

(No Model.)

J. W. DENNIS.
DENTAL MATRIX.

No. 532,722.

Patented Jan. 15, 1895.

Fig: 1.

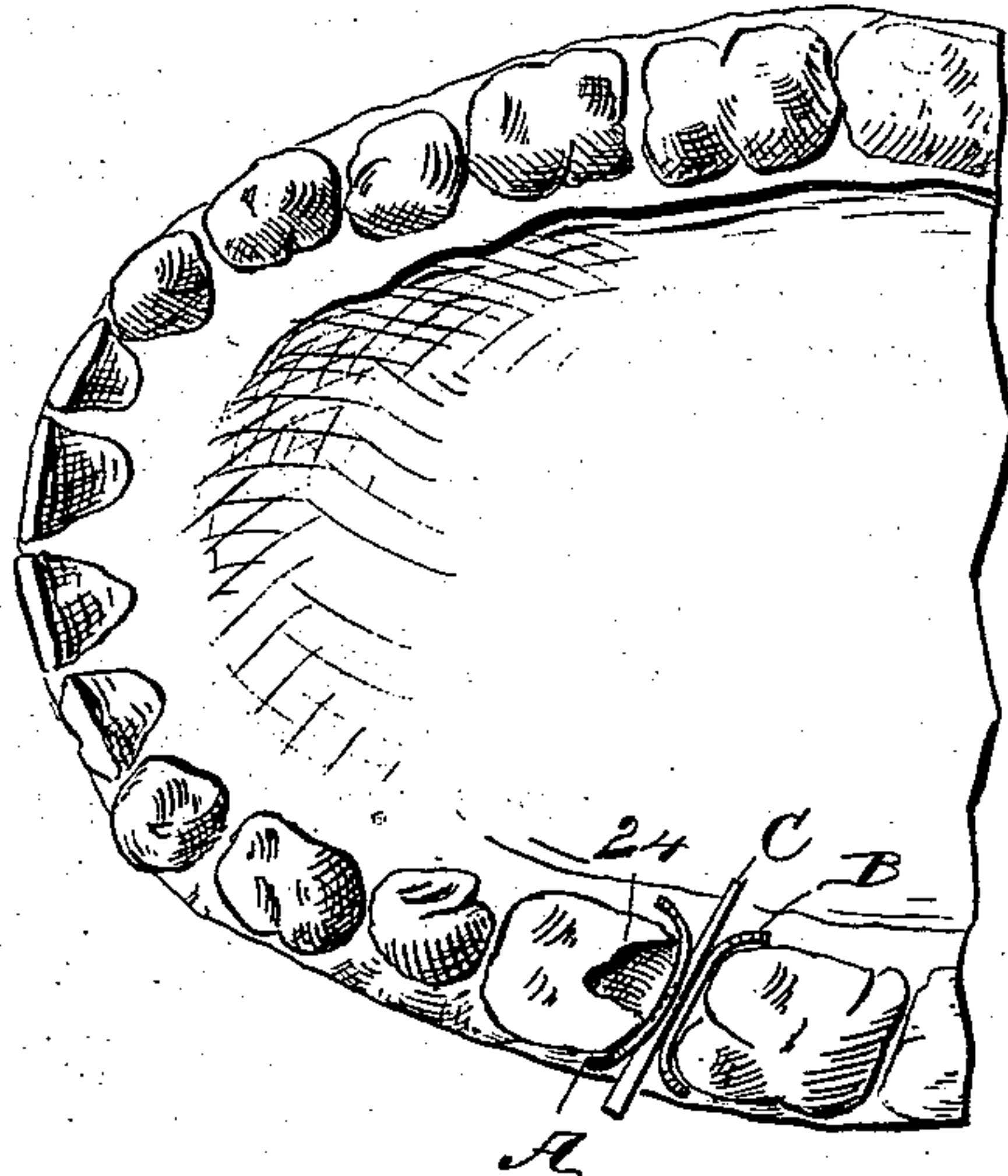


Fig: 3.

