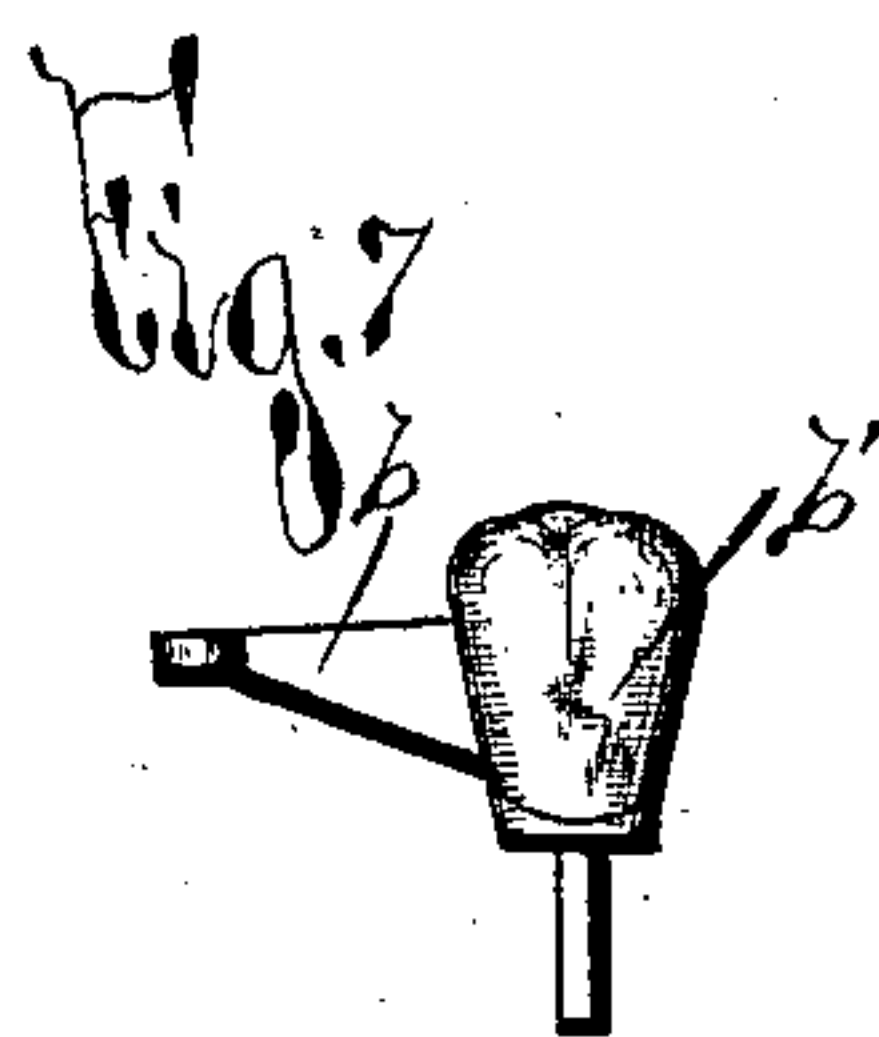
