

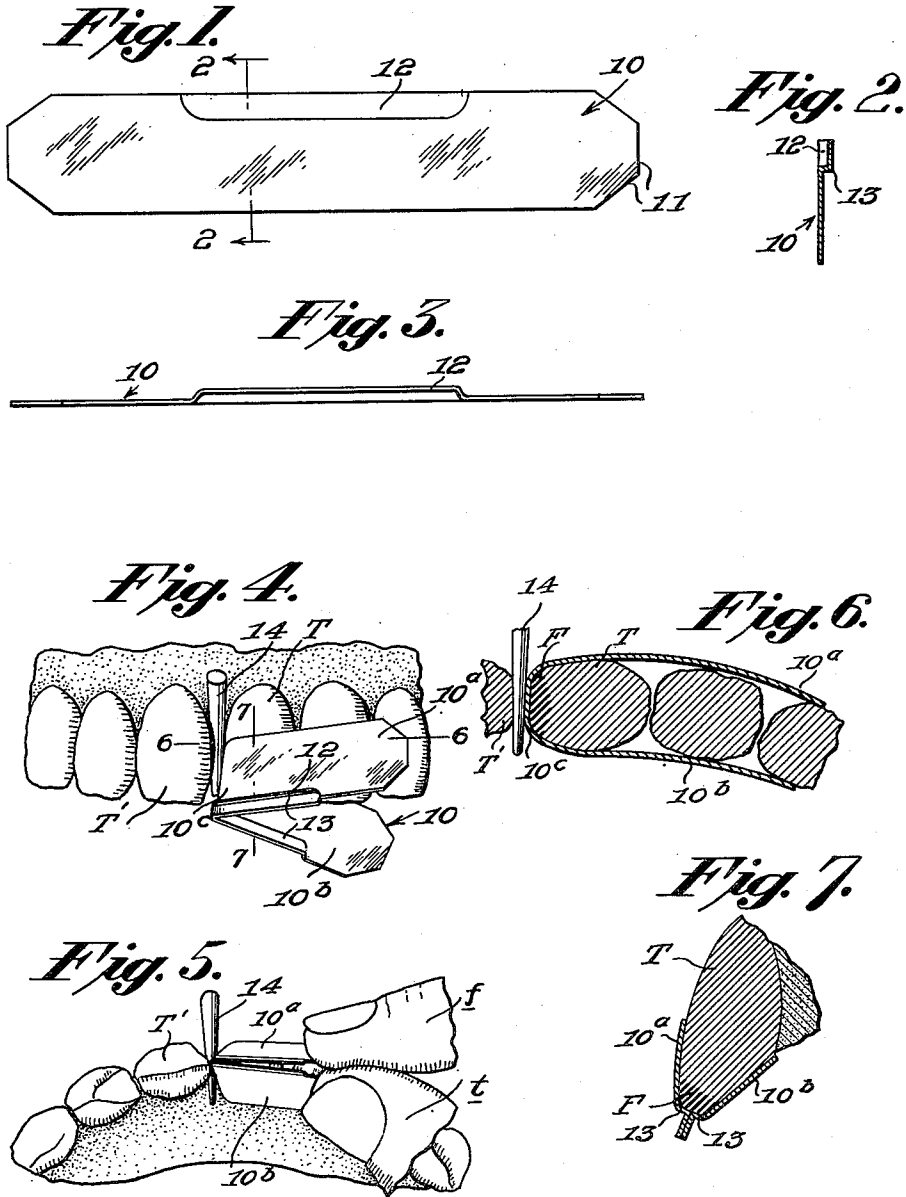
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DENTAL MATRIX BAND

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DENTAL MATRIX BAND

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1 Claim. (Cl. 32-63)

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This invention relates to a method of filling teeth and apparatus for carrying the method into effect.

The invention is more particularly concerned with a method of restoring the corners of front upper and lower teeth, and a primary object of the invention is to provide a method whereby the corners of teeth are restored with maximum efficiency as well as with greater facility on the part of a dentist.

A further object of the invention is to provide a novel matrix band for confining plastic filling material to a broken tooth at an incisal angle thereof, and also for shaping such filling material whereby minimum subsequent shaping thereof is required.

Other objects and advantages of the invention will become apparent in the course of the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a side elevational view of the improved matrix band.

Fig. 2 is a transverse sectional view of the band as observed in the plane of line 2-2 on Fig. 1.

Fig. 3 is a top edge view of the band.

