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M. RAPAPORT
PYROGRAPHIC INSTRUMENT

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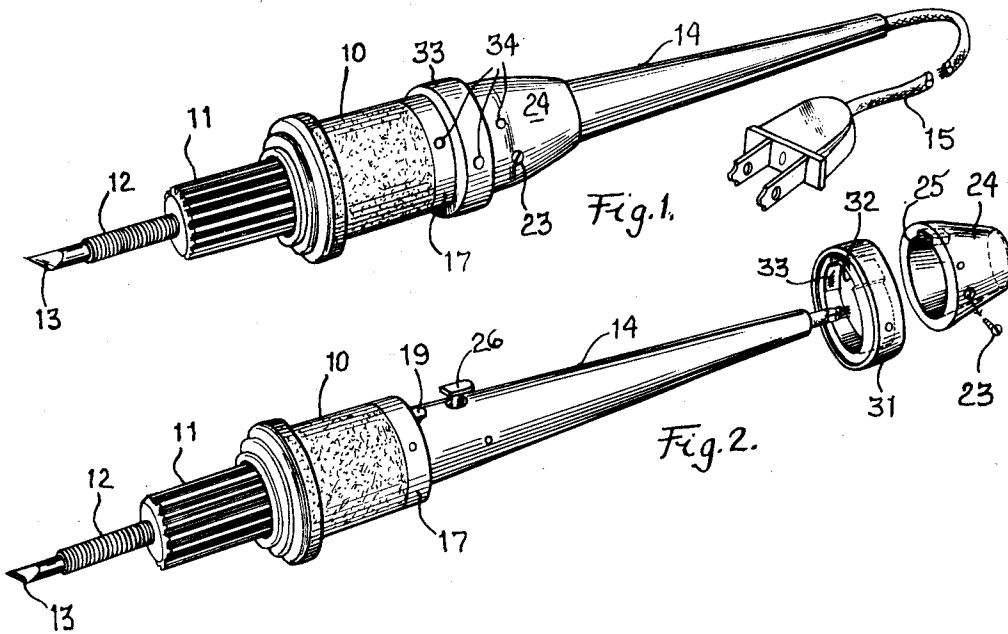
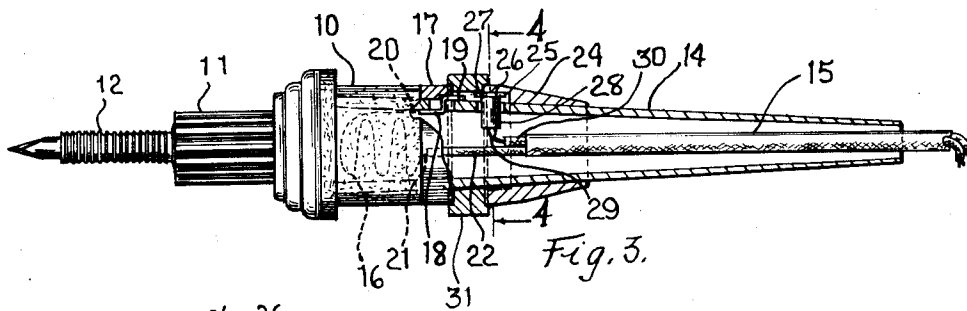
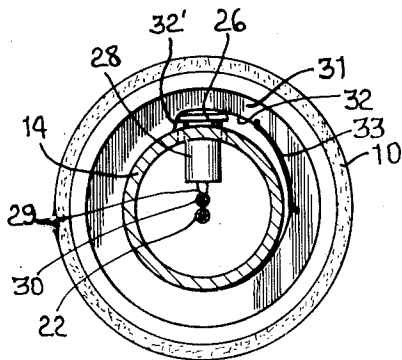


Fig. 4.

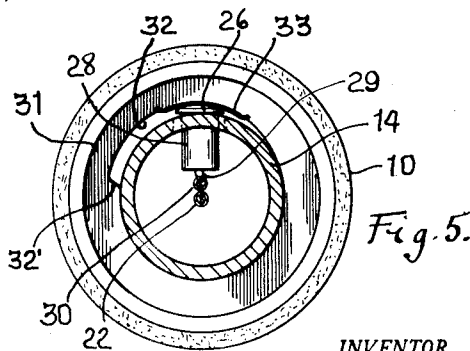


Fig. 5.

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PYROGRAPHIC INSTRUMENT

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1 Claim. (Cl. 200—157)

1

This invention relates to certain new and useful improvements in pyrographic instruments.

More specifically the invention relates to an arrangement for controlling the electric circuit to the burner or marker of the pyrographic pencil. An object of this invention is to incorporate in that part of the pencil which provides the hand-gripping portion for proper manipulation of the pencil, a circuit control which because of this specific location can be conveniently actuated with the minimum degree of effort on the part of the user or operator of the pencil by a simple manipulation of the thumb of the hand while the pencil is supported by the fingers of the hand, or which may be conveniently actuated, while the pencil is held in one hand, leaving the other hand free to manipulate the circuit control.