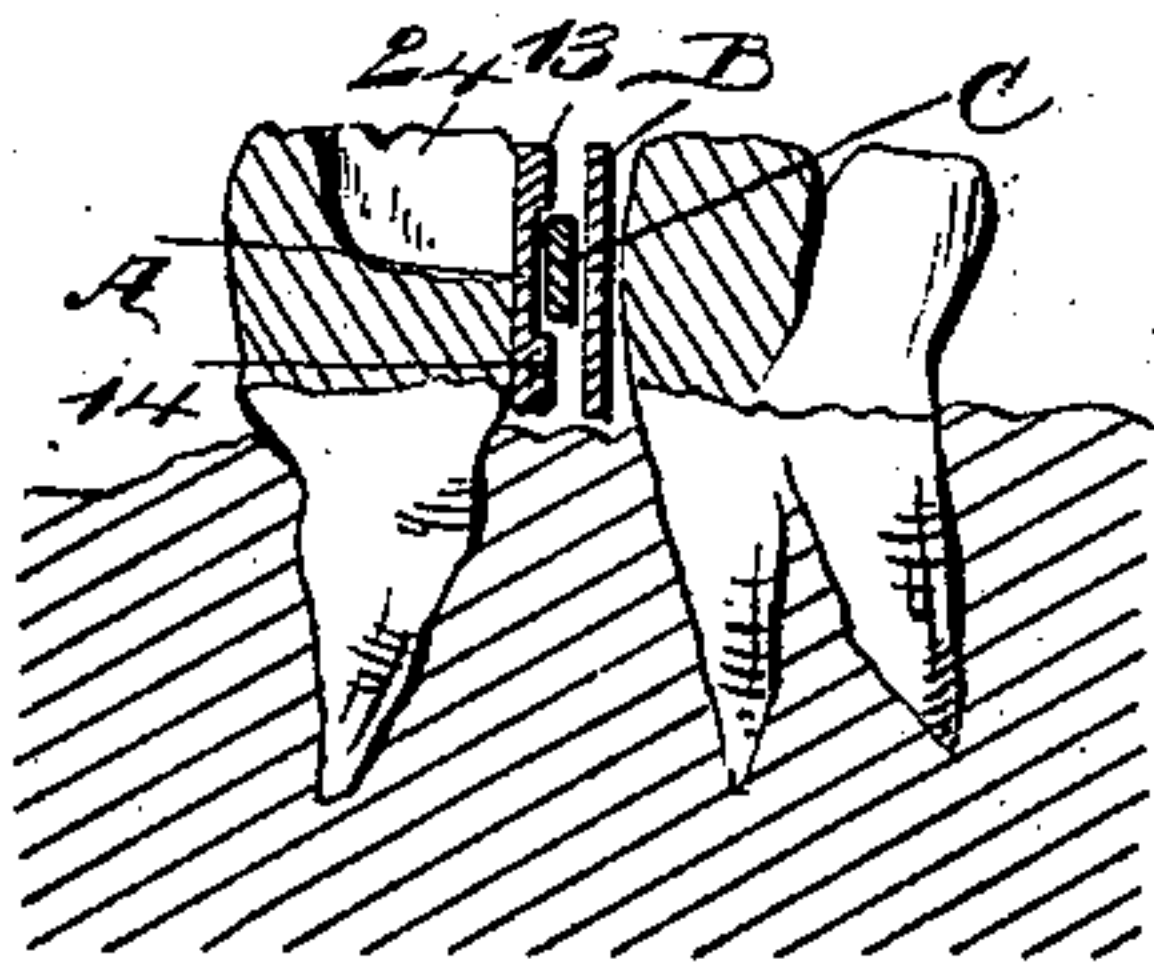


Fig: 4.

