No. 844,079. PATENTED FEB. 12, 1907.

E. ARMSTRONG.

DENTAL MATRIX.

APPLICATION FILED JULY 26, 1906.

Fig 1

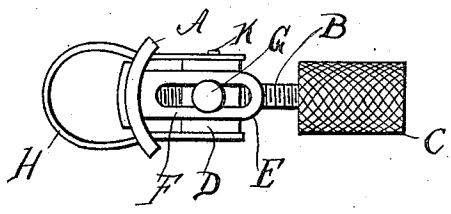


Fig 2

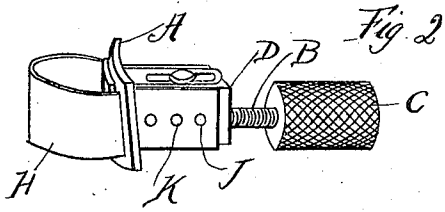


Fig 3

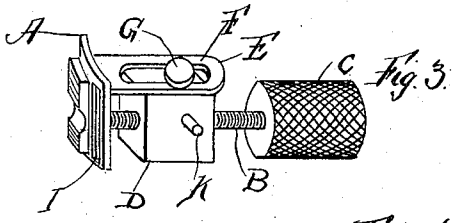


Fig 4

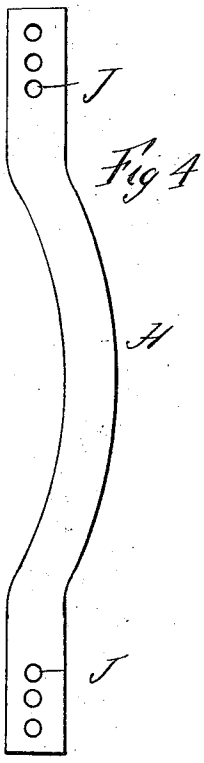


Fig 5

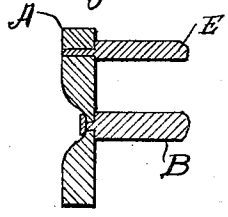


Fig 6

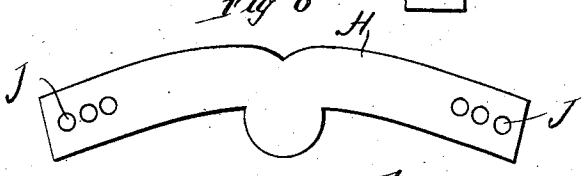
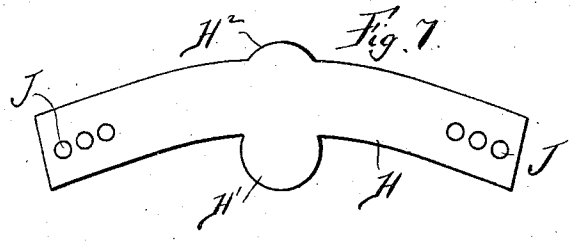


Fig 7



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DENTAL MATRIX.

No. 844,079. Specification of Letters Patent. Patented Feb. 12, 1907.

Application filed July 26, 1906. Serial No. 327,811.

To all whom it may concern:

Be it known that I, ELLSWORTH ARMSTRONG, a citizen of the United States, residing at Collingdale, county of Delaware, and State of Pennsylvania, have invented a certain new and useful Improvement in Dental Matrices, of which the following is a specification.

My invention relates to a new and useful improvement in dental matrices, and has for its object to provide an exceedingly simple and effective device of this description which may be readily applied to any form of tooth to confine the filling while the same is being introduced into the cavity of the tooth to which the matrix is attached and which may be readily detached after the filling has been inserted.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of my improved matrix; Fig. 2, a perspective thereof; Fig. 3, a view similar to Fig. 2, the band being removed, so as to clearly show the arrangement of the threaded sleeve; Fig. 4, a detail view of the band before being attached to the holder; Fig. 5, an enlarged section of the clamp, showing the operating-rod swiveled thereto; Fig. 6, a view of a slightly-modified form of band; Fig. 7, a similar view of a further modification of the band.

In carrying out my invention as here embodied, A represents the clamp, to which is swiveled the operating-screw B, the latter terminating in a knurled handle C, by which the screw may be manipulated, and upon this operating-screw is threaded the collar D.

The clamp has attached thereto or formed therewith the guide extension E, which is provided with a slot F, through which the pin G, projecting from the collar, passes, and this arrangement will permit the clamp to be moved back and forth by the proper manipulation of the operating-screw, while at the same time holding said clamp and collar against independent rotation.

H represents the clamping-band, the central portion of which is curved when of the construction shown in Figs. 2 and 4, while its end sections are straight and adapted to pass through the elongated eyes I of the clamp, and these end sections have the holes J formed therein, adapted to engage the pins K, which project from the sides of the collar, and as there are several of these holes it follows that the band may be adjusted to suit various sizes of teeth.

In practice the band H is preferably made of very thin and flexible metal, so that when it is placed around the tooth and the operating-screw properly manipulated to force the clamp against the tooth the band will be tightly drawn around the tooth and assume the shape thereof. This will, without any care upon the part of the operator, snugly inclose the cavity in the tooth to be filled, so that the filling may be readily applied thereto, the exposed portion assuming the general contour of the tooth by reason of the band inclosure.

The fact that the central portion of the band is curved greatly facilitates the manipulation of the matrix in that when the band is fitted around the tooth the operating-screw will stand at an angle sufficient to clear the other teeth in the mouth.

In Fig. 6 I have shown a slight modification of the band H, in which the end portions are curved and a central enlargement H′ is formed with the band adapted to fit certain shaped teeth, and in Fig. 7 a further modification is shown, in which a supplementary enlargement H^2 is provided, which is especially advantageous for certain classes of work.

Having thus fully described my invention, what I claim as new and useful is—

1. A dental matrix consisting of an operating-screw, a clamp swiveled thereto, said clamp having elongated eyes, a curved band, the ends of which are adapted to pass through said eyes, a collar threaded upon the operating-screw, pins projecting from the sides of said collar adapted to engage holes formed in the ends of the band, a pin projecting from the top of the collar, a guide extending rearward from the clamp having a slot through which the last-named pin passes, and a knurled handle for operating the screw as and for the purpose set forth.

2. In combination, a clamp, a threaded stem swiveled thereto, a collar threaded on the stem, a band engaging the clamp and secured to the collar and means carried by the

clamp and engaging the collar for holding said clamp against rotation independently of the stem.

3. In combination, a clamp, a threaded stem swiveled thereto, a sleeve threaded on the stem, a band engaging the clamp and secured to the sleeve, a slotted extension on the clamp and means carried by the collar extending within the slot for holding the clamp against rotation independently of the stem.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

ELLSWORTH ARMSTRONG.

Witnesses:

S. M. GALLAGHER,

O. M. TRACY.