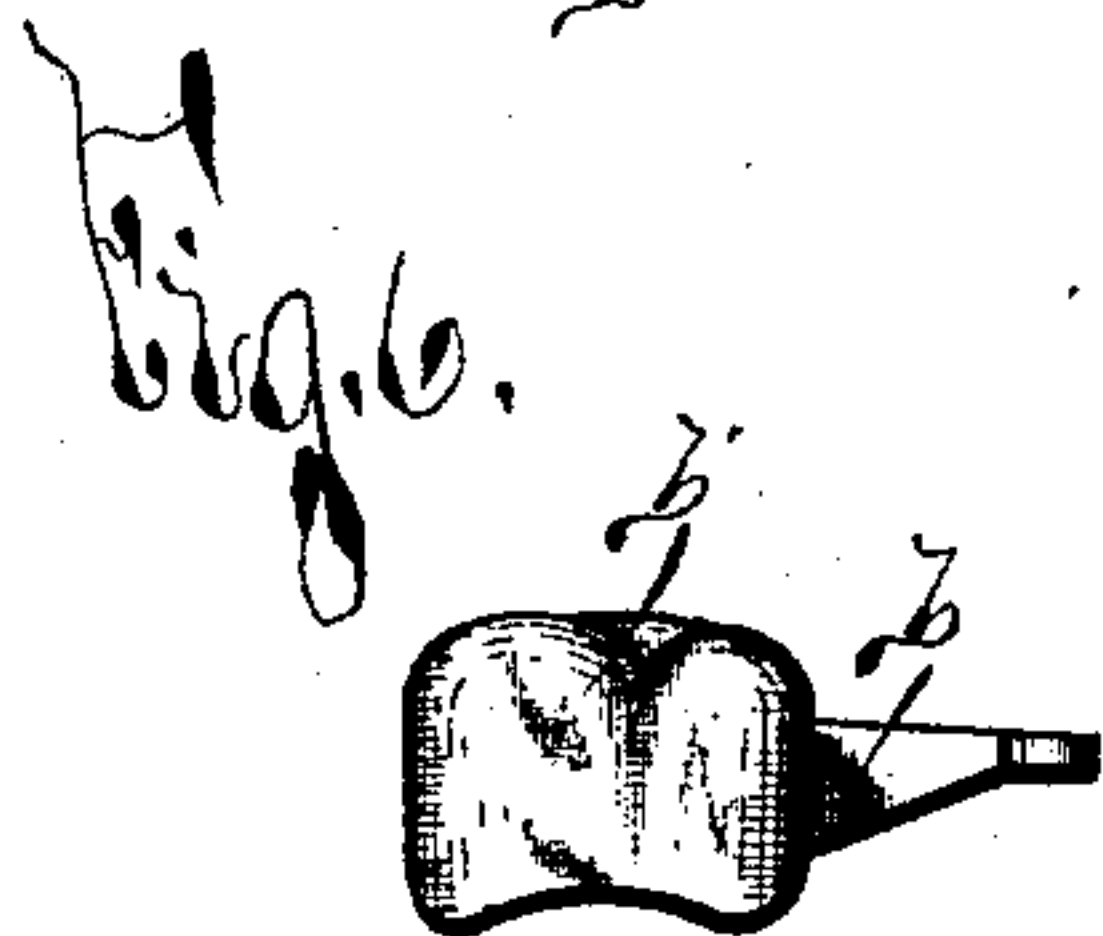
