Aug. 19, 1924. 1,505,684

F. A. AINSWORTH

DENTAL INSTRUMENT

Filed Oct. 13, 1923

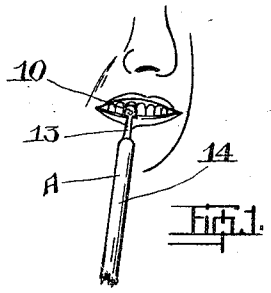


Fig. 1.

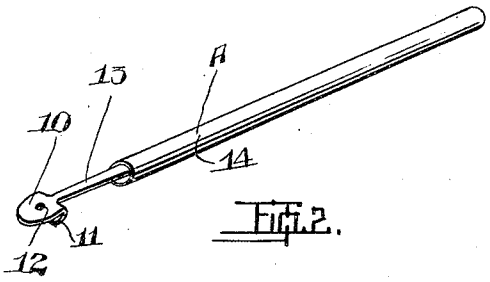


Fig. 2.

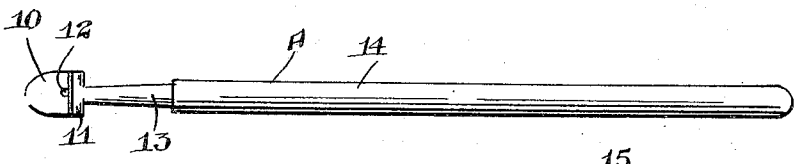


Fig. 3.

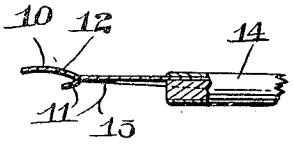


Fig. 4.

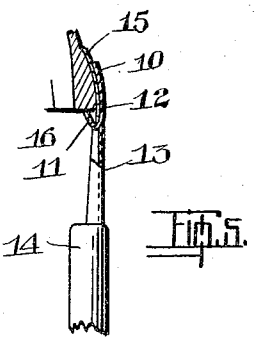


Fig. 5.

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ATTYS.

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UNITED STATES PATENT OFFICE.

FRANCIS ASKEY AINSWORTH, OF ST. JOHN, NEW BRUNSWICK, CANADA.

DENTAL INSTRUMENT.

Application filed October 13, 1923. Serial No. 668,389.

To all whom it may concern:

Be it known that I, FRANCIS ASKEY AINSWORTH, a subject of the King of Great Britain, and resident of St. John, in the Province of New Brunswick, Dominion of Canada, have invented certain new and useful Improvements in Dental Instruments, of which the following is a specification.

This invention relates to dental instruments and more especially to instruments designed to be used as holders and compressors for the placing of synthetic porcelain fillings.

Further objects are to provide an improved holder and compressor, which is connected to a detachable handle so that several sizes of holders may be provided, while only one handle is sold for every set.

Further objects of the invention are to facilitate the handling of synthetic porcelain in gingival and labial cavities by providing an instrument to hold the celluloid strip against the filling instead of using the fingers as is done at present.

It is well known that a strip of celluloid is used in the insertion of these synthetic fillings, as this material does not affect the porcelain while hardening, and the celluloid strips may be made of such forms as to roughly fit the size of the tooth that is to be filled.

The celluloid form is placed over the synthetic porcelain, and pressed on it by means of an improved holder until the porcelain is hardened. The object of the celluloid strip is also to protect the porcelain from the moisture of the atmosphere, which is important until the porcelain is thoroughly set.

Still further objects are to provide a holder which is formed with a hole, through which wax may be run to hold the complete manufactured celluloid tooth face form securely when a whole surface of tooth is to be restored or a bridge facing restoration is being made, so that the metal flange will not come in contact with the porcelain filling at the incisal end of the tooth.

Still further objects are to provide an improved dental instrument, that is simple in construction, not liable to go out of repair, and generally to adapt the several parts to better perform the functions required of them.