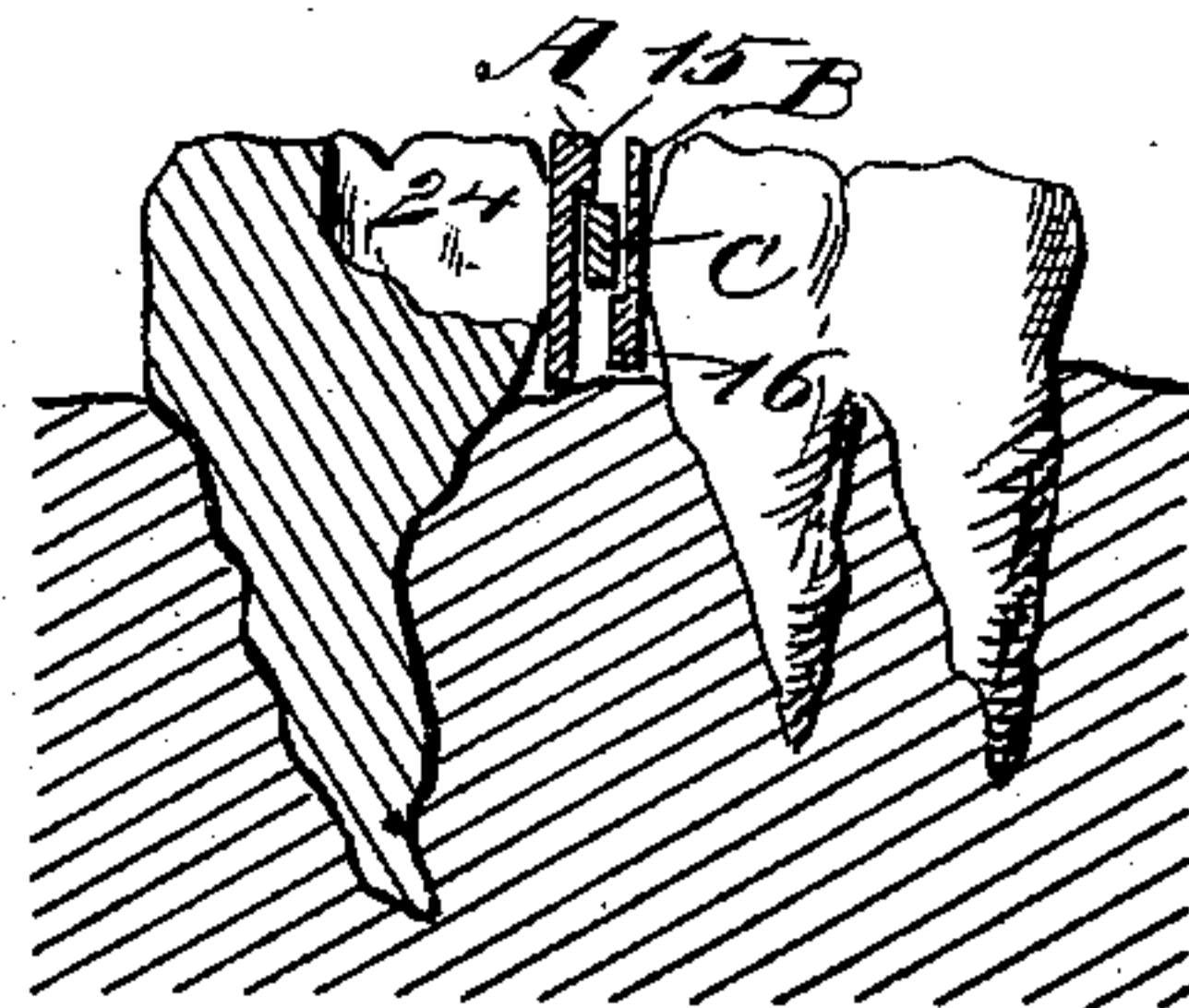


Fig: 2.