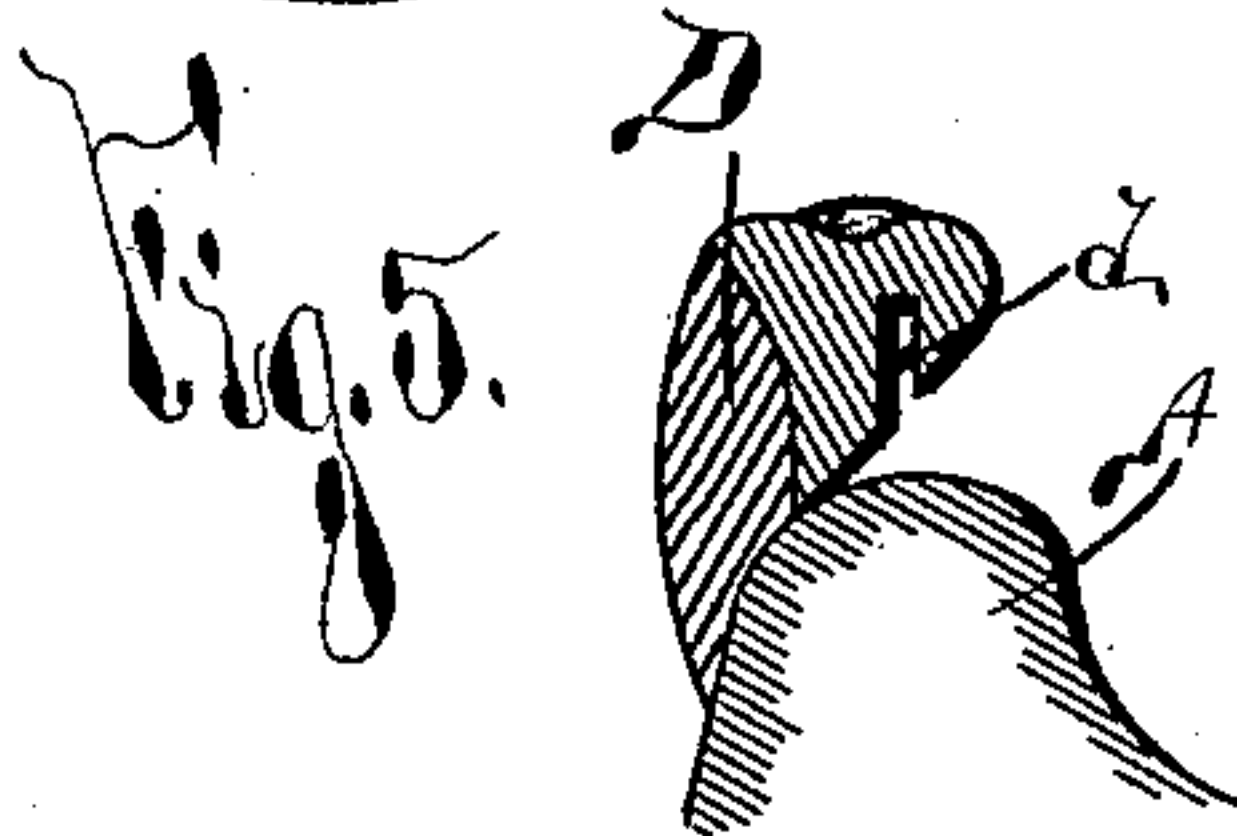
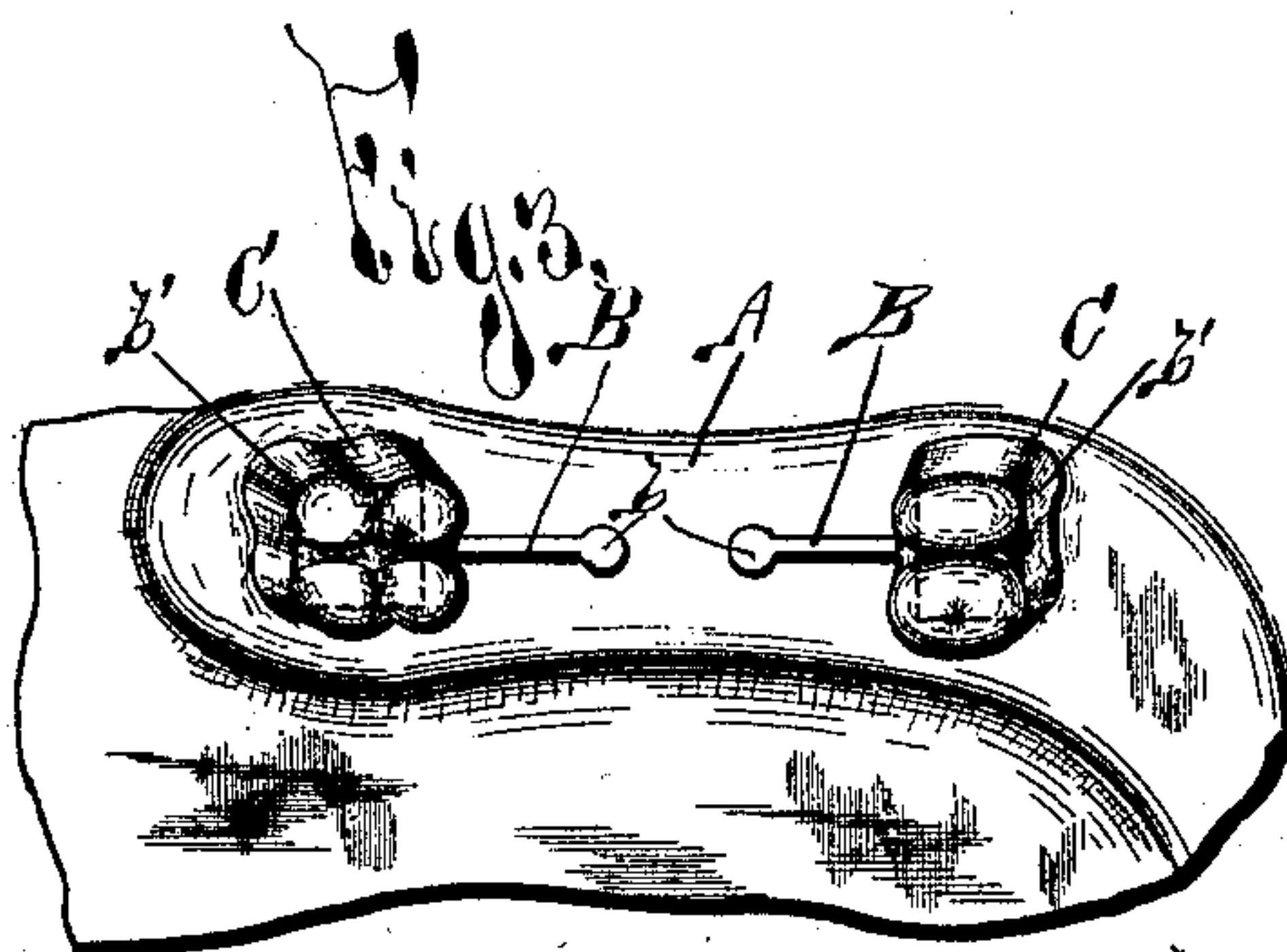
