April 2, 1929. G. SCHNEIDER 1,707,952

DENTAL INSTRUMENT

Filed May 23, 1927

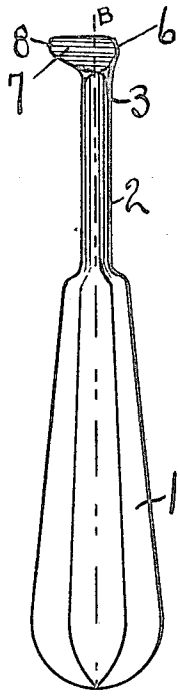

Fig. 1.

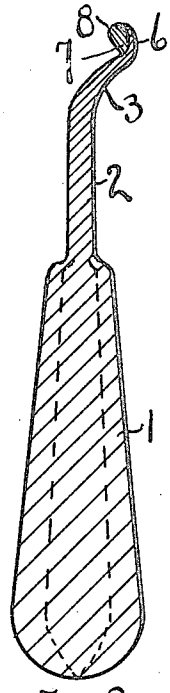

Fig. 2.

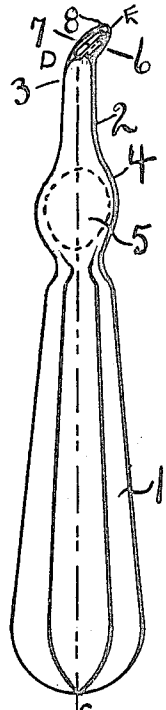

Fig. 3.

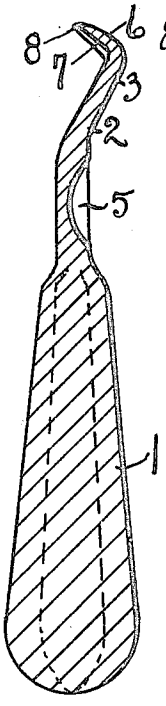

Fig. 4.

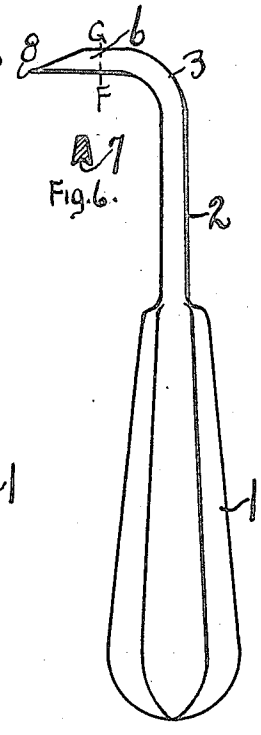

Fig. 6.

Fig. 5.

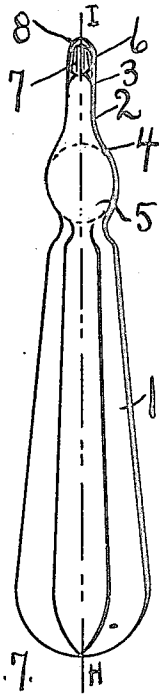

Fig. 7.

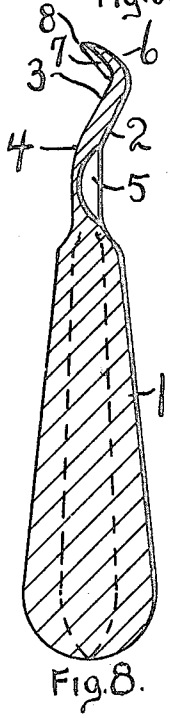

Fig. 8.

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Patented Apr. 2, 1929. 1,707,952

UNITED STATES PATENT OFFICE.

GEORGE SCHNEIDER, OF LA SALLE, ILLINOIS.

DENTAL INSTRUMENT.

Application filed May 23, 1927. Serial No. 193,572.

My invention relates to dental instruments and has for its object the production of a set of dental instruments for removing the alveoli or bony structure around the roots of the teeth to facilitate the extraction or removal of defective teeth.

It is well known that in extracting a tooth readily and without either fracturing the jawbone or fracturing the tooth at the point where it emerges from the jaw-bone it is necessary to remove this upper part of the jawbone or alveoli away from the roots of the tooth.

Previous to my invention it was necessary to do this with a chisel and a mallet the shock of which operation was extremely trying on the nervous system of the patient, or to use an instrument similar to a chisel but very sharp at the cutting edge and with a handle part at right angles to the chisel part to push it to cut out this alveoli or bony part, which pushing operation was extremely difficult to control and unless extreme care was taken it generally resulted, after the cut was completed, in passing beyond the point either against a good tooth damaging it, or in injury to the fleshy part of the patient's mouth making such an instrument very undesirable.