Another and equally important object of the invention resides in the simplicity of construction which permits economical and expeditious manufacture.

Yet a further object of the invention is the provision of a circuit control for the heating unit of a pyrographic pencil in which the circuit control may be incorporated in a pyrographic pencil of a standard construction without making any material or extensive alterations or changes.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

Fig. 1 is a perspective view of the pyrographic pencil embodying the invention;

Fig. 2 is a perspective view of the same but showing certain parts thereof in exploded relation with respect to each other;

Fig. 3 is a side part sectional detail view of the same;

Fig. 4 is a sectional detail view taken substantially on line 4—4 of Fig. 3; and

Fig. 5 is a sectional detail view similar to Fig. 4 but showing the parts thereof in a different position.

The standard and conventional pyrographic pencil comprises a finger-gripping barrel 10 usually formed of a soft pliable material so as to be restful to the fingers of the hand when gripped thereby. Extending forwardly of this barrel 10 is a sleeve 11 of non-heat-conductive material. Through this sleeve 11 projects the heat-conductive shaft 12 which has its end por-

2

tion 13 shaped in a conventional manner to provide a proper and adequate burner or marker tip.

Extending rearwardly of the barrel 10 is a tube 14 tapered in the direction of its length. Through this tube 14 is a conductor 15 which carries electric current to a heating element 16, and the several parts just described are assembled together in a manner well-known in the art.

To the rear of the barrel 10, I provide a fixed collar 17. Between this collar 17 and the adjacent end portion of the tube 14 is a metal conductor 18 having a horizontal finger 19. This conductor 18 is connected as at 20 to one of the terminals of the heating unit 16, the other terminal 21 of this unit being connected to one of the wires 22 of the conductor 15.

Fixed to the tube 14 by means of a set screw 23 is a collar 24. This collar 24 has a notch 25 formed therein into which projects a contact plate 26. One end portion 27 of this plate 26 projects outwardly from beneath the collar 24. This plate 26 is carried on a tube 28 which is connected as at 29 to the wire 30 of the conductor 15.

The collar 24 is spaced from the collar 17 and between these collars is arranged a rotatable ring 31 of non-conductive material. This ring 31 has an eccentric cut-out portion 32 and arranged in this cut-out portion 32 at one end thereof is a conductor plate 33 which is adapted to bridge the finger 19 with the contact 27, when disposed over this finger and contact.

The pencil is generally held in the hand with the tube resting upon the hand. In this position the barrel 10 rests upon the third finger of the hand and is gripped between the thumb and the index finger. By gripping the barrel 10 between the third finger and index finger of the hand, the operator may place the thumb upon the ring 31 and, by exerting a rotary pressure thereon, rotate this ring from the position shown in Fig. 4 to the position shown in Fig. 5, in which latter position the conductor plate 33 will bridge the finger 19 with the contact 26, to complete a circuit between the source of electric energy and the heating unit 16. By exerting rotary thumb pressure on the ring 31 in an opposite direction, the ring 31 may be rotated to its original initial position shown in Fig. 4 to break the connection between the heating unit 16 and the source of electric energy. By the nature of the formation of the cut-out portion 32, a shoulder 32' is formed which limits the rotation of the

3

ring to its original initial position shown in Fig. 4.

If desired, suitable markings 34 may be formed on the collars 17 and 24 and the ring 19 to indicate the position of the bridging conductor 33. When these marks are in alignment it will indicate to the operator that the bridging conductor 33 has bridged the conductor finger 19 with the contact plate 26 and that the heating unit 16 is being energized.

While it requires very little effort on the part of the user to manipulate the ring 31 by means of the thumb, it is obvious that the pencil may be held in one hand and the ring manipulated by the fingers of the other hand.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

A pyrographic pencil comprising a gripping barrel, an elongated circuit wire conducting tube arranged in alignment with the barrel with one end portion inserted into said barrel, a collar fixed to the barrel at the end thereof into which the end portion of the tube is inserted, a collar

4

fixed to the tube in spaced relation to the collar on the barrel, a pair of contacts within the tube in spaced relation with respect to each other and carried by the tube with portions thereof exterior of said tube within the space between the collars, a rotatable ring embracing the tube and arranged between the collars over said portions of said contacts, said ring having a cut-out portion formed in its inner surface and extending in a circumferential direction with respect to the ring and eccentric with respect to the tube to provide at one end thereof a stop shoulder adapted to be engaged by one of said contacts to limit the rotation of the ring relative to the tube in one direction, and an elongated bridging contact plate carried by the ring within the cut-out portion at the end thereof opposite the stop shoulder and adapted to be wedged against the pair of contacts when the ring is rotated in an opposite direction relative to said tube.

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