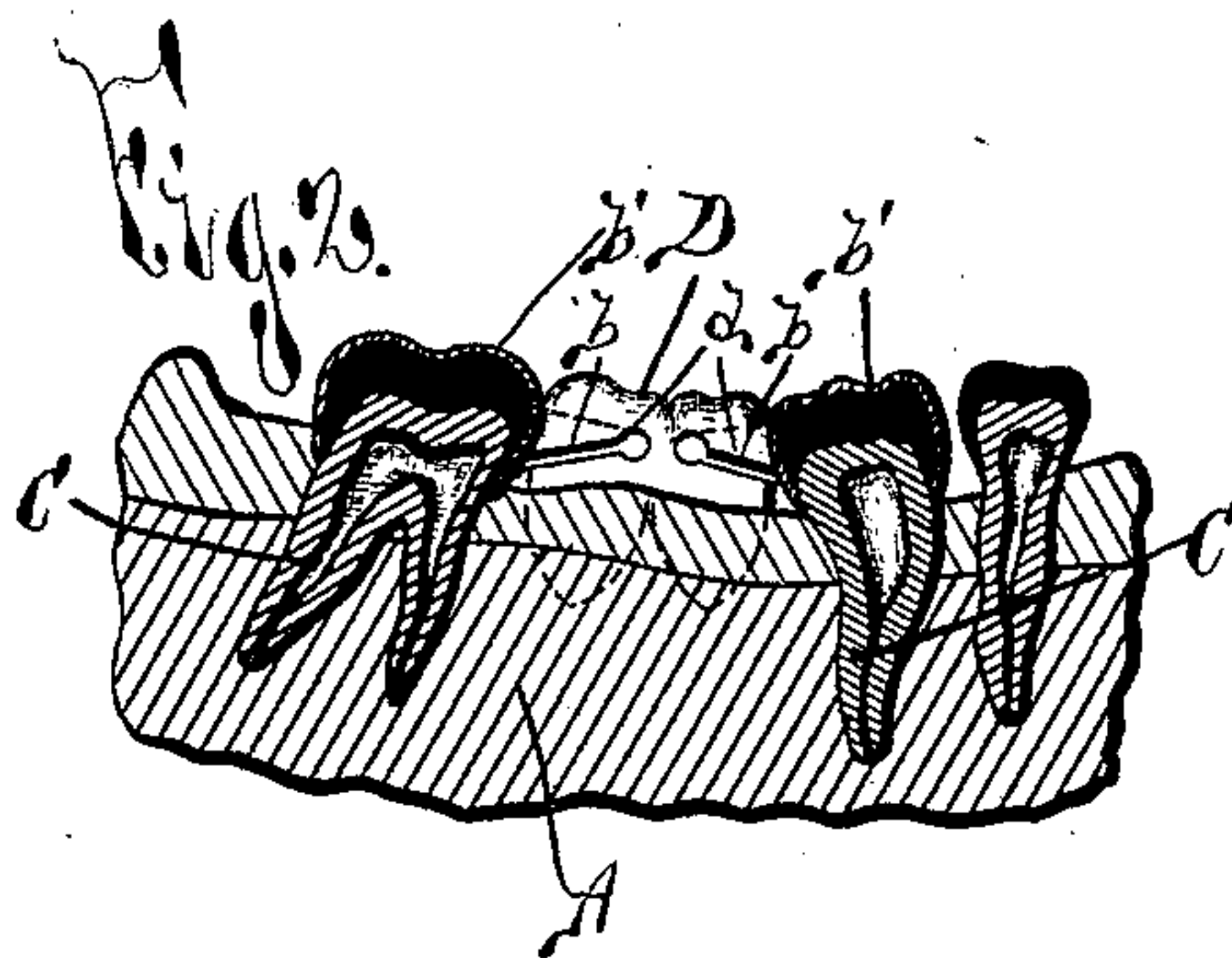
