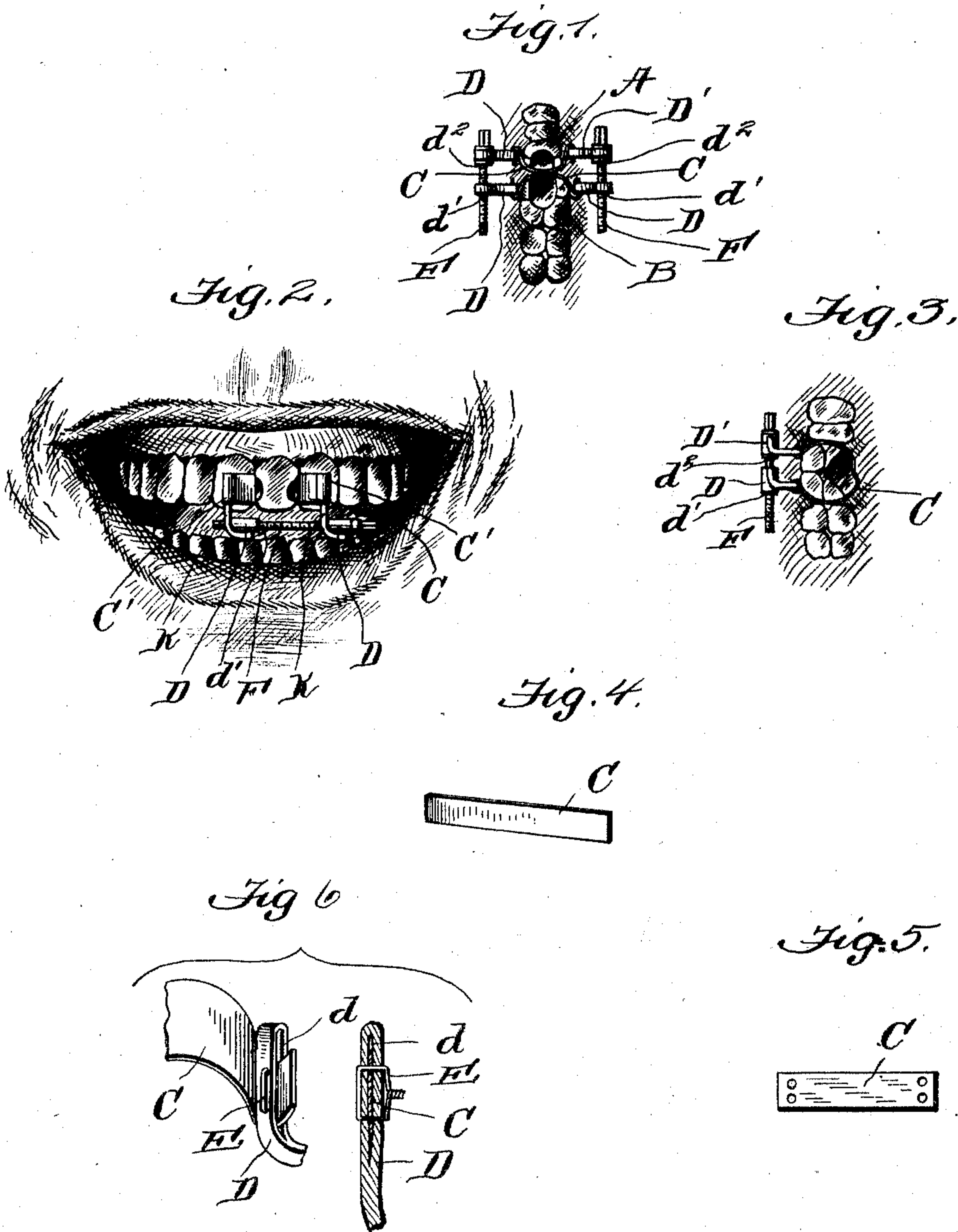


No. 776,718.

PATENTED DEC. 6, 1904.

C. M. BEAM.
MATRIX HOLDING DEVICE FOR FILLING TEETH.
APPLICATION FILED APR. 2, 1904.

NO MODEL.



WITNESSES:

R. A. Baswell.
A. L. Hough

INVENTOR

C. M. Beam,
BY
Franklin H. Hough
Attorney

UNITED STATES PATENT OFFICE.

CALVIN MICHAUX BEAM, OF SHELBY, NORTH CAROLINA.

MATRIX-HOLDING DEVICE FOR FILLING TEETH.

SPECIFICATION forming part of Letters Patent No. 776,718, dated December 6, 1904.

Application filed April 2, 1904. Serial No. 201,314. (No model.)

To all whom it may concern:

Be it known that I, CALVIN MICHAUX BEAM, a citizen of the United States, residing at Shelby, in the county of Cleveland and State of North Carolina, have invented certain new and useful Improvements in Matrix-Holding Devices for Filling Teeth; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in a combination of holding devices for dental matrices for use in filling teeth; and the object of the invention is to produce a universal posterior and anterior matrix-holder which may with aid of matrix-strip be conveniently and readily applied to teeth having various forms of cavities therein, whereby the same may be properly filled and the teeth built up.