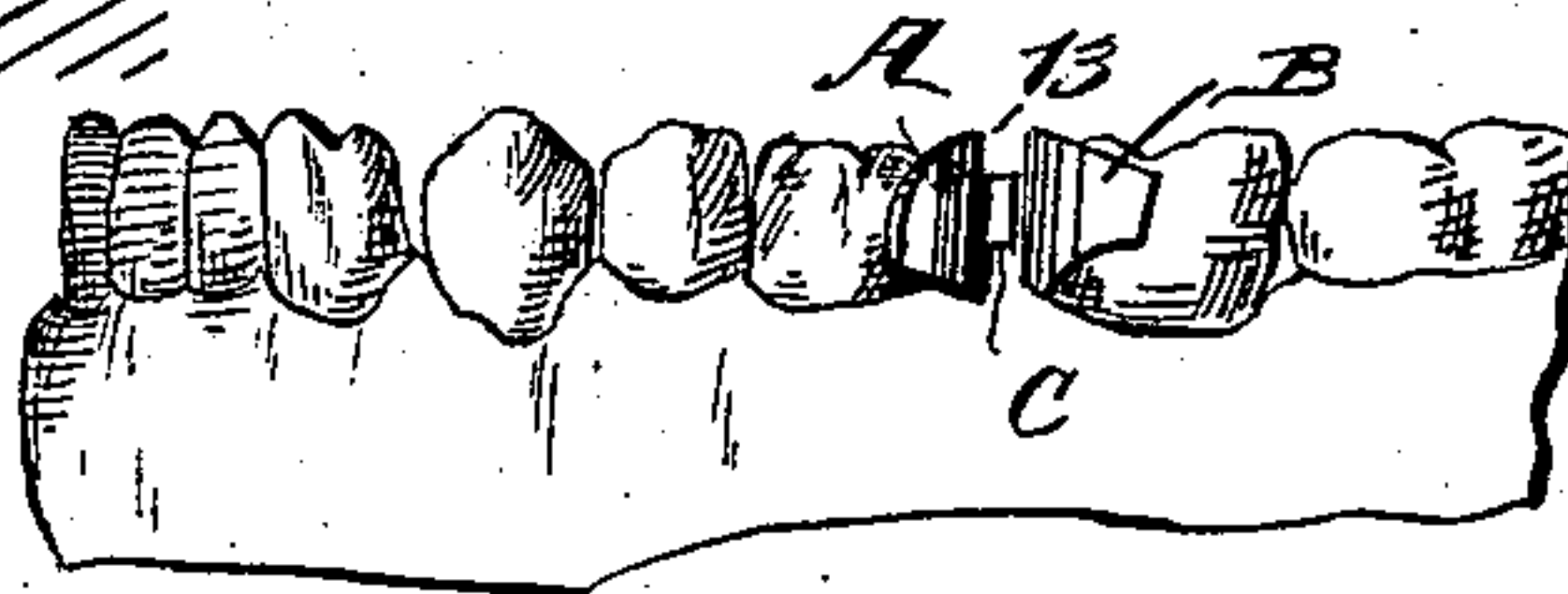


Fig: 5.