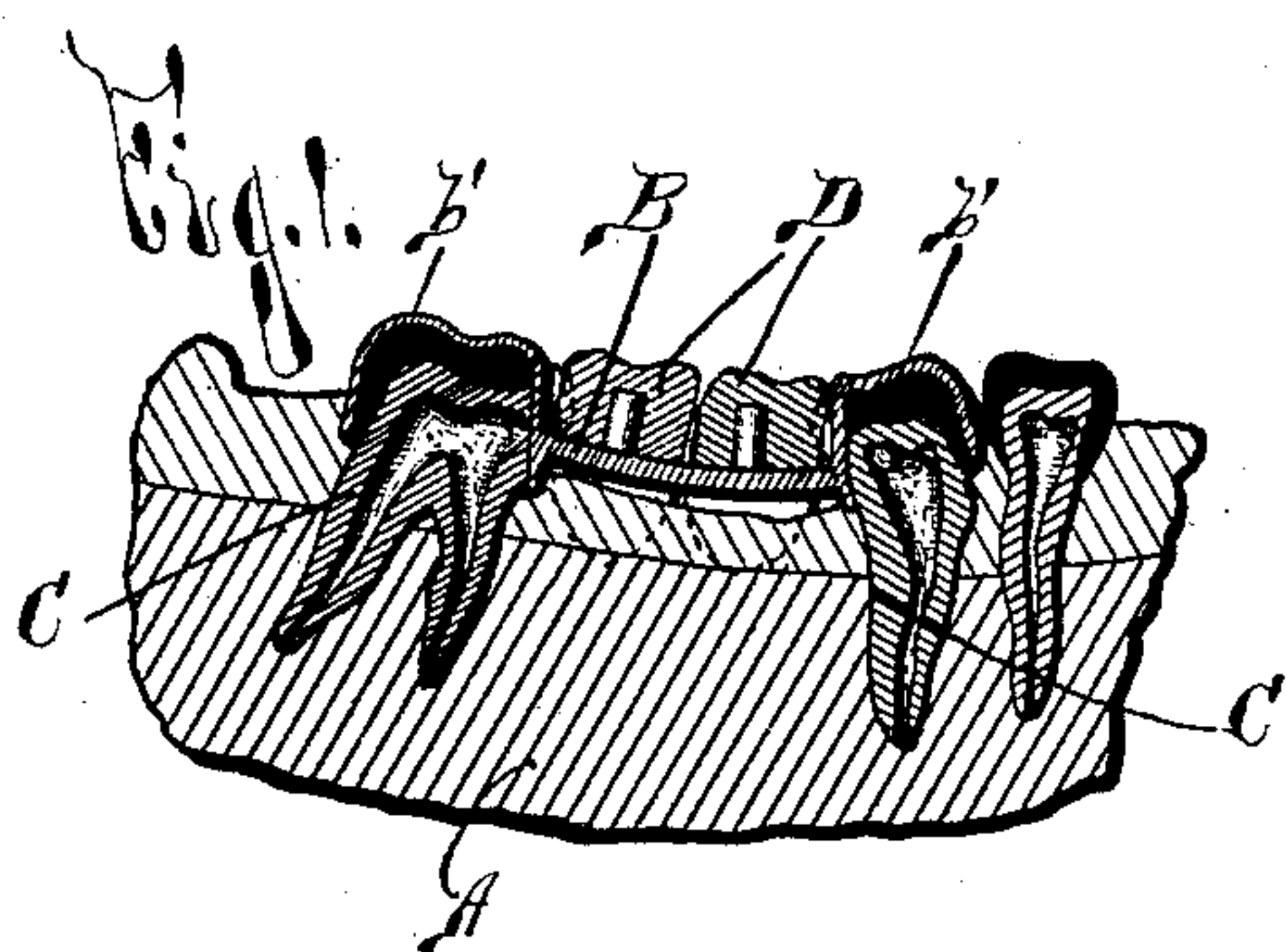


