

UNITED STATES PATENT OFFICE

2,253,132

DENTAL INSTRUMENT

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Application May 31, 1940, Serial No. 337,991

4 Claims. (Cl. 32-63)

This invention relates broadly to dental instruments and more specifically to improvements in forceps for taking plastic impressions of teeth or a portion of a tooth.

One of the objects of the invention is to provide a dental instrument having a pair of arms pivotally connected together with a locking attachment formed on one end thereof for imparting a spring pressure upon the material retained between the opposed ends of the arms.

Another object of the invention is to provide a dental instrument consisting of a pair of arms pivotally connected together and having an end portion thereof curved to form finger tip control handles with the curved portion of one of the arms extending across the other arm for the reception of a locking nut and washer.

Another object of the invention is to provide a pair of dental forceps having an end portion thereof curved downwardly to facilitate their re-entrance in a patient's mouth and engagement with a tooth along the medial axis thereof; the end portions of the forceps being formed with recesses in their opposed faces for the retention of a plastic matrix material.

Another object of the invention is to provide an instrument which is designed to facilitate the manipulation and adjustment by one hand and the fingers thereof, the weight of the instrument being proportioned so that the dentist may recognize the tensile effort of application during the use thereof.

Another object of the invention is to construct an instrument which is economic of manufacture, durable, and which may be sterilized without separation of the component parts thereof.

Other objects and advantages more or less ancillary to the foregoing and the manner in which all the various objects are realized will appear in the following description, which considered in connection with the accompanying drawing, sets forth the preferred embodiment of the invention.

Referring to the drawing wherein the preferred embodiment of the invention is illustrated:

Fig. 1 is a perspective view of a pair of dental forceps as viewed from the top thereof;

Fig. 2 is a perspective view of the opposite side of the dental forceps illustrated in Fig. 1 and showing the downwardly curved end portion and the cups for the retention of a plastic material;

Fig. 3 is a plan view of the instrument including in dotted lines the outline of a tooth retained between the plastic matrix material seated in the cups in the end portions of the forceps;

Fig. 4 is a side elevational view of the forceps shown in Fig. 1; and

Fig. 5 is a sectional view through a portion of the instrument, the section being taken on a plane indicated by line 5-5 in Fig. 1.

Referring to Figs. 1 and 2, the improved dental forceps embody a pair of arms 10 and 11 which are pivotally connected together, intermediate their ends by a rivet 12. The end portions 15 and 16 of the arms contiguous the pivotal connection are curved downwardly to accommodate their entry into the mouth of a patient and their engagement with a tooth without obscuring the view of the dentist. Formed in the opposing faces of the end portions 15 and 16 there are recesses or cups 17 and 18 adapted to retain a plastic material therein while an impression of a tooth or a missing portion thereof is made.

The opposed end portions of the arms 10 and 11 are curved outwardly and inwardly to provide handles 20 and 21 which permit the operator to employ a finger tip grip or control. The free end of the arm 10 is curved inwardly and extended across the central portion 19 of both of the arms and is threaded for the reception of a locking washer 22 and nut 23. Provided in the central portion of the arms 10 and 11 there is a flat surface 24 which forms with the side of the arms a ledge for the engagement of the locking washer 22.

As shown in Fig. 5, the washer 22 is swiveled upon the nut 23 and is provided with a plurality of grooves or indentures in one end thereof. The grooved end of the washer is adapted to engage the ledge defined by the flat surface on the arm 11 when it is restrained from rotative movement as the nut is adjusted to effect the compressive engagement of the end portions of the arms or jaws 15 and 16 upon the tooth.

The improved dental forceps disclosed herein may be employed as a matrix for either a synthetic filling or a direct inlay. In the use of the forceps as a matrix for a synthetic filling a plastic compound is heated and then molded into a wedge or cone form in the cups 17 and 18, after which the material is allowed to cool. The surface of the patient's tooth or teeth in the area of the cavity are lubricated after which the tips of the plastic material within the cups are surface heated prior to the forceps being clamped over the tooth containing the cavity. The nut 23 is tightened on the threaded end of the arm 10 so that the plastic material will conform to the outline of the tooth.

After the plastic material has been chilled the