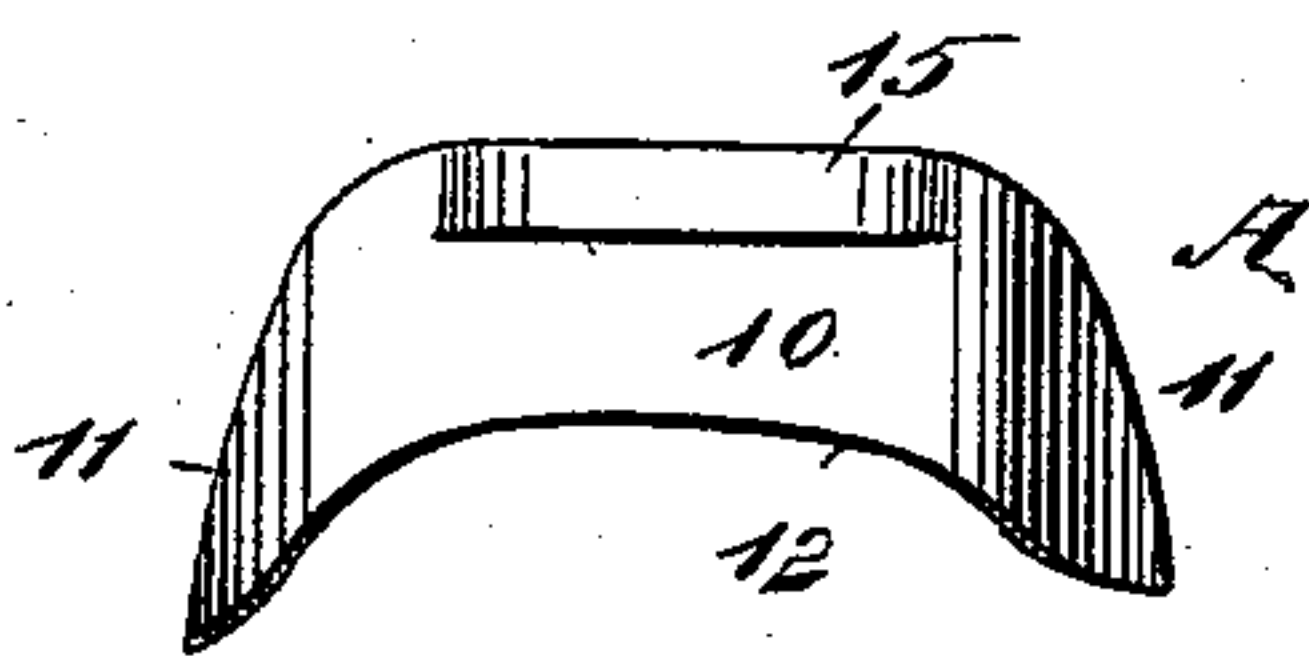


Fig: 6.

