

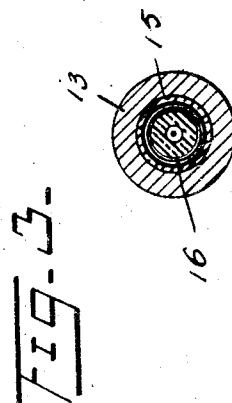
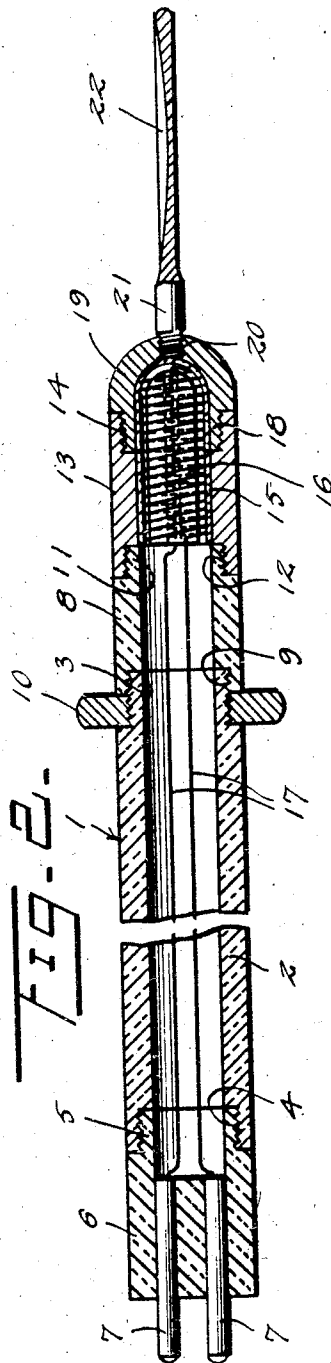
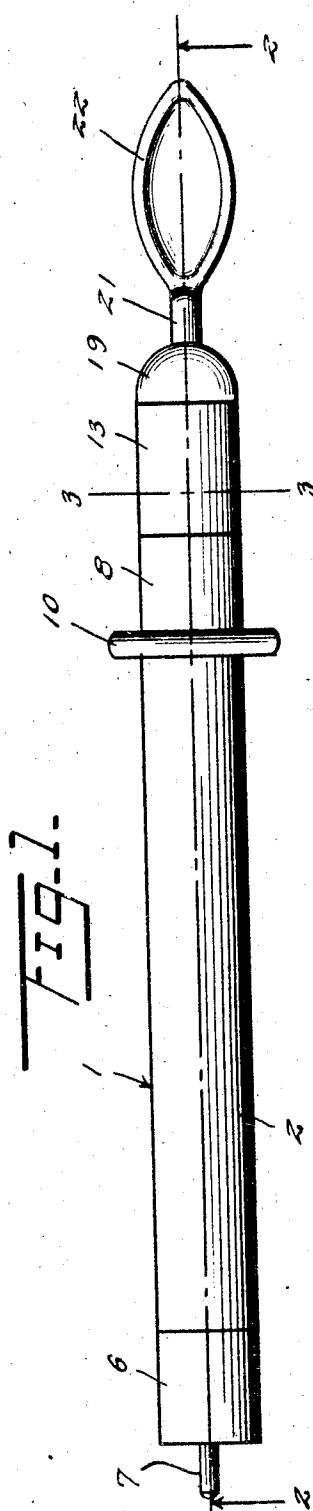
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ELECTRICALLY HEATED WAX SPATULA

Filed April 25, 1931



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ELECTRICALLY HEATED WAX SPATULA

Application filed April 25, 1931. Serial No. 532,949.

This invention relates to electrically heated instruments and pertains particularly to an instrument designed for use in mechanical dentistry.

5 In the making of dental plates and in certain other operations in mechanical dentistry the use of wax is necessary and this, after being placed in the proper position, must be shaped up by a spatula or other suitable im-
10 plement which must be maintained in a heated condition so that the wax will be softened and will melt down into the proper place as this operation is carried out.