My invention consists in various details of construction and in combinations and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claim.

My invention is illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings similar letters of reference indicate like parts in the views, in which—

Figure 1 is a perspective view showing my invention with matrix-strip as applied to a bicuspid and first molar having their mesial and distal surfaces decayed. Fig. 2 is a perspective view showing one side of a matrix-holding device with strip or prepared matrix as applied when the lingual surface of the right upper incisor is decayed. Fig. 3 is a perspective view showing a matrix-strip held by a matrix-holding device and surrounding a molar in which the lingual side of the same is decayed. Fig. 4 is a detail view of a matrix-strip before having its ends turned to form rolls or perforated corresponding with registering apertures in shank. Fig. 5 is a detail

view of one of the matrix-engaging members of the invention, and Fig. 6 is a detail view showing the manner of attachment of one end of the matrix-strip to the screw-carrying member.

Reference now being had to the details of the drawings by letter, A and B designate, respectively, a second bicuspid and a first molar having the mesial and distal surfaces thereof decayed, and in applying my dental matrix devices or holders for the treatment of said teeth for filling and building up the same I provide two matrix-strips similar in construction and each designated by letter C. Said matrix-strips may be easily made by the operator to suit individual cases and of any suitable metal, such as German silver or steel, and must be thin enough to be easily passed between the teeth to be filled.

Referring to Fig. 1 of the drawings, two matrix-holding devices are illustrated, right and left, (designated by letters D and D'.) Said members are formed, preferably, of steel, the arms of which are angled, coming from threaded and swivel screw connection about one-twentieth inch, turning downward about one-third inch, and are rounded at corresponding ends, and a longitudinal slit d is formed in each member for the reception of one end of a matrix-strip, and a suitable wire E or other fastening device is passed through registering apertures in the shank portions of said members and in the matrix-strips, whereby the ends of the strips may be securely fastened to said members. The outer angled ends of the members D, which extend rearward and in opposite directions, are provided with apertures d' , the inner walls of which apertures are threaded and adapted to receive the screws F, and each of the matrix-holding members D' is also apertured, as at d^2 , and each is adapted to receive a portion of one of said screws which has swivel connection therewith. One end of each of said screws is squared in order to permit a wrench to be applied thereto for the purpose of rotating the screw in one direction or another, accordingly as it may be desired to cause the ends of the two matrices, which are positioned as shown in the drawings, to be forced away from each

other or together for the purpose of holding the matrix-strips about a portion of the adjacent faces of the teeth which are being treated.

5 Referring to Fig. 2 of the drawings will be seen the application of one of my matrix-holding devices and a prepared strip as employed when a lingual surface of the right upper incisor is decayed. In this application
10 of my invention I show a slight modification in the manner of applying one of the holding devices for holding the strips adjacent to the tooth, and the modification consists in turning the ends of the strip into cylindrical rolls C',
15 and in this modification the shank portions K of the strip-holding members are adapted to enter said rolls, and the ends of the strips may be held in the cylindrical rolls by means of solder or other fastening mechanism.

20 Referring to Fig. 3 of the drawings, I have illustrated the application of one of my matrix-holding devices and a prepared strip in connection with a molar in which the lingual side thereof is gone, and in said Fig. 3 the
25 matrix-strip is passed about the tooth and the ends of the strip are turned into rolls which are engaged by the shank portions of the matrix-strip-holding device and a screw which is swiveled to one member engages threaded
30 walls in the aperture of the other member.

Letter N designates a tooth where only the buccal and lingual walls of the bicuspid are left, and in applying my invention to treat a
35 tooth of this kind it is better to place two strips of the matrix around the tooth instead of between the same, as illustrated in Fig. 1, and by turning the screw in the reverse direction the strips may be securely held to the tooth.

40 By the provision of my invention or the apparatus shown and described it will be observed that I produce simple and efficient ma-

trix-holding devices which may securely hold the matrix-strip, and by the application of the screws one or more strips may be held about
45 the tooth to be treated, and by the employment of a wrench the strips may be easily and quickly adjusted, and by the construction illustrated the matrix-strip holders will not interfere with the movements of the operator in
50 treating the teeth to which the matrices are applied.

While I have shown certain forms of matrix-strips for application to different teeth, it will be understood that many other forms
55 may be made as may be found necessary in the treatment of teeth located in different positions and having cavities positioned at different locations in the tooth, as the object of this invention for holding the matrix-strips is
60 that the operator is enabled to construct his matrices in shape, width, and length to suit each individual case where a dental matrix is used.

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

A dental matrix-holding apparatus comprising two separate matrix-holding members, each having a curved end with a longitudinal
70 slot therein, and apertured bosses at the opposite ends of said members, a matrix, the ends of which pass through said slots, means for fastening said matrix to the members, one
75 of said bosses being interiorly threaded, a screw swiveled in one of said bosses and having threaded connection with the other, as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

CALVIN MICHAUX BEAM.

Witnesses:

GEO. B. SANTON,

L. I. GIDNEY.