(No Model.)

G. L. CURTIS.
DENTAL BRIDGE.

No. 424,924.

Patented Apr. 1, 1890.



WITNESSES

W. C. Tomlinson
A. C. Adams

INVENTOR

George L. Curtis

BY

George W. Stey
ATTORNEY.

UNITED STATES PATENT OFFICE.

GEORGE L. CURTIS, OF SYRACUSE, NEW YORK.

DENTAL BRIDGE.

SPECIFICATION forming part of Letters Patent No. 424,924, dated April 1, 1890.

Application filed January 28, 1889. Serial No. 297,752. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. CURTIS, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and
5 useful Improvements in Dental Bridges, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to an improved dental
10 bridge, and has for its object the production of a simple and effective device, which may be readily applied to the teeth without undue cutting away of the same, upon which the bridge or crown of artificial teeth may be
15 readily anchored; and to this end it consists, essentially, in caps or crowns adapted to be mounted upon the natural tooth or a root thereof, and provided with a portion of a divided truss, upon which the artificial teeth
20 or crowns are mounted by engagement therewith.

It furthermore consists in the detail construction and arrangement of the parts, all as hereinafter more particularly described,
25 and pointed out in the claims.

In specifying my invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

30 Figure 1 is a detached section of a portion of a jaw having a molar and bicuspid tooth in natural position thereon, with the natural intervening teeth withdrawn, the ordinary caps provided upon the crowns of the teeth
35 and connected together by the usual truss, and artificial crowns mounted upon the bridge in the position of the natural teeth. Fig. 2 represents a like view to that illustrated in Fig. 1, with the exception that the caps provided
40 upon the teeth are formed or provided with my improved divided truss or projecting wings, and the artificial crowns are adapted to be mounted upon and engage this divided truss. Fig. 3 is a plan view of a detached
45 portion of a jaw with a molar and bicuspid tooth shown thereon, and provided with my improved bridge supports or truss, the teeth inclining out of their true straight position, as is frequently the case, and a dotted line
50 drawn upon the teeth indicating the amount of the same, which would necessarily be cut away in fitting the ordinary construction of

bridge-work. Fig. 4 is a detached view of a bridge or crown of two artificial crowns adapted to be anchored upon and engage my
55 improved truss. Fig. 5 is a vertical cross-section taken through line *x x*, Fig. 4, the bridge or crown of crowns being shown as mounted upon the jaw. Fig. 6 is a detached view of a cap for an ordinary straight molar tooth
60 provided with a half of my improved support or truss for the bridge of artificial crowns, and Fig. 7 is a detached view of an artificial crown of a tooth provided with the opposite half of my improved support or truss for the
65 bridge of artificial teeth.

A represents the jaw; B, a truss supported or anchored upon natural teeth or roots C, and provided with a bridge or crown of artificial crowns D, mounted thereupon.
70

It has of recent years been the custom with dentists, upon the loss of natural teeth, to provide jaws with a bridge or crown of artificial crowns mounted upon a truss anchored
75 upon sound crowns or roots of the teeth, thus obviating the necessity of plates in the mouth, and providing the jaw with teeth but little inferior to the natural ones. As previously designed, these trusses or backing for the
80 teeth have been continuous in length, and have been mounted or anchored upon suitable supports best fitted to the sound crown or root, upon which the extremities of the same are anchored. When the natural crowns are
85 sufficiently sound, it is usually preferable to cement or otherwise anchor thereupon a suitable cap fitting the natural crown. When not sufficiently sound for the anchorage of a cap,
90 it is usually customary to provide an artificial crown upon a firm natural root and then rigidly secure the truss or bridge support upon the artificial crown.

