Feb. 11, 1936. G. DINYER 2,030,285

CAUTERIZING INSTRUMENT

Filed Oct. 24, 1934

Fig. 1.

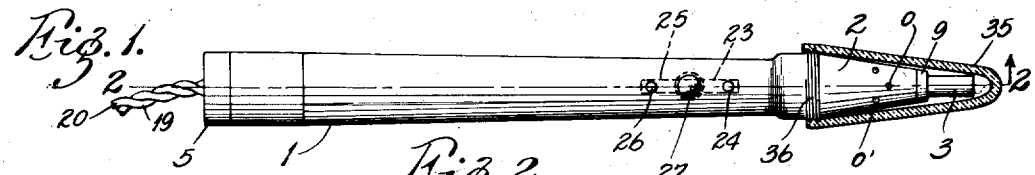


Fig. 2.

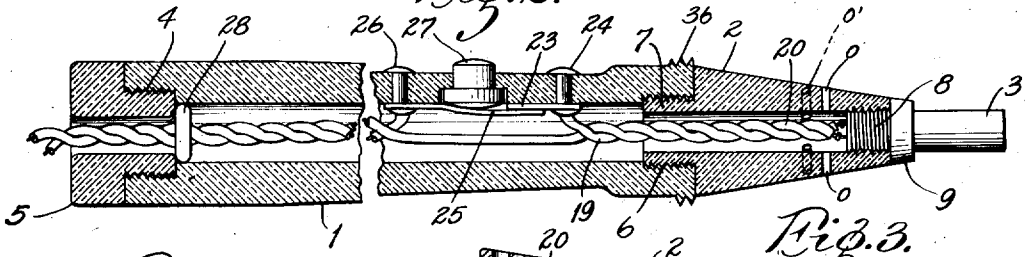


Fig. 3.

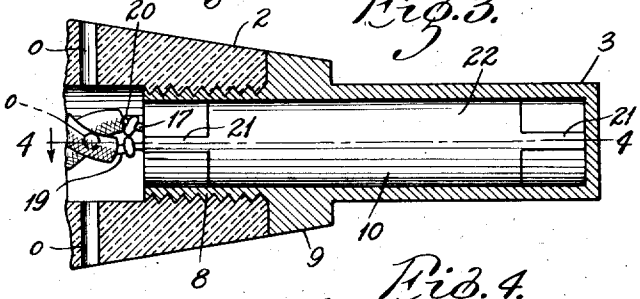


Fig. 6.

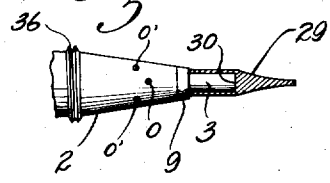


Fig. 7.



Fig. 4.

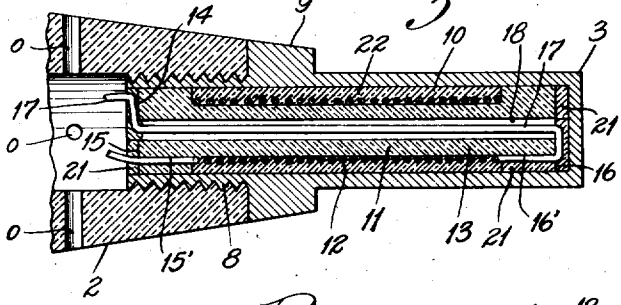


Fig. 8.

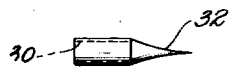
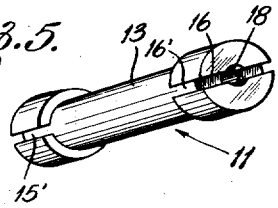


Fig. 5.



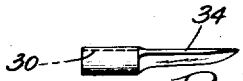


Fig. 10.

Fig. 9.



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UNITED STATES PATENT OFFICE

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CAUTERIZING INSTRUMENT

George Dinyer, St. Louis, Mo.

Application October 24, 1934, Serial No. 749,720

1 Claim. (Cl. 219—31)

My invention has relation to improvements in cauterizing instruments and it consists in the novel features of construction more fully set forth in the specification and pointed out in the claim.

The object of the present invention is to provide a cauterizing instrument especially for removing warts, moles and similar skin blemishes, said instrument being of the general shape of a pen or pencil so that it may be conveniently held in the hand, which instrument will comprise a holder and a series of points so constructed as to be interchangeable so that a point of any desired shape may be used according to the size and nature of the blemish that is to be cauterized. A further object of the invention is to so construct the cauterizing instrument that the heat of the cauterizing point may be readily controlled.