With the instrument of my invention, the instrument is so constituted and constructed that the operator holds the handle firmly in the palm of his hand and places the cutting edge of the instrument in contact with the alveoli on one side of the tooth and with his thumb or finger on the other side of the tooth and forces the cutting point and edge to remove the alveoli by means of the pressure between the thumb or finger and the palm of the hand, enabling the operator to exert a great pressure on the cutting edge and at the same time keeping complete and absolute control of the movement of the cutting edge within the very limited space adjacent to the root of the tooth itself.

I attain these objects by the means shown in the accompanying drawings, in which

Fig. 1, is a front view of the instrument used in the right hand to cut away the alveoli border on the labial and buccal side of the left lower teeth as far back as and including the first molar tooth and the alveoli border on the lingal side of the lower right teeth as far back as the first molar.

Fig. 2, is a cross sectional of Figure 1 along a line A—B.

Fig. 3, is a front view of an instrument for the purpose of removing the alveoli border on the buccal side of the upper right teeth beginning with the first bicuspid, and the labial side on the upper left teeth beginning with the first bicuspid.

Fig. 4, is a cross sectional view of Figure 3 along a line C—D—E.

Fig. 5, is a side view of an instrument for the purpose of removing the alveoli border on the buccal and the labial sides of the lower right and left second and third molars and also the distal side of the lower right and left third molars.

Fig. 6, is a cross sectional view of Figure 5, along a line F—G.

Fig. 7, is a front view of an instrument for the purpose of removing the alveoli border lingually and labially on the upper anterior six teeth including right and left central incisors and the right and left lateral incisors and right and left cuspids.

Fig. 8, is a cross sectional view of Figure 7 along a line H—I.

Similar numerals refer to similar parts throughout the several views.

In the drawings 1 represents the handle of my instrument which is preferably made up so that it is eight sided and larger on the outward handle end and smaller on the end adjacent to the cutting end, so called, "pear shaped", so that it will very readily fit in the palm of the hand as the instrument is firmly held therein during the time it is used to operate on the teeth. Projecting from the smaller end of handle 1 and preferably formed integral therewith is a supporting member 2 which has a curved part 3 attached thereto as shown in Figure 2, or may have an expanded part 4 which carries a suitable depression 5 as shown in Figures 3–4–7 and 8 which is utilized, either as a place for the end of the operator's thumb or the finger end in order to apply the greater pressure to and transmit it to the suitably shaped cutting head 6. Cutting head 6, in general, comprises a concave curved surface 7 which terminates in a sharp curved edge 8 of varied curvatures and the concave curved surface 7 can be set at varied angular positions so as to properly reach the alveoli border parts to be removed from around the teeth in a given part of the mouth and the set of instruments shown in the drawings if accompanied by the tools similar to those shown in Figures 1 and 3 but having the parts 7 and 8 on the opposite side from that shown in said figures will give

the operator access to all parts of the alveoli border around the teeth in every part of the mouth.

In practice my instruments are used in general by firmly grasping the pear shaped handle 1 in the palm of the hand and inserting the point 8 against the alveoli border to be removed and then placing the thumb of the same hand on the opposite side of the teeth to be operated on and then pressing the point 8 towards the thumb at the same time giving a forward and backward motion to the cutting edge 8 until the alveoli border is removed. In the instrument shown in Figure 5 the pressure is applied in a downward direction at the time of the forward motion as the cutting is done during said forward motion.

From the above description it is evident that with dental instruments of my invention the matter of removing the alveoli border around the teeth is readily and safely accomplished without the usual shock of the chisel and mallet and the nervous strain in the patient caused by the fear of injury due to the other usual dental instruments that are pushed by the force of the arm muscles and arm movements.

It will be understood, of course, that while I have here shown a few forms of my invention I do not wish to limit myself to the exact forms shown but desire to have them taken in a sense illustrative of any and all the forms that come fairly within the scope of the appended claims.

I claim:

1. In an instrument for removing the alveoli process, a pear shaped handle, a projecting portion having a curved part terminating into a cutting head comprising a sidewise projecting curved surface whose edge is formed into a curved cutting edge, and finger retaining means on said curved portion.

2. In an instrument for removing the alveoli process, a pear shaped handle, a projecting portion having a curved part terminating into a cutting head comprising a sidewise projecting curved surface whose edge is formed into a curved cutting edge, and finger retaining means comprising a spherical cavity on said curved portion.

3. In an instrument for removing the alveoli process, a pear shaped handle, a suitably shaped part formed integral therewith terminating into a cutting head comprising a concave curved part whose edge is formed into a cutting edge, said cutting head being located at an angle in relation to said suitably shaped part and pressure retaining means comprising a spherical shaped cavity positioned on said suitably shaped part.

GEORGE SCHNEIDER.