W. FULTON.

Lamp Burner.

No. 21,069. Patented Aug. 3, 1858.

Fig. 1.

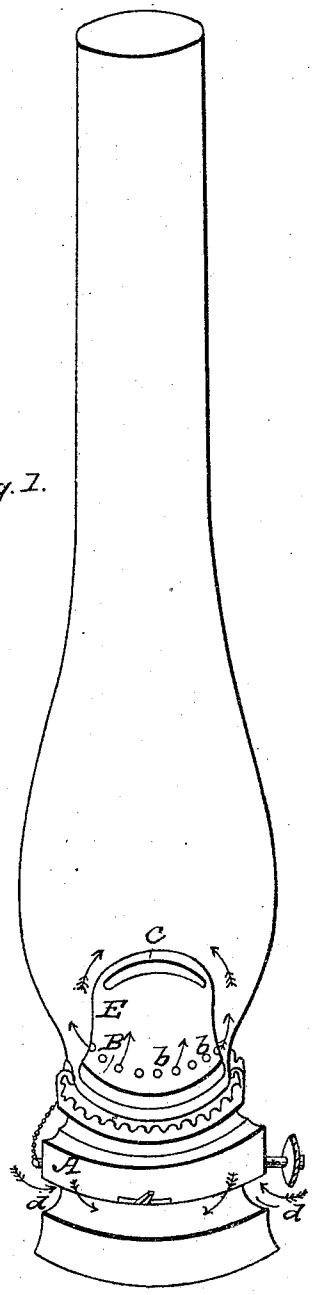


Fig. 4

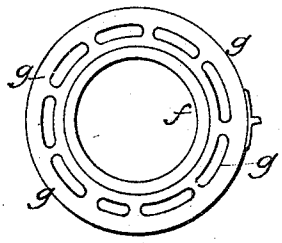


Fig. 3

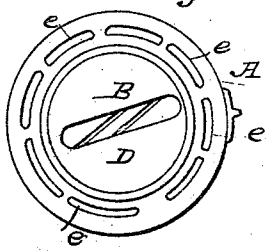
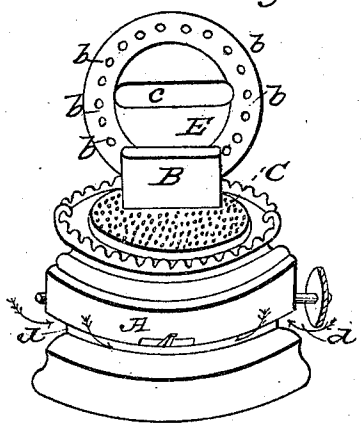


Fig. 2



UNITED STATES PATENT OFFICE.

W. FULTON, OF CRANBERRY, NEW JERSEY.

LAMP.

Specification forming part of Letters Patent No. 21,069, dated August 3, 1858; Reissued September 13, 1859, No. 810.

To all whom it may concern:

Be it known that I, WILLIAM FULTON, of Cranberry, in the county of Middlesex and State of New Jersey, have invented a new and Improved Lamp; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is an external view of my invention with the glass chimney applied to it. Fig. 2, is also an external view with the cap raised so as to expose the wick tube and the perforated plate. Fig. 3, is an inverted plan of my invention showing the stationary portion of the register. Fig. 4, is a detached view of the movable plate of the register.

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

This invention relates to an improvement in lamps for burning coal oils and other substances that are rich in carbon, and which require a considerable amount of oxygen to support a proper combustion for illuminating purposes.

The object of the invention is to adapt a 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 a register to the cap of the lamp, and using in connection therewith a perforated plate or air distributer, the parts being so arranged that a greater or less amount of oxygen is admitted to the flame, according to the amount of carbon the burning material possesses, a complete combustion of its elements 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 top of a lamp, which is fitted on a reservoir or fountain of the usual or any proper form. This top is constructed of sheet metal, any of the ordinary materials being used.

B, is the wick tube which is of oblong form to receive what is generally known as the flat wick. This wick tube instead of passing through a solid metal plate as usual passes through a perforated plate C, which is plainly shown in Fig. 2. The perforated plate C, does not afford a communication with the reservoir below and the flame, for a plate D, see Fig. 3, closes the lower end of the cap, the wick tube passing through said plate, see Fig. 3.

On the upper part of the top A, a cap E, is placed and attached by a hinge or joint, so that it may readily turn back to fully expose the wick tube as shown in Fig. 2, or turned forward so as to cover it as shown in Fig. 1. Through the lower part of the cap E, openings *b*, are made, said openings extending all around the cap, and an oblong slot *c*, is made through the top of the cap.

The top A, above the plate D, communicates with the external air as shown at *d*, the top A, at this point projecting over or beyond the other parts and perforated as shown at *e*, Fig. 3. Within the top A, and just above or over the perforated portion *e*, a perforated plate *f*, is placed. This plate is allowed to turn within the top A, and its holes *g*, are made to wholly or partially register with the openings *e*. The perforated plate *f*, and perforated portion of the top form a register to regulate the admission of air to the flame, the air passing through the perforated plate C, within the cap E, the plate serving to distribute the air so that it will be presented evenly to the flame.

By this invention more or less air may be admitted to the flame as may be desired. If the material to be burned is very rich in carbon as camphene for instance or rosin oil, the register is left entirely open. If coal oils are used the register is turned to reduce the volume of air which is admitted to the flame as the latter material contains less carbon than the former, and if a mixture of coal and whale oils are used, a mixture containing still less carbon, the register may be turned to still further reduce the volume of air. The plate C, adds greatly to the efficiency of the device, it having a tendency to equalize the draft causing it to impinge upon the flame all around with equal intensity. The perforations *b*, in the cap E, admit a current of air each side of the cap as indicated by the arrows.

The invention is important for many burning materials are now sold which differ only in the amount of carbon they contain and which can only be perfectly consumed by a proper admission of air to them. Articles of the same name, as coal oil for instance frequently differ in this respect and hence a

perfect or good illuminating flame has not hitherto been obtained at all times.

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

The register formed of the perforations *e*, in the top A, and the perforated plate *f*, placed within the top, in combination with the perforated or air distributing plate C, the whole being arranged substantially as and for the purpose set forth.

WM. FULTON.

Witnesses:
ISAAC VAN NORSTRAND,
ROBERT SHEPHERD.

[FIRST PRINTED 1911.]