Further objects, such as simplicity and durability of the device, will be better apparent from a detailed description of the invention in connection with the accompanying drawing, in which:

Fig. 1 is an elevational view of my improved cauterizing instrument; Fig. 2 is an enlarged medial, longitudinal section taken on the line 2—2 of Fig. 1, with parts left in elevation; Fig. 3 is an enlarged longitudinal, sectional view of the point of the instrument with the heating coil left in elevation; Fig. 4 is an enlarged longitudinal section of the point of the instrument taken on a plane indicated by the line 4—4 of Fig. 3; Fig. 5 is a perspective view of the core of the heating coil; Fig. 6 is an elevation of the tip of the pencil showing an auxiliary cauterizing point applied thereto; and Figs. 7 to 10, inclusive, are detached views of different forms of auxiliary points that may be applied to the main tip of the instrument.

Referring to the drawing, my improved cauterizing instrument comprises a holder 1, a tip 2 and a removable point 3 secured in said tip. The holder 1 comprises an elongated tubular member of a size that may be conveniently held in the hand and is preferably formed from insulating material, such as bakelite or other material having equally good insulating properties. One end of the holder 1 is provided with a screw-threaded socket 4, in which is screwed a plug 5, and the other end of the holder is provided with a screw-threaded socket 6, in which is screwed the threaded stem 7 of the conical tip 2. The cauterizing point 3 comprises a tubular shell formed of some metal that has high heat conductivity and has a screw-threaded portion 8 threaded into the end of the tip 2 and a conical flange 9 flush with the surface of the tip 2 when the point 3 is securely in place. A heating element 10 fits snugly within the hollow point 3, said heating element comprising a hollow core 11 formed of insulating material that has high heat resistant qualities and a coil 12 (preferably of nichrome wire) wound on the intermediate reduced portion 13 of the core. The ends of the core 11 are provided with slots 14 and 15 on one end and slot 16 on the opposite end, and in winding coil 12 the wire 17 traverses the center opening 18 in the core 11 and is bent through the slot 16 at the outer end and connecting slot 16', and after being wrapped around the core the wire is brought through slots 15 and 15' so that both ends of the coil are at the same end of the heating element for simplicity of connection with the ends of the conductors 19 and 20 which lead to an outlet or other source of electrical supply.

The slots 14, 15, 15', 16 and 16' are filled with suitable insulation 21 so as to effectively insulate the wire 17 of the heating coil, and suitable insulation 22 is wrapped or otherwise disposed over the coil around the core 11. In order that the operator may be able to control the temperature of the point 3, a switch is provided on the handle 1, said switch comprising a contact 23 secured in place by a rivet 24, a spring contact 25 secured in place by a rivet 26, and a push button 27 operable against the spring contact 25 so that pressure thereon will separate the contacts 23 and 25 and open the circuit, giving the coil 10 and of course the point 3 an opportunity to cool somewhat. The switch comprising the parts just described is connected in one of the conductors 19 or 20 (in the present instance conductor 19 is opened to receive the switch). In order that there will be no strain on the connections of conductors 19 and 20 with the heating coil wire 17, a stop element 28, which may be either a knot or a wrapping of tape or any equivalent device, is provided on the conductors 19 and 20 for engagement with the plug 5.

In Fig. 6 I show an auxiliary point 29 considerably sharper than the point 3, said point having a socket 30 which receives point 3 snugly so that in operation the heat of the point 3 will be communicated to the point 29. In order that this heat may not unduly raise the temperature of the tip 2 of the holder, I provide two series of openings o and o' in close proximity to the threaded stem 8 of the point 3 through which the heat may be vented.

A screw-cap 35 (similar to that on a fountain

pen) is positioned over the point 3 when the instrument is not in use, and is held in place by the threads 36 on the holder.

In Fig. 7 I show a slightly different shape of auxiliary point 31, and in Fig. 8 I show a needle point 32, and in Fig. 9 a slight variation and somewhat larger point 33 than the point 31, while in Fig. 10 I show a knife-shaped point 34. Obviously, any number of shapes or sizes of points may be utilized, and I do not wish to be restricted to the specific points herein illustrated and described.

Having described my invention, I claim:

A cauterizing instrument comprising a handle, a tip secured in one end of said handle, a cauterizing point removably fixed in said tip, said point comprising a hollow metallic member, and a tubular heating coil disposed therein in contact with the inner wall of said member, and an auxiliary point disposed over and in contacting relation with said hollow metallic member, and suitable electric conductors connected to said coil and passing through the handle.

GEORGE DINYER.