

(No Model.)

W. H. MARSHALL.
COMBINED DENTAL SEPARATOR AND MATRIX.

No. 421,952.

Patented Feb. 25, 1890.

Fig. 1.

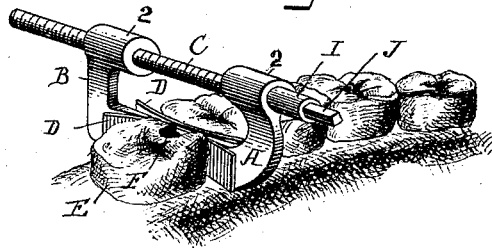


Fig. 2.

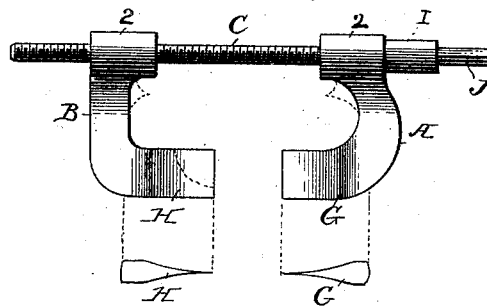


Fig. 3.



Fig. 4.

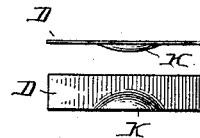
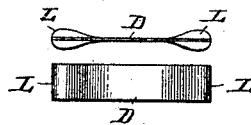


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. MARSHALL, OF OXFORD, MISSISSIPPI.

COMBINED DENTAL SEPARATOR AND MATRIX.

SPECIFICATION forming part of Letters Patent No. 421,952, dated February 25, 1890.

Application filed December 20, 1889. Serial No. 334,383. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. MARSHALL, a citizen of the United States, residing at Oxford, Lafayette county, State of Mississippi, have invented certain new and useful Improvements in Separators and Matrices for Teeth, of which the following is a specification.

My invention relates to that class of dental matrices in which a double wedge is used for holding an auxiliary sheet or plate of metal at the side of a cavity in a tooth while it is being filled; and it consists of a threaded shaft and two carriers having wedges secured or formed thereon, as will be hereinafter more fully set forth.

Referring to the drawings, Figure 1 is a perspective view of my device as applied to a tooth to be operated upon. Fig. 2 is a side view of the device. Figs. 3, 4, and 5 are edge and side views, respectively, of different styles of the auxiliary strips I use in connection with the wedges.

In filling cavities in teeth where the side of the tooth has decayed it is often necessary that an artificial wall be constructed at that point to prevent the metal or other material used in the filling from being forced out by the pressure applied in plugging or hammering it into a compact mass in the body of the filling. When the cavity is in the face of one of two contiguous teeth, I utilize the adjacent tooth as a rest or support for means to hold the plate against the side of the tooth to be filled, as shown in Fig. 1 of the drawings.

The device consists of the carriers A B, each of an L shape and each having a hub 2 for the passage of the screw-shaft C, which turns loosely in the hub of the carrier A, while the hub of the carrier B is threaded to engage the thread of the screw-shaft. The lower end of each carrier is beveled from opposite sides, thus forming two edges G H.

To close the open side of the opening F in the tooth, I make use of the usual plate or strip D. By means of the shaft the carriers may be drawn toward each other for the purpose of forcing the plate D against the side of the tooth E. The carriers are made L-shaped, with their lower ends pointing toward each other to give more room at the top of the tooth for operating the plugger in filling, &c. The sides of the wedges may be made slightly

concave, if desired, and the lower point of one or both of them may be made a trifle longer than the top to more nearly conform to the shape of different teeth. The screw is provided with an enlargement I at one end, forming a shoulder which bears against the loose carrier. The screw is rotated by a key fitting on the squared portion J, or by any other means.

In using the device above described the cavity is first thoroughly cleansed ready for filling and the rubber dam applied in the ordinary manner. One or more of the thin auxiliary metal strips D are then slipped in between the teeth down to the gum and the carriers applied, as shown in Fig. 1, with the points of the wedges entering between the strips and forcing one of them tightly against the side of the tooth having the cavity as the screw is rotated. As soon as the device has been tightened up the cavity can be filled and the device removed by unscrewing the screw and taking out the strips or plates.

To secure a closer fit, in addition to the shaping of the sides of the wedges, as hereinbefore described, different-style plates may be used—as, for instance, one of them may be provided with an enlargement K about midway of its ends, as shown in Fig. 4, which will cause the plate to follow the contour of the neck of the tooth when the wedge is drawn against it. Where the cavity is very large and the walls of the tooth thin and frail, a strip can be used having a wedge L at each end, as shown in Fig. 5, and made out of solder or some soft material, which will not be so apt to injure the tooth as a harder material would. Where the teeth is widely separated, several strips must be used to fill up the space; but with closer teeth a fewer number will answer.

With a matrix constructed and applied as above described a cavity can be quickly and effectually filled with gold, amalgam, or other material ordinarily used and the matrix removed without any danger of disturbing or damaging the filling in any manner before it has become thoroughly set or hardened. It can be applied to any teeth requiring such a device, and can even be used without the rubber dam, as it fits so snugly to the teeth as to exclude the moisture. The most deli-

cate edges of cavities need not be broken or damaged, and the plate or strip can be made to correspond with the contour of the tooth being filled.

5 Having thus described my invention, I claim—

1. A clamp for dental purposes, consisting of a screw-threaded shaft having a shoulder at one end, and two L-shaped carriers thereon,
10 one of which is screw-threaded and the other one fits loosely and bears against the shoulder, the lower portion of each of said carriers being provided with or formed into a wedge, substantially as described.

15 2. The combination of a clamp consisting

of two wedges and a screw-shaft extending through the same, and a plate thickened to fit the contour of the tooth, substantially as described.

3. The combination of the wedge-carriers, 20 screw, and plate or strip having an enlargement at each end formed out of soft material, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 25 two subscribing witnesses.

WILLIAM H. MARSHALL.

Witnesses:

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M. A. MONTGOMERY.