

(No Model.)

J. W. IVORY.
DENTAL MATRIX RETAINER.

No. 474,132.

Patented May 3, 1892.

Fig. 1.

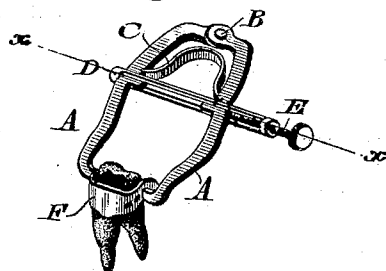


Fig. 7.

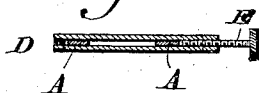


Fig. 2.

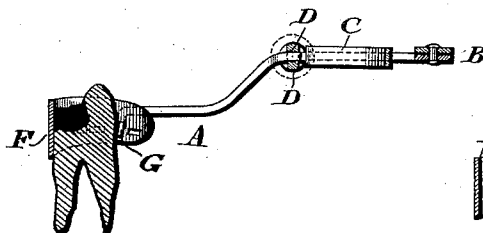


Fig. 3.



Fig. 4.

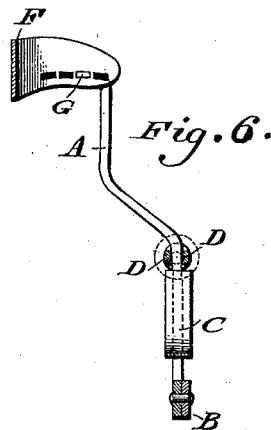
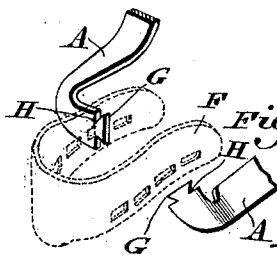
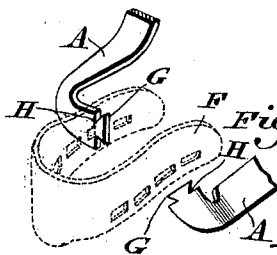


Fig. 5.



WITNESSES:

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JAMES W. IVORY, OF PHILADELPHIA, PENNSYLVANIA.

DENTAL MATRIX-RETAINER.

SPECIFICATION forming part of Letters Patent No. 474,132, dated May 3, 1892.

Application filed May 11, 1891. Serial No. 392,312. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. IVORY, a subject of the Queen of Great Britain, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Dental Matrix-Retainers, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a dental matrix-retainer having jaws which are so constructed that they are prevented from disconnection from the matrix.

Figure 1 represents a perspective view of a dental matrix-retainer embodying my invention. Fig. 2 represents a longitudinal section thereof. Fig. 3 represents a face view of a matrix. Fig. 4 represents a perspective view of a portion of the retainer, on an enlarged scale, the same being interlocked with the matrix, which latter is shown in dotted lines. Fig. 5 represents a perspective view of a portion of one of the jaws opposite to that shown in Fig. 4 in position to enter an opening in the matrix. Fig. 6 represents a section of the matrix and retainer, showing the relative position in which said parts must be held in the act of attachment prior to being locked, as shown in Figs. 2 and 4. Fig. 7 represents a transverse section on line *x x*, Fig. 1.

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

Referring to the drawings, A designates jaws, which are pivoted together, as at B, and adapted to be separated by the spring C.

D designates a yoke, which embraces the jaws A and carries a screw E, the inner end of which bears against one of the jaws, so that by the proper rotation of the same the jaws may be closed.

F designates a dental matrix of flexible material, as well known, the same being adapted to be engaged by the jaws A, so as to be held on a tooth during the dental operation thereon. The free or outer ends of the jaws are provided with lips G, (see Figs. 4 and 5,) which flare outwardly, leaving the places of junction with the jaws somewhat narrow, thus forming necks H, said lips being also flat, so

as to conform to the shape of the openings of the matrix in the direction of the length thereof and enter the same. It will be seen that when the jaws are presented to the matrix the lips are passed through either of a pair of openings in the matrix. Then the retainer or the matrix is turned, owing to the narrow portions or necks of the lips occupying the openings of the matrix, whereby said lips in the flat direction thereof stand at or about a right angle to the openings or across the same, and the matrix is thus interlocked with the jaws and prevented from disconnection therefrom. The matrix may now be carried by the retainer and applied to and adjusted on a tooth, after which the jaws are closed by the screw E, so that the matrix is bent around the tooth and held securely thereupon. After the dental operation is performed the screw is operated, whereby the jaws are permitted to separate. The matrix is opened out and then removed from the tooth, after which the retainer or matrix is turned, so that the lips register with the openings, whereby said lips emerge from said openings, the retainer and matrix thus being disconnected. Both ends of the upper yoke have threaded apertures, whereby the screw is applicable to either end, as will be seen in Fig. 7, where it will be noticed that one jaw is in contact with one end of the yoke, while the other jaw has the end of the screw bearing against the same, thus making the instrument universal in its application to the teeth, it being further seen that the yoke provides a guide and brace for said jaws when the latter are held true and in the same plane.

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

1. A matrix-retainer having jaws provided with flaring or widening lips adapted to register with the openings of the matrix and having reduced necks on said lips at the places of connection with the said jaws, whereby the matrix may be interlocked with the retainer, substantially as described.

2. A matrix-retainer having a yoke connected with the jaws thereof, said yoke being provided with a threaded aperture at each

end for the engagement of the closing-screw of said jaws at either end, substantially as described.

3. Pivoted jaws with a separating-spring,
5 a yoke embracing the said jaws and carrying a screw the inner end of which bears against one of the said jaws, and outwardly-flaring

lips connected by necks with said jaws, said parts being combined substantially as and for the purpose set forth.

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Witnesses:

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