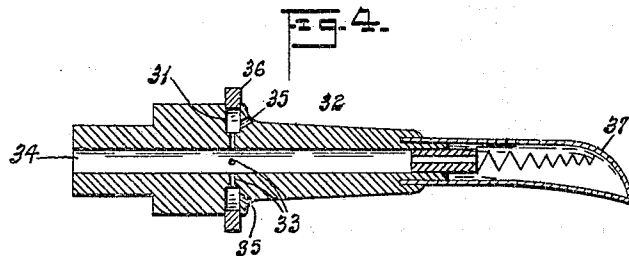
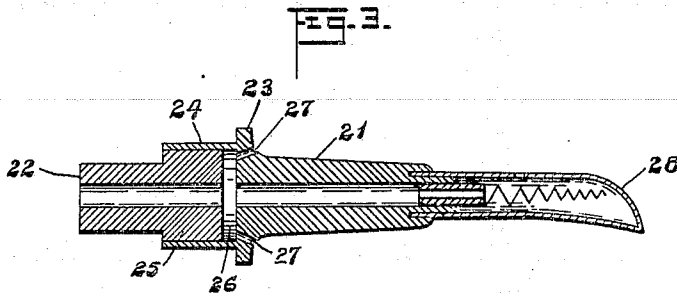
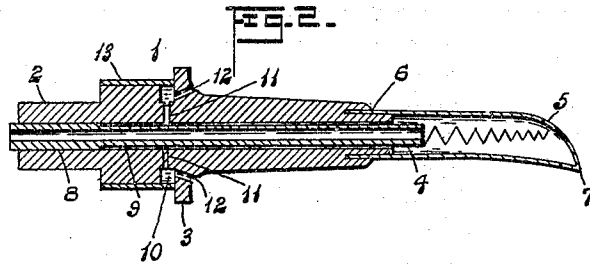
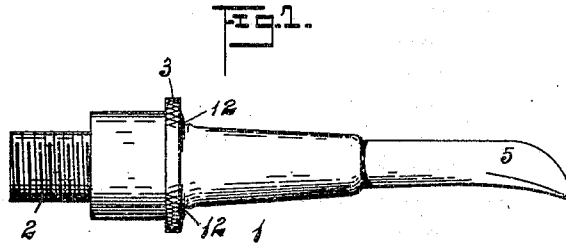


C. U. MACY.
PYROGRAPHIC BURNER.
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929,614.

Patented July 27, 1909.



WITNESSES

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PYROGRAPHIC BURNER.

No. 929,614.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES U. MACY, a citizen of the United States, residing at Irvington, in the county of Essex and State of New Jersey, have invented certain Improvements in Pyrographic Burners, of which the following is a specification.

The objects of this invention are to secure a pyrographic burner body-portion, or lug, as it is commonly called in the trade, which shall serve as a blower to also disperse the smoke; to thus simplify the use of a blower in connection with a pyrographic burner, and locate the blowing orifices as close as possible to the shell or burner tube; to provide for the exhaust or vent of the burner through such blowing apertures, and thus economize gas; to secure a simple and inexpensive construction, and to obtain other advantages and results as may be brought out in the following description.

Referring to the accompanying drawings, in which like numerals of reference indicate corresponding parts in each of the several figures, Figure 1 is a side elevation of a burner embodying my improvements in the preferred form, and Fig. 2 is a central longitudinal section of the same; Fig. 3 is a central longitudinal section of a modified construction, and Fig. 4 is another central longitudinal section of a still further modification.

In said drawings, 1 indicates the body portion or lug of a pyrographic burner, provided at one end with a threaded portion 2 adapted to be screwed to a handle (not shown), and having an exterior milled flange 3 to facilitate such attachment. An inner tube 4 extends longitudinally of the lug through a central passage thereof, and serves to convey fuel or gas to the shell or burner tube 5, inside of which tube said gas or fuel burns. The said shell or burner tube 5 is secured to the lug or body portion 1 in any suitable ordinary manner, as at 6, and at its forward extremity 7 is adapted to perform any desired kind of work, as is common. The said inner tube 4 fits tightly in the central passage 8 of the lug at the rear end or threaded portion 2 thereof, but for all the rest of the length of said longitudinal passage, the tube is reduced radially, as at 9, so as to provide an annular space between the inner tube 4 and the lug, as clearly shown in Fig. 2 of the drawing. Just back of the milled flange 3, a groove 10 is cut in the lug,

and through the bottom of said groove holes 11 are drilled into the central passage of the lug. Other holes 12, preferably two in number as shown, are drilled from the front of the flange 3 through into the said groove 10, and a thin sleeve 13 is forced tightly onto the grooved portion of the lug back of the flange 3, to close the groove 10 from the outside.