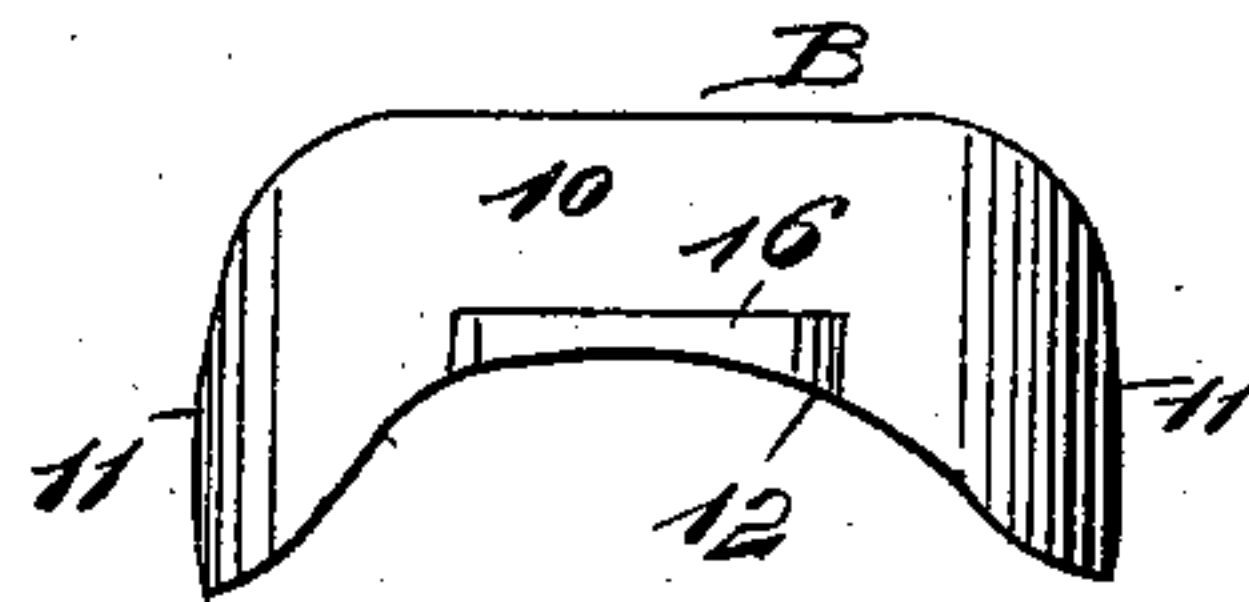
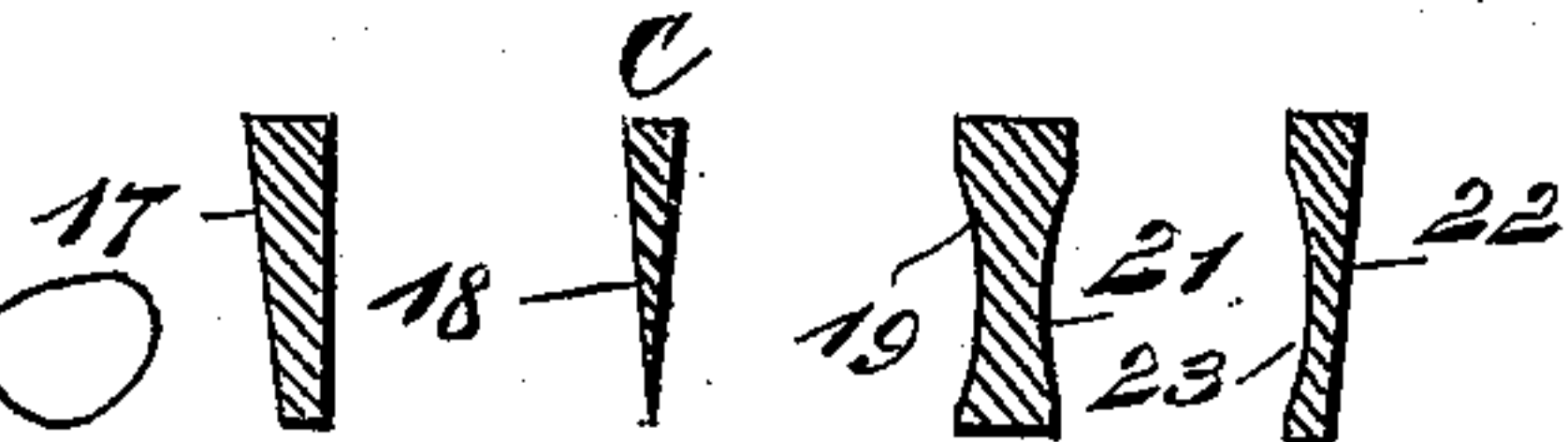


Fig: 7.



WITNESSES:

Chas. Vida.
Fred. Acker

INVENTOR

J. W. Dennis
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES W. DENNIS, OF CINCINNATI, OHIO, ASSIGNOR TO CLARA E. DENNIS,
OF SAME PLACE.

DENTAL MATRIX.

SPECIFICATION forming part of Letters Patent No. 532,722, dated January 15, 1895.

Application filed July 3, 1894. Serial No. 516,437. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. DENNIS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Dental Matrix, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of dental matrices which are placed between the teeth so as to form a temporary wall for the cavity to be filled, and the invention consists in the peculiar construction and arrangement of parts as hereinafter fully described and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 represents an upper set of natural teeth and the matrix in position between two of the molars. Fig. 2 is a side elevation of the upper set of teeth inverted, and an end view of the matrix. Fig. 3 is a sectional view through two teeth between which the matrix is located, illustrating a cavity to be filled in one of them, the matrix being in transverse section. Fig. 4 is a view similar to Fig. 3, illustrating a modification in the formation of the matrix. Fig. 5 is an outer face view of one member of the matrix constructed in the manner shown in Fig. 4. Fig. 6 is a similar view of the opposing member; and Fig. 7 represents a transverse section through different styles of wedges employed in connection with the two members of the matrix shown in Figs. 5 and 6.

