

R. NUTTING.
Vapor Burner.

No. 103,917.

Patented June 7, 1870.

Fig. 1

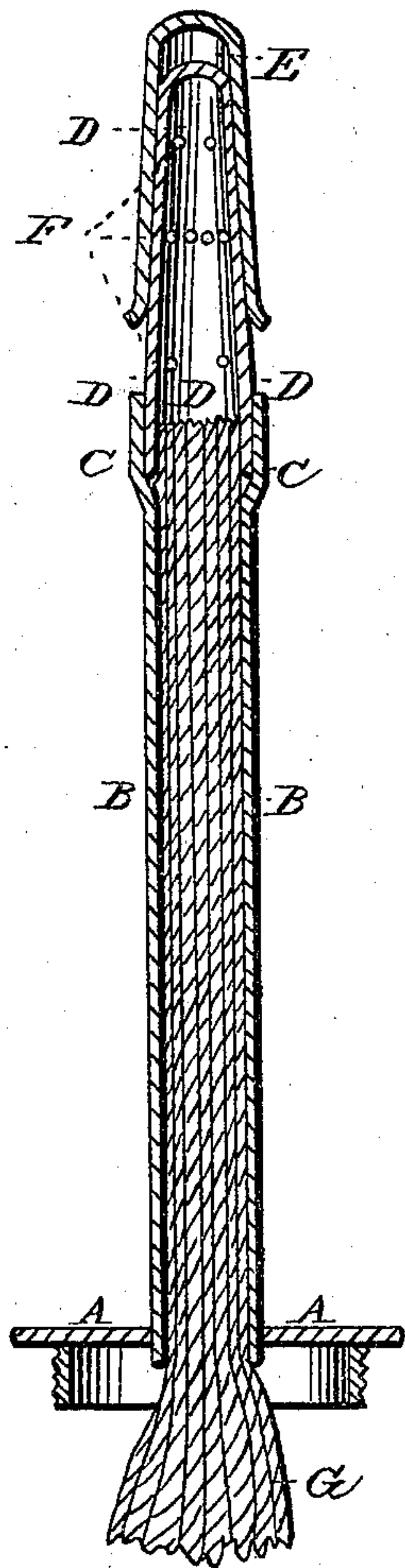
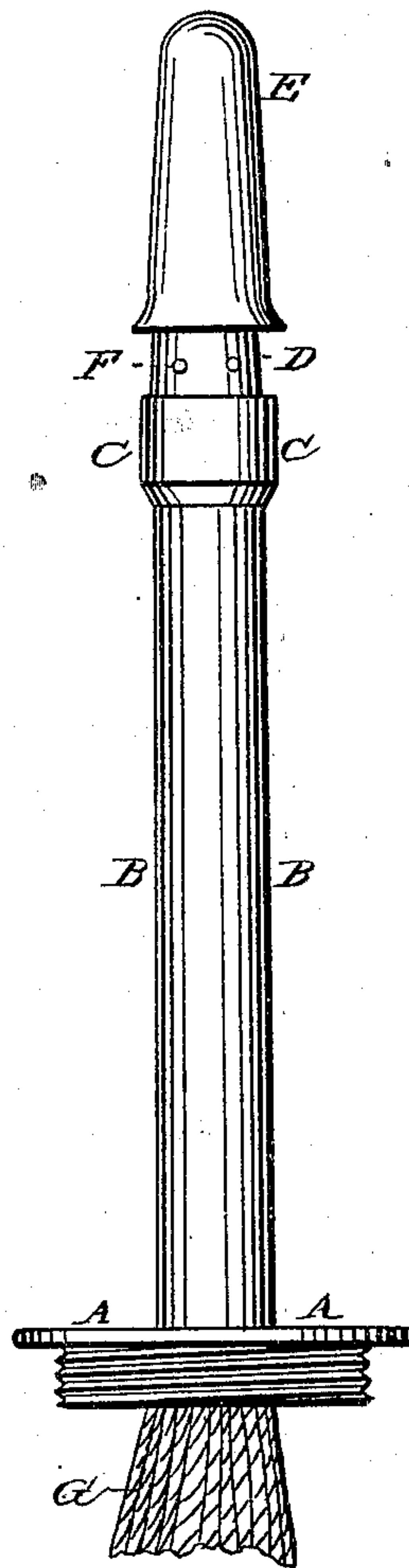


Fig. 2



Witnesses

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RUFUS NUTTING, OF RANDOLPH, VERMONT.

