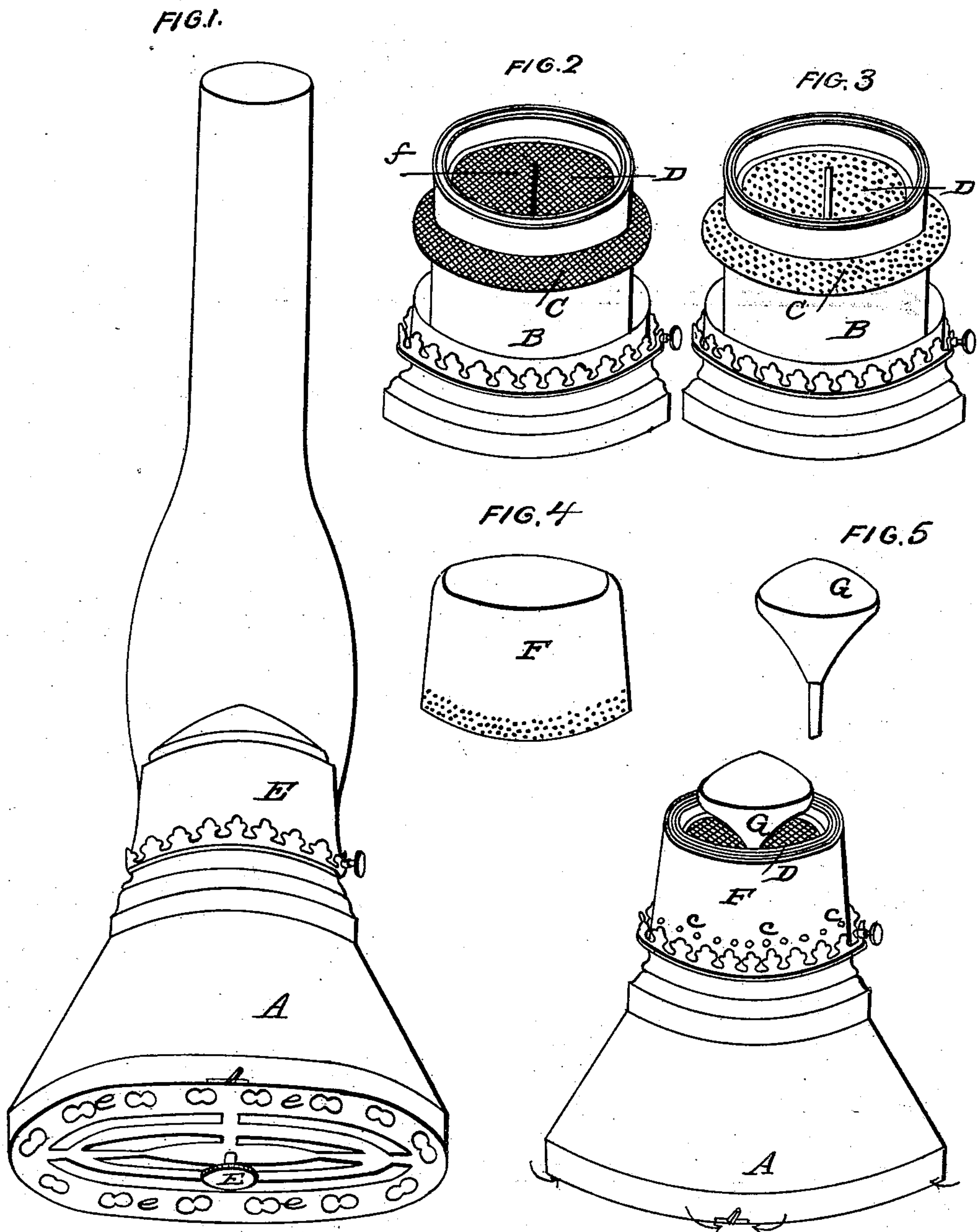


W. FULTON.

Lamp Burner.

No. 29,260.

Patented July 24, 1860.



UNITED STATES PATENT OFFICE.

WILLIAM FULTON, OF CRANBERRY, NEW JERSEY.

LAMP.

Specification of Letters Patent No. 29,260, dated July 24, 1860.