In carrying out the invention the matrix may be said to consist of two plate members A and B, and an expanding or wedge member C. Each plate member comprises a substantially straight central section 10 and end sections 11, the latter being bent or curved at an angle to the body. One longitudinal edge of each plate member is concaved to a greater or less degree, as illustrated at 12 in Figs. 5 and 6, while the opposing edge is in a measure convexed, the end sections being downwardly inclined or tapered while the edge of the body section is substantially straight. The concaved edge 12 of each plate

is adapted to be presented to the gums when the plates are placed in position. Two plate members are employed in the formation of the matrix, and the longitudinally concaved surface is adapted to be presented to, and contact with the tooth. Consequently this surface is denominated the inner surface, while the opposing longitudinally convexed surface may be denominated the outer one. One or both of the plate members is provided with one or more ribs upon the outer face of the body section, the ribs being made to extend longitudinally thereof. In Fig. 3 the outer face of one of the plate members is illustrated as without a rib, while the corresponding face of the opposing plate member is provided with two ribs 13 and 14, one being located near each longitudinal edge of its body portion 10, while in the form of matrix shown in Fig. 4, the plate members whereof are illustrated in detail in Figs. 5 and 6, one plate member is provided with a longitudinal rib 15 at the substantially convexed edge of its body section, while the opposing member is provided with a like rib 16 at the concaved edge of the body, as shown in Fig. 6. The plate members are preferably made of thin steel, and the ribs of a softer material, as for example tin.

The wedge or expanding member C may be in different forms, as shown in Fig. 7, in which one form 17 is shown as blunt at top and bottom and as provided with tapering sides, while another form 18, is tapered both transversely and longitudinally, making one longitudinal edge flat and the opposing edge somewhat sharp. Another form 19, is of an ordinary wedge shape, but is provided in the central portion of each side with a longitudinal groove 21, forming limited straight bearing surfaces at each side of the top and bottom of the member, while a fourth form 22, is also in the shape of a wedge, but its sides are more tapering than in the form 19, being substantially that of the form 17, and a longitudinal groove 23 is produced in one side only. In this manner the wedge or expanding members may be made exceedingly light, yet have ample bearing surface for expansion.

In the drawings I have illustrated a cavity as formed in the proximal surface of one

of the molars. In operation, one of the plate members is made to surround the proximal surface of the molar containing the cavity, forming a temporary wall therefor, and the other plate member is in like manner made to surround the posterior surface of the adjoining molar, the concaved edges of the members being presented to the gum. A wedge is then introduced between the opposing outer faces of the opposing plate members, and is forced inward until these members are firmly clamped against the teeth and held positively in position, the wedge member being prevented from slipping by reason of the ribs 15.

By making the ribs of softer metal than the metal of the plate members proper, the wedge member when forced to place will not grate upon a hard surface, but will strike substantially a yielding one, and consequently a grating sensation will not be experienced by the patient; and furthermore, in the event it is required to set the plates slightly different from ordinary, and the ribs offer an obstruction to the wedge or expanding member, it can be forced to place without filing the ribs.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. A dental matrix, the same consisting of opposing plate members, one of the members being provided with a rib made of a softer material, formed upon its outer face, and an expanding member adapted to be introduced between the plate members and in engagement with the said rib, as and for the purpose set forth.

2. In a dental matrix, an expanding member of wedge-like construction and provided with a longitudinal groove in its side face, as and for the purpose set forth.

3. A dental matrix, comprising two plates adapted to embrace the edges of opposing teeth, the said plates each being provided with a rib, and a wedge provided with a longitudinal groove in its side face and adapted to be inserted between the said plates, substantially as described.

JAMES W. DENNIS.

Witnesses:

F. W. HANAFORD,
C. SEDGWICK.