At the present time the custom is to keep
15 a burning Bunson burner at hand so that the instrument may be occasionally passed through the flame and thus maintained at the proper temperature for carrying out the operation at hand.

20 The primary object of the present invention is to provide an instrument for shaping the wax used in the formation of a plate which is electrically heated and thus may be continually used by the operator without his
25 having to stop to reheat the same as is necessary with the instruments at present employed.

Another object of the present invention is to provide an instrument in which the work-
30 ing end may be removed to be replaced by a working tip or end of a different form.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accom-
35 panying drawing forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such
40 changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claim.

In the drawing:—

45 Figure 1 is a view in side elevation of the instrument embodying the present invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a view in cross-section taken on the line 3—3 of Figure 1.

50 Referring more particularly to the draw-

ing, wherein like numerals of reference indicate corresponding parts throughout the several views, the instrument embodying the present invention is indicated generally by the numeral 1 and comprises an elongated
55 preferably cylindrical handle portion 2, which is formed of a material of poor heat conductivity such, for example, as fiber, porcelain or the like. This handle 2 is tubular and one end is reduced and screw thread-
60 ed, as indicated at 3, while the other end is interiorly threaded, as indicated at 4.

The interiorly threaded end constitutes the rear of the handle 2 and in this is threaded the reduced portion 5 of a body 6 in which
65 is secured the electric contact pins 7.

To the forward end of the body 2 there is attached a short cylindrical portion 8, the connection being made by threading the re-
70 duced end 3 into the interiorly threaded part 9 of this portion and this portion 8 secures in place, upon the end of the handle 2, the annular guard flange or ring 10. The forward end of the portion 8 is reduced and threaded as indicated at 11, for extension into
75 the threaded interior end 12 of a cylinder 13 which is preferably formed of copper and which also has its other or forward end interiorly threaded, as indicated at 14.

The inner face of the cylinder 13 is lined
80 with a suitable insulation material 15 and houses a resistance or heating coil unit 16, as illustrated.

The ends of the heating coil unit 16 are connected with the contact pieces 7 by means
85 of the wires 17 which pass through the handle 2 and through the bodies 8 and 10, as shown, these wires of course being insulated in the usual manner.

Threadably engaging in the forward end
90 of the cylinder 13 is a reduced threaded coupling 18 forming a part of a metal head 19 which is preferably formed of copper and substantially semi-spherical, as shown. This head has formed therein, opposite the thread-
95 ed coupling 18, the threaded aperture 20 which receives the threaded reduced end 21 of a spatula 22.

The spatula is also preferably formed of copper so that it will readily take up the heat
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generated by the coil 16 and transmitted thereto through the head 19, and one face thereof is depressed slightly to form a spoon in which wax may be melted as necessary.

5 It will, of course, be readily understood that tips of various shapes may be substituted for the spatula shaped tip 22 as found necessary for the user of the device.

From the foregoing description it will be 10 readily seen that with the present electrically heated spatula the work of the mechanical dentists will be expedited considerably as it will not be necessary for him, in working with wax, to continually stop to reheat or 15 keep warm the instrument which he is using.

By providing the instrument with the guard rim 10, the operator is protected against burns which would probably result, if this flange were not provided, by his fingers slipping forward onto the heated head 20 of the instrument.

Having thus described the invention, what is claimed is:

25 An instrument of the character described, comprising a tubular body having a portion formed of insulation material and divided into an intermediate section and two end sections, one of the said end sections and said intermediate section being threadably connected 30 together, the other end of said intermediate section having a reduced exteriorly threaded terminal portion with which the other end section is threadably engaged, a cylindrical metallic tip threadably connected 35 at one end with the said other end section and having its other end rounded and provided with a centrally threaded passage, said metallic tip being formed of a metal of a character to rapidly absorb heat, an annular member 40 surrounding the reduced threaded portion of the said intermediate insulation section and secured in place by the said other end section, an electric heating element housed within said metallic tip, means for 45 conducting electric current to said heating element through the body of the instrument, and a removable tool element having a threaded shank adapted to engage in the threaded bore to be heated through contact 50 with the adjacent tip-enclosed heating element.

In testimony whereof I hereunto affix my signature.

WILTON V. LANE.

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