being thin, is accurately indented or impressed to form an exact occluding-surface for the opposite teeth. The incomplete crown B is afterward removed
90 from the tooth or tooth-root A, and the wax melted out, and the space between the inner band portion, *b*, and outer shell, *c*, is then filled with solder or other permanent and hard filling, *d*, which is run in through the hole or
95 opening *b²* from the inner side of the crown, and which unites the inner band portion, *b*, and outer shell, *c*, in one integral and solid structure.

Care should be taken in running in the sol-
100 der *d* that none overflows within the crown and on the inner side of the flange *b'*, and when the

crown is to be placed in position a very small quantity of cement is placed within it, said quantity of cement being sufficient to fill all space between the crown and the tooth or tooth-root, and yet not sufficient to raise the crown above the position which it had when previously placed on the root or tooth and when its occluding-surface was fixed by the impression of the opposite teeth.

10 The flange *b'* is not indispensable, but I find it advantageous to provide the band portion with such a flange because the flange will overlie the top of the tooth-root and support the band when the cap containing wax is placed

15 over it and pressed down into place. The flange is also desirable because it forms a wall for retaining the solder filling above it. I believe, however, that a crown consisting of a band portion open at the top, a surrounding-

20 cap closed at the top, and a permanent filling introduced between them, is broadly new, and deem such a construction, broadly, as the scope of my invention.

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

1. A metallic tooth-crown consisting of an inner band portion open at the top and closely fitted to the tooth or tooth-root, an outer shell or cap surrounding the band portion and closed at the top to form an occluding-surface, and a solder or other permanent filling introduced between the inner band portion and the outer shell and uniting them in one integral structure, substantially as herein described.

2. A metallic tooth-crown consisting of the inner band portion, *b*, with its inwardly-projecting flange *b'* and opening *b''*, the outer shell, *c*, and the permanent filling *d*, whereby the space between the band portion and shell is filled and they are united in one integral structure, substantially as herein described.

CHAS. P. GROUT.

Witnesses:

C. HALL,
FREDK. HAYNES.