When caps are used upon the teeth, it will be seen that the tooth must be sufficiently cut away to allow of the vertical movement
95 necessitated in fitting the separate caps joined together by the truss for the bridge of artificial teeth. This movement is always obtainable when the teeth are straight in form; but when the same are inclined toward or
100 away from each other, or inwardly or outwardly, as shown in Figs. 1, 2, and 3 of the drawings, it will readily be seen that the tooth structure must be greatly cut away, as

shown in full lines in Fig. 1 and in dotted lines in Fig. 3; otherwise it would be impossible to fit the ordinary truss for bridge-work upon the teeth when the crowns thereof are inclined out of their natural position.

The cutting away of the tooth structure is frequently an extremely painful operation, from the liability of the contact of air with the pulp of the tooth. Moreover, the life of the tooth is greatly endangered by the cutting away of the outside shell of the tooth, and it is frequently the case that after the operation of fitting bridge-work in the mouth has been entirely completed the tooth-pulp becomes diseased by the reason of the undue cutting away of the outside shell of the tooth and necessitates the removing of the bridge-work.

To obviate the cutting away of the tooth structure, as necessitated by fitting the ordinarily-constructed bridge-work, I provide the caps *b'* or other supports with projecting wings *b*, extending toward each other and forming a divided truss, to which the bridge of artificial crowns *D* may be readily anchored. The dividing of the truss *B* allows each half thereof to be made independent of the other half and to be fitted upon its separate support, thus obviating the cutting away of the tooth structure *C*.

The supports *b'* for the divided truss *B* may be made of caps, as illustrated, when the teeth are comparatively sound; or they may consist of artificial crowns, as shown in Fig. 7, mounted on natural roots of the teeth, which artificial crowns may be secured to the natural roots by any of the usual processes in use.

The bridge of artificial crowns *D* is preferably formed on the back face thereof with a slot *d*, adapted to receive and engage the arms or wings *b*, forming the divided truss *B*; but it will be apparent that, if desired, the separate halves of the divided truss may be provided with pins or other supports to which the bridge or crown of artificial teeth may be secured. It is frequently advisable to slightly bevel the halves of the divided truss *B* and to suitably bevel the slots *d* in the teeth, as by thus forming the parts the strain to which they are subjected is to be more readily withstood. The bridge of artificial crowns *D* as so far described is removably secured to the truss *B*, and may be detached therefrom at will. However, in some instances it is desirable to secure the same rigidly to the truss, and by coating the truss or the slot *d* with a suitable cement or paste the bridge of artificial crowns will be firmly held upon the divided truss, whence it may be disengaged by the application of heat or by otherwise

overcoming the action of the cement or paste. This bridge is readily adapted for use in every case, and, as described, is removed from its truss when desired, and also when in position can be readily cleansed, affording a very desirable construction of bridge-work.

The object of my invention will be readily understood, and it will be seen that by dividing the truss into two halves I obviate the cutting away of the tooth structure and greatly facilitate the fitting of artificial teeth by bridge-work when the supporting-teeth are inclined out of their natural position.

It will be readily understood that the illustrated construction of truss and the means for attaching the bridge of artificial crowns to the same are only my preferred construction, and that the parts may be greatly varied in form and construction without departing from the spirit of my invention, which is the production of a divided truss and a removable bridge. Moreover, it will be understood that I do not limit myself to construct my improved bridge or crown so that the same resembles the artificial teeth, since, although this is desirable, it is not absolutely necessary.

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

1. The combination of a divided truss, supported upon natural roots or crowns of the teeth, with a bridge or crown removably secured to said divided truss, substantially as and for the purpose set forth.

2. The herein-described support for a bridge, the same consisting of supports anchored upon the natural roots or crowns of the teeth, and arms *b*, provided upon said anchored supports, said arms projecting toward each other, substantially as and for the purpose specified.

3. The combination of supports mounted on the natural teeth or the roots thereof, arms *b*, projecting toward each other, and artificial crowns *D*, removably engaging the arms *b*, substantially as and for the purpose set forth.

4. The combination of supports mounted on the natural teeth or the roots thereof, arms *b*, projecting from the said supports, and artificial crowns *D*, having slots *d* for engaging the arms *b*, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 25th day of January, 1889.

GEORGE L. CURTIS.

Witnesses:

CLARK H. NORTON,
A. E. PARSONS.