The shell or burner tube 5 does not have in its side the usual vent or exhaust orifice, but the gaseous products of combustion pass backward through the space between the inner tube 4 and surrounding lug, to the holes 11, and from thence through the groove 10 and discharge orifices 12. Currents thus issue from said discharge orifices which serve to blow away the smoke created by the use of the tool. Under some conditions the inner tube 4 may be omitted, and a vent opening provided in the shell or burner tube, in which case gas blows out through the orifices 12 to dispel the smoke. This, though not so economical, is entirely satisfactory as far as clearing away smoke is concerned.

In Figs. 3 and 4 I have shown modifications in which no inner tube is employed, as just referred to. In Fig. 3, the lug is in two sections 21, 22, the forward section 21 being centrally chambered or hollow at its rear end behind the flange 23, as at 24, and into this chamber 24 is forced the head 25 of the rear section 22. Said head, however, does not reach to the bottom of the chamber 24, but leaves a space 26 thereat, into which space blow holes 27 open from in front of the flange 23. Both sections 21, 22 are bored out centrally and longitudinally to provide a passage leading to the shell or burner tube 28. In Fig. 4 a groove 31 is formed in the exterior of the lug 32, and borings are made through the bottom of this recess into the longitudinal passage 34 of the burner, as at 33. Other holes or discharge orifices 35 also lead from said groove forwardly through the body of the lug, and said groove 31 is closed exteriorly by a ring 36 pressed part way into it and forming at its outer edge a milled or roughened finger hold for turning the lug to screw its rear end into the handle. Some of the gas passing along the duct 34 to the shell 37, therefore, blows out through the holes 33, groove 31 and orifices 35.

Having thus described the invention, what I claim is:

1. A pyrographic burner, comprising a

body-portion or lug adapted at one end to receive a handle and at its other end a shell or burner-tube and having a central longitudinal passage with a branch passage opening through the side of the lug intermediate of its said ends and directed forwardly, and said shell or burner tube.

2. A pyrographic burner, comprising a body-portion or lug adapted at one end to receive a handle and at its other end a shell or burner-tube, and having a central longitudinal passage, the chamber of said passage being intermediate of its ends thereof extended radially outward from said passage, said lug having a reduced forward end portion forming an annular shoulder and blow holes bored through said shoulder into communication with said radial extension of the passage, and said shell or burner tube.

3. In a pyrographic burner, a lug adapted at its rear end to be secured to a handle and at its forward end to receive a shell or burner-tube, said lug having an exterior groove intermediate of said ends, a passage leading from said groove into said longitudinal passage, and other passages leading from said groove forwardly outward through the surface of the lug, means for closing said groove outwardly, and said shell or burner-tube.

4. In a pyrographic burner, the combination with a lug adapted at its rear end to be secured to a handle and at its forward end to receive a shell or burner-tube, said lug having a central longitudinal passage, of an inner tube fitting tight in the rear end portion of said passage and providing an annular space between its outer walls and the inner walls of the lug for the forward portion of the latter, said lug having blow holes leading from said space outwardly and forwardly through the sides of the lug.

5. In a pyrographic burner, the combination with a body portion or lug having a rearward reduced portion adapted to connect with a handle and a forward reduced end providing a shoulder, said lug being bored centrally and longitudinally and having passages leading from said boring out through the front wall of said shoulder, a shell or burner tube fixed to the forward end of the lug, and an inner tube fitting tight in the rear portion of the central boring of the lug and being loose therein for its forward portion, said tube extending into said shell.

CHARLES U. MACY.

In the presence of—

RUSSELL M. EVERETT,
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