With the above and other objects in view, the invention consists essentially of an instrument for pressing thin celluloid over synthetic porcelain in the cavity of a tooth instead of holding and pressing the celluloid with the fingers and is particularly adaptable for use for dealing with the gingival and labial cavities in the anterior teeth.

In the drawings:

Figure 1 is a perspective view of the device in use.

Figure 2 is a perspective view of the device itself.

Figure 3 is a plan view.

Figure 4 is a fragmentary detail view showing the holder itself in section.

Figure 5 is a fragmentary sectional view of the holder in use.

In the drawings, like characters of reference indicate corresponding parts in all the figures.

Referring to the drawings, A represents the dental instrument, which comprises a holder 10, which roughly has the shape of a tooth, and is a concave element as clearly shown in Figures 4 and 5 of the drawings.

The member 10 is formed integral with a flange 11 provided at the edge designed to engage the incisal edge of the tooth.

The holder member 10 is provided with a hole 12 in which dental wax may be run as will be hereinafter set forth.

The member 10 is formed integral with a shank 13 which has the form of a pen nib and is designed to be engaged by a detachable handle 14, which is similar to a pen holder.

By means of this arrangement, it will be seen that several sizes of holders proper 10 may be provided, while only one handle 14 is adapted for each set of holders.

When in use, the strip of celluloid is placed in the holder in engagement with the flange 11 as shown in Figure 5, and by means of the holder, the strip of celluloid 15 is pressed against the synthetic porcelain 16.

The method for inserting the synthetic porcelain filling in the gingival or labial cavities in the anterior teeth is to mount the strip of celluloid in the holder as shown in Figure 5, and trim the edge so as to shape it to conform with the shape of the gum line or margin with the scissors, soft porcelain is then properly placed in cavity and held in place while hardening with the celluloid in the holder above described.

The gum line of teeth varies greatly, so that after a celluloid form is trimmed for

one case, it is not likely to be suitable for another, hence these ready made forms are manufactured in different sizes, and moulds are selected in each case, which are trimmed to fit the size of the teeth that is to be placed in the cavity.

A slight pressure on each side of the holder at the flange end causes the centre part of the flange to grip the celluloid. Before inserting the celluloid in the holder, it may be found preferable to previously bend it in V-shape so as to more readily enter the holder and flange.

An advantage of this is that the holder can be withdrawn leaving the celluloid in place to protect from the moisture of the atmosphere, which is important until the porcelain is thoroughly set.

The concave holder 10 is made of sufficiently resilient metal so that when pressure is applied, it will cause the celluloid to conform to the surface of the tooth structure around the cavity.

The small perforation 12 in the member 10 is provided above the centre, so that dental sticking wax may be run through to hold the celluloid tooth face form securely when the whole surface of tooth is to be restored, or a bridge facing restoration made, so that the metal flange, will not come in contact with the porcelain filling at the tip or incisal end of the tooth.

As a rule the celluloid strips are allowed to extend beyond the cavities so as to conform to the contour of the gum line and also keep the metal from the porcelain.

As many changes could be made in the above construction, and many apparently widely different embodiments of my invention, within the scope of the claims, constructed without departing from the spirit or scope thereof, it is intended that all matter contained in the accompanying specification and drawings, shall be interpreted as illustrative and not in a limiting sense.

What I claim as my invention is:

1. A dental filling holder and compressor to be used in connection with celluloid strip as a facing form, comprising a concave holder, a flange formed integral with the lower end of the holder designed to hold the celluloid around the incisal edge of the tooth, a shank extending from the holder, and a handle detachably engaging the shank.

2. A dental filling holder and compressor, comprising a concave holder, a flange formed integral with the lower end of the holder, a shank extending from the holder, a handle detachably engaging the shank, the holder being formed with a hole, as and for the purpose described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

FRANCIS ASKEY AINSWORTH.

Witnesses:
STEPHEN W. PALMER,
WILLIAM E. DENNY.