Fig. 4 is a partial front elevational view of a set of upper front teeth and showing the folded matrix band in position for application of the plastic filling to the tooth engaged by the bend in the band.

Fig. 5 is a bottom plan view of the teeth in Fig. 4 and showing the folded matrix band in substantially closed position after the plastic filling has been applied.

Fig. 6 is a horizontal sectional view substantially in the plane of line 6-6 on Fig. 4.

Fig. 7 is a vertical sectional view substantially in the plane of line 7-7 on Fig. 4, but showing the folded band closed.

Referring now in detail to the drawing, the improved matrix band, by which the improved method of filling or corner restoration is carried out, is represented at 10, and same is of elongated generally rectangular form and may have the three-sided end formation as indicated at 11, but which is not essential to the efficiency of the band.

The improved matrix band is very flexible and strong and same is preferably constructed from stainless steel .002 of an inch thick and $\frac{1}{16}$ of an inch wide. While the stainless steel band has been found most satisfactory, the invention is not limited thereto, since the band may be formed of certain transparent plastic materials or resins.

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The band 10, which is illustrated in substantially oversize thickness for greater clarity, is pressed out adjacent its upper edge and intermediate its ends in a relatively long zone, as indicated at 12, and which pressed-out formation provides a tooth biting edge engageable shoulder 13 for a purpose later referred to.

In the use of this novel matrix band, same is inserted between a tooth T, which is to be operated upon, and an adjacent tooth T', and the band is pushed in between such teeth to a distance limited by engagement of shoulder 13 with the biting edge of tooth T. The band is folded on a transverse line intermediate its ends in the provision of wings 10^a and 10^b and a fold 10^c, and such folding is preferably done prior to the insertion of the band between the teeth T and T'.

With the band thus positioned, a small wooden peg 14 is inserted between the teeth T and T' in a position adjacent the gum and in contact with the outer edge of the band at the bend 10^c therein for holding the band firmly against the tooth T to prevent flow of the filling material onto the patient's gum intermediate the teeth T and T'.

With the peg thus applied the band is held in firm position between the teeth, as a first step in the improved method of filling or restoring the incisal angle of a broken tooth T.

In the second step of the method, the band wings 10^a, 10^b are separated (Fig. 4) sufficiently to admit introduction of the filling material into a cavity in the tooth or a cavity defined by the surface of a broken corner on the tooth and the curved fold portion 10^c of the band.

In the third step of the method, the band wings 10^a, 10^b are grasped by a thumb and finger t, f (Fig. 5) and pressed toward each other, thereby bringing the shoulders 13 on the opposed wings into overlying relation to the biting edge of the tooth T and with the wings adjacent the bend 10^c accurately confining and shaping the filling material to a substantially accurate incisal angle for the tooth.

The band wings are held under pressure for an interval of approximately five minutes to allow hardening of the filling material. After hardening has taken place, the peg 14 is withdrawn and the band removed and which may be straightened out and retained for another similar operation.

Due to the substantial flexibility of the band it will readily conform to the surface of the tooth from the gum to the biting edge thereof and, as shown in Fig. 7, the shoulders 13 will not only

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limit inward movement of the band but will also act to shape the biting edge of the corner restoring filling material F.

In Fig. 6 the band is indicated in its accurate encircling relation to tooth T and as confining the corner filling F.

The improved matrix band may be ready-made for average cases, and few circumstances would present themselves wherein it would be necessary to alter the contour thereof to secure proper adaptation to the cavity margins.

The improved matrix band is well adapted for use with filling materials including cement, porcelain, or plastic acrylic, and it is ideal in use with the plastic acrylic which is the choice material at present in use.

While I have disclosed my invention in accordance with a single specific embodiment thereof, such is to be considered as illustrative only, and not restrictive, the scope of the invention being defined in the following claim.

What I claim and desire to secure by U. S. Letters Patent is:

A matrix band for use in restoring the incisal angles of broken front teeth, comprising a rela-

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tively long generally rectangular flexible body member formed of relatively thin material, the body member having a relatively long zone adjacent one edge thereof and intermediate the ends thereof displaced laterally and providing a laterally projecting tooth edge-engageable shoulder extending longitudinally of the body member and inwardly of said edge a distance equal to the width of said laterally displaced zone.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,505,684	Ainsworth	Aug. 19, 1924
2,310,448	Leib	Feb. 9, 1943
2,565,598	Eaton	Aug. 28, 1951

FOREIGN PATENTS

Number	Country	Date
79,728	Switzerland	May 1, 1919