May 12, 1925.

1,537,793

T. F. BATES

DENTAL TWEEZERS

Filed July 9, 1923

Fig. 1.

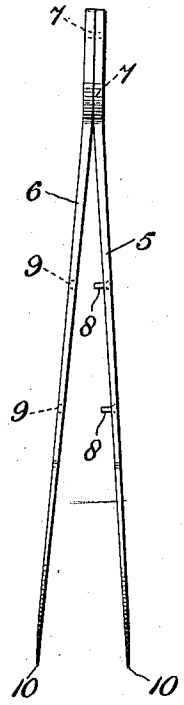


Fig. 2.

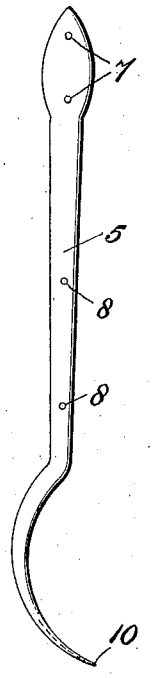


Fig. 3.

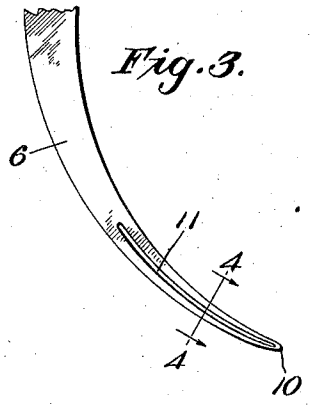


Fig. 4.



Inventor

Thomas F. Bates,

By Wilkinson & Guisto

Attorneys.

Patented May 12, 1925. 1,537,793

UNITED STATES PATENT OFFICE.

THOMAS F. BATES, OF SHELBYVILLE, TENNESSEE.

DENTAL TWEEZERS.

Application filed July 9, 1923. Serial No. 650,472.

To all whom it may concern:

Be it known that I, THOMAS F. BATES, a citizen of the United States, residing at Shelbyville, in the county of Bedford and State of Tennessee, have invented certain new and useful Improvements in Dental Tweezers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to dental instruments, and more especially to instruments of the tweezer type, and has for one of its objects to provide an instrument of this character which will be susceptible of use not only in the usual manner of tweezers but which may be also employed for applying medicants in the treatment of diseases of the teeth.

In the treatment of certain dental diseases, such as pyorrhea, for instance, it is frequently desirable to apply medicants locally to the diseased tissues adjacent the tooth roots, which applications should be limited in so far as possible to the diseased areas, since the medicants employed are relatively strong, and if applied to the healthy tissues, are likely to tend to destroy the same and cause pain and inconvenience.

It is therefore the primary object of the present invention to provide an instrument by which such medical applications may be made to affected areas without spreading the medicant over the unaffected areas to any appreciable extent.

A still further object of the invention is to provide a dental instrument which may serve the double purpose of a medicant applicator and of a tweezer for handling small absorbent cotton points for drying pulp canals, small gutta percha nerve canal points for filling root canals, broaches and drill points and other relatively small instruments ordinarily employed in dentistry and dental surgery.

With the above and other objects in view which will appear as the description proceeds, the invention consists in the novel details of construction and combinations and arrangements of parts more fully hereinafter disclosed, and particularly pointed out in the appended claims.

Referring to the accompanying drawings forming a part of this specification in which like reference characters designate like parts in all the views;

Figure 1 is an edge elevational view of a dental instrument constructed in accordance with the present invention;

Fig. 2 is a side elevational view of the figure shown in Fig. 1;

Fig. 3 is a fragmentary enlarged view of the lower portion of one of the tweezer legs or points as seen from the inside; and

Fig. 4 is a cross-sectional view, taken approximately on the plane indicated by the line 4—4 of Fig. 3, looking in the direction of the arrows.

In the said drawings the numeral 5 indicates one leg of an instrument and the numeral 6 the other leg thereof, which legs are suitably connected together at their upper ends as by the dowel pins 7, in the usual and well known manner. The leg 5 may be provided with the pins 8, adapted to enter the holes 9 of the leg 6 for alignment purposes, as is well known.

The lower portions of the said legs may be either straight or curved, substantially as shown in the drawings, and they are preferably tapered so that the extreme ends terminate in relatively fine points 10. The inside of the lowermost portion of either one or both of the legs, 5 and 6, is provided with a relatively fine groove or recess 11, which extends substantially to the end of the point 10, as will be clear from Fig. 3.

When both of the legs are provided with these grooves they are preferably so positioned as to register, when the legs of the tweezers are brought together and thus provide a relatively fine circular tube or recess, which may be filled with a suitable medicating solution by dipping the points of the tweezers into the said solution, while in the open position, and then closing them, thus trapping a small quantity of the medicant in the said recesses.

While thus holding the solution, the points of the tweezers may be worked around the tooth roots to the infected tissues, whereupon by slightly releasing the pressure of the fingers which maintain the points in contact, a sufficient separation of the said points may be had to permit the solution carried within the recess to flow along the same and be applied to the diseased tissues.

Inasmuch as the recesses 11 are relatively

fine of course only a small amount of medicant will be applied each time.

It will be noted that the outer surfaces of the tweezer legs are left smooth, the grooves 11 being milled upon their inside faces without producing any outward bulge upon the outer faces, as would be the case if the grooves were produced by stamping. This is essential in delicate work for which the tweezers are to be employed, since it is frequently necessary to apply the medicants at points where the tweezers must be worked between the tooth roots and the gums and any projections on the outside faces of the tweezers would tend to tear the tissues and make the use of the instrument painful.

In addition to its use as a medicinal applicator, the instrument may also be employed in the usual manner for taking up small bits of cotton, drill points, and the like, as will be readily understood by those skilled in the art.

While one form of the invention has been illustrated and described, it is obvious that those skilled in the art may vary the details of construction as well as the arrangement of parts, without departing from the spirit of the invention, and therefore it is not wished to be limited to the above disclosure except as may be required by the accompanying claims.

What is claimed is:

1. A dental instrument of the tweezer type having coacting legs the ends of which are adapted to be worked in around the tooth roots, one of said legs being provided with a liquid-medicant receiving recess on its inside surface, the parts being adapted to completely enclose the medicant in said recess.

2. A dental tweezer having tapering coacting legs, the inside surfaces of which are flat throughout, and are provided with registering liquid receiving grooves, adapted to completely enclose the liquid.

3. Dental tweezers having tapering pointed coacting legs provided with relatively long, narrow registering grooves upon the inside surfaces, adjacent the points thereof, said grooves being closed at both ends and adapted to receive and hold a liquid medicant.

THOS. F. BATES.