To all whom it may concern:

Be it known that I, WILLIAM FULTON, of Cranberry, in the county of Middlesex, in the State of New Jersey, have invented a new and improved round-wick lamp-burner for burning coal-oils and other substances that are rich in carbon and which require a considerable amount of oxygen and heat to support a proper combustion for illuminating purposes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is an external view of my invention, with the glass chimney applied to it, and showing the manner in which the button or cone is raised and lowered. Fig. 2 is an internal view of my invention, with the button and cap off, showing the manner in which gauze wire plates are applied as air distributors and heaters so as to consume the carbon of the oil, and regulate the elastic force of the air so that it produces a perfect combustion. Fig. 3 is also an internal view with the button and cap off, showing the manner in which perforated plates are applied as air distributors and heaters. Fig. 4 is a view of the movable cap which can be made in any suitable form. Fig. 5 is a view of the movable button. Fig. 6 is an outward view of my invention with the button and cap applied to it.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in round wick lamps for burning coal oils and other substances that are rich in carbon, and which require a considerable amount of heated oxygen to support a proper combustion for illuminating purposes, as one gallon of coal oil contains more than double the amount of carbon that the same quantity of whale oil possesses, thereby requiring a greater intensity of heat to consume the carbon of the oil.

The object of the invention is to adapt a round wick lamp for burning equally well all the different substances above named, however much they may vary as regards the proportion of carbon they possess. This object is attained by applying two gauze-wire or perforated plates, one to the interior of the wick tube, and the other to the outer part so that it surrounds the wick tube. If

the material to be burned is very rich in carbon these can be formed of copper-gauze-wire or perforated plate made of the same material, as copper is one of the best conductors of heat and helps to consume the carbon of the oil, likewise serving to regulate the elastic force of the air so that it may be presented evenly to the flame, and the button or cone regulates the amount of oxygen which is supplied to the flame; the different parts being so arranged that the carbon of the oil is consumed and a greater or less amount of oxygen admitted to the flame, according to the amount of carbon the burning material possesses, a complete combustion of its elements being thereby effected, and a flame of the greatest illuminating power obtained.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents the bottom of a lamp, which may be constructed of sheet metal; any of the ordinary materials being used. In this bottom if necessary a register can be placed as in my flat wick lamp burner.

B, is the wick tube, which is of circular form, to receive what is generally known as the round or Argand wick. This wick tube instead of being left open as in camphene and Argand lamps, is surrounded by a gauze wire plate C, as shown in Fig. 2, or a perforated plate C, as shown in Fig. 3. There is also another perforated or gauze wire plate placed inside of the wick tube as shown at D, in Fig. 2, and Fig. 3. Through the center of this plate a rod *f*, passes, extending to the bottom of the lamp, on the lower end of which a screw E, is formed as shown in Fig. 1, so that the button G, can readily be raised or lowered, and thereby the flame increased or diminished.

G, is the egg shaped button or cone, which is placed on the top of rod *f*, so that it can be readily taken off when necessary as shown in Fig. 2 and Fig. 3. This cone ranges from an eighth to one half of the size of a camphene cone or button, having an aperture all around the wick so that the air can readily impinge up the flame, the flame passing up straight.

F, is the movable cap, around the bottom of which a row of holes can be made as shown at *c*, in Fig. 6, or they can be dispensed with as shown in Fig. 1, according to the oils used. This cap can be readily taken

off to fully expose the wick tube as shown in Fig. 2 and Fig. 3, or it can be placed on so as to cover it as shown in Fig. 1, and Fig. 6, any suitable form can be applied to the construction of this cap.

The button G, adds greatly to the efficiency of the device, it having a tendency to equalize the draft, and at the same time acting as a conductor of heat and allowing the blaze to go straight up or nearly so. Without this button or its equivalent in combination with the gauze wires C, and D, it is impossible to obtain a perfect combustion from a large size burner when of a circular form.

This invention is important, for many trials have been made to burn coal oils in round wick lamps without success, combustion in all cases being imperfect and the flame having a tendency to flicker prior to my invention.

Having thus described my invention, and the manner in which the same is or may be used or carried into effect, I would observe

in conclusion that I do not confine or restrict myself to the precise details or arrangements which I have had occasion to describe or refer to, as variations may be made therefrom without deviating from the main features of my said invention.

I do not claim a camphene button that projects over the wick and causes the flame to flicker; but

What I consider to be new, and desire to secure by Letters Patent is:—

The peculiar construction of button G, as shown in Fig. 5, and Fig. 6, or its equivalent in combination with the gauze wire plates C, and D, as shown in Fig. 2, or the perforated plates C, and D, as shown in Fig. 3, the whole being arranged substantially as and for the purpose set forth.

WM. FULTON.

Witnesses:

R. McC. SHEPHERD,
ISAAC VAN NORSTRAND.