Letters Patent No. 103,917, dated June 7, 1870.

LAMP GAS-BURNER.

The Schedule referred to in these Letters Patent and making part of the same

I, RUFUS NUTTING, of Randolph, county of Orange and State of Vermont, have invented certain Improvements in Lamp-Burners, of which the following is a specification.

The nature of my invention consists in constructing lamp-burners so that, instead of the flame burning directly from the wick in the ordinary way, it burns in jets from holes in a small, simple, and cheap chamber or gasificator, made somewhat in size and form like the various sizes of percussion-caps and small rifle-cartridges, and adjusted within the upper end of the wick-tube, at the termination of the wick, and held tight and firm by the expansion caused by the heat of the flames, which flames convert the vapor from the oil or fluid into gas, that burns in jets as other more complicated and less practicable vapor or gas-burners, and also so that a more powerful, safe, and cheap domestic light may be produced than when the flame burns directly from the wick, and that without the use of chimneys used in kerosene and many other fluid-burners, which are liable to break, and require to be daily washed or otherwise cleaned, and also so that naphtha or other light oils and fluids may be safely used, as they are so much cheaper than the heavier oils, as not to be as liable to adulteration, while they yield a more intense light, and are more cleanly.

The drawings—

Figure 1, represents a vertical, transverse section, as if the burner were divided from top to bottom.

Figure 2 is an external elevation view.

A is the base of the burner, which screws into the collar of the lamp, and may be made and connected in the usual way with the wick-tube B, which may be made straight, (in the common way,) but which I usually make in an "ogee"-curved form, to facilitate getting more tubes into the base, while the socket or enlarged part C at the upper end, for receiving the gasificator D, remains perpendicular.

F are holes for the admission of gas, and

G is the wick.

This burner is designed particularly for burning naphtha or other so called light oils or fluids which are not so perfectly consumed, do not produce so strong a light, and are not so safely, economically, and pleasantly used when the flame burns directly from the wick as when it burns in gas-form, in jets, from holes in a chamber.

Its operation is thus:

By holding it slightly inclined and applying a lighted match, the vapor from the fluid is converted into gas,

which is emitted through the holes F in the small and light gasificator D, and, being ignited by the burning match, the gas continues to be manufactured as fast as consumed by the caloric generated by the burning jets or flames.

The gasificator D may be made of any desired form, though of as little material as possible for quickness of lighting, so as to emit jets or flames in various fanciful forms, but its lower end must be made to fit within the socket C at the upper end of the wick-tube, without a screw, so that its expansion by intense heat will not make a loose joint, as when fitted to the outside, but rather insure a tight joint when in use; but when not in use, and cool and contracted, it may be instantly removed and exchanged for another with more or less holes or jets, as is often desired, when there is but one wick-tube; but, as more generally made, with two or more curved wick-tubes, in each of which there is a gasificator having more or less holes than either of the others, either one or the whole of them may be burning at once, and thus produce just the amount of light desired, and supersede the use of regulators.

The socket C, besides holding the gasificator, also facilitates the drawing up of the wick with tweezers or otherwise whenever it needs trimming.

I am aware that various devices have been made called vapor or gas-burners, as Hopkins & Anderson's, Mellick's, &c., but think they have all proved practically worthless, for one or more of the following reasons or objections, which are not found in mine, to wit: not easily lighted by a single match; liable to "gum up," and to leak the fluid, which vaporizes and readily ignites in a dangerous manner; not sufficiently simple; liable to get out of order; some require chimneys; unnecessarily expensive; not durable, &c.; and I do not, therefore, claim as my invention, vapor-burners in general, or when connected with the tubes of ordinary fluid-lamps especially, so that the flame may burn directly from the wick or in jets optionally; but

What I do claim as my invention is—

The gasificator D, in combination with the wick-tube B, having its upper end so constructed as to form a socket, C, substantially as and for the purposes set forth.

RUFUS NUTTING.

Witnesses:

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