N. CLIFFORD.

Vapor Lamp.

No. 32,755. Patented July 9, 1861.

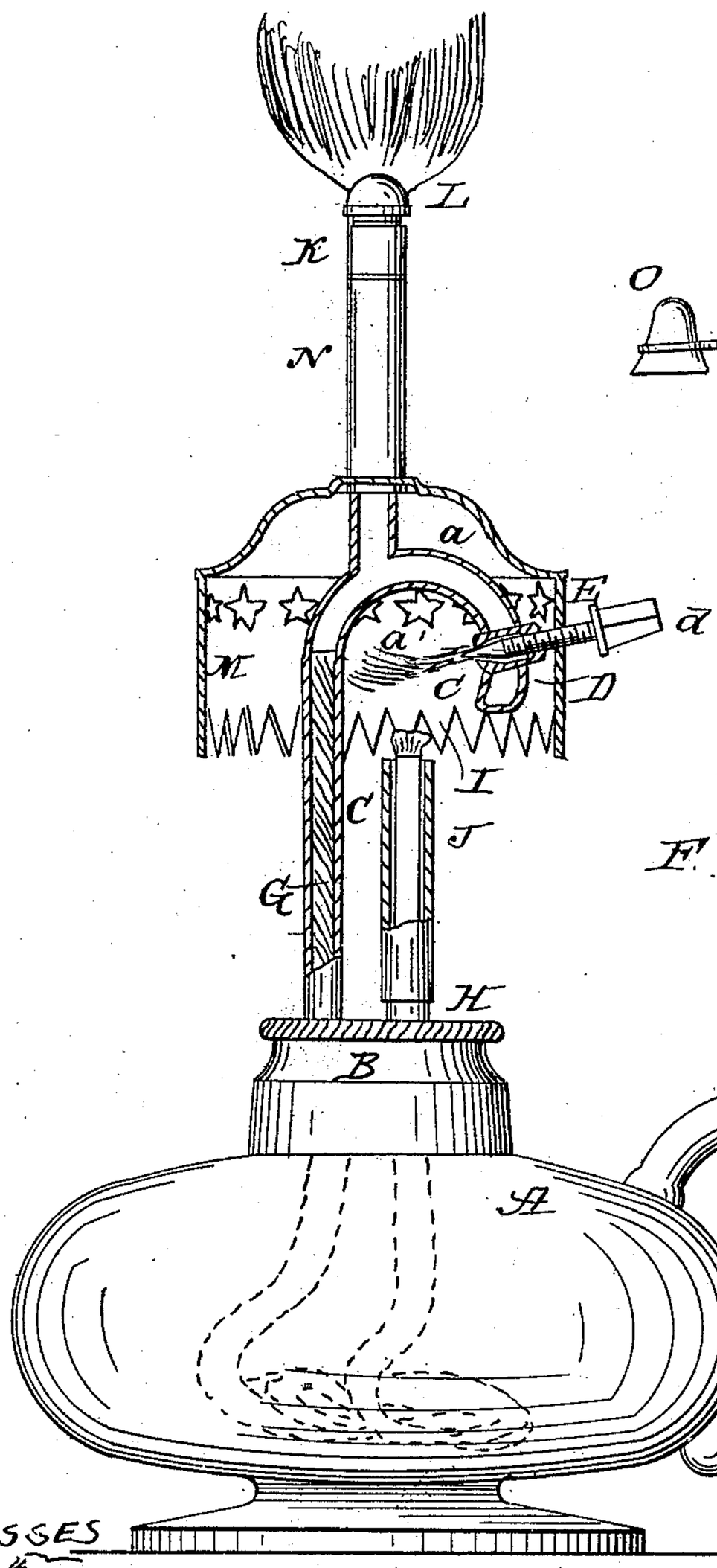


Fig. 2

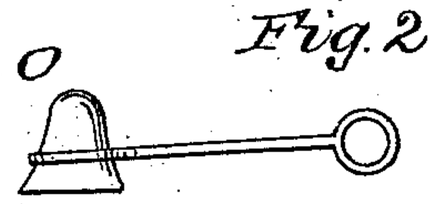
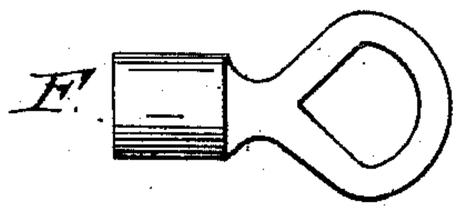


Fig. 3



WITNESSES

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NEIL CLIFFORD, OF BROOKLYN, NEW YORK.

VAPOR-LAMP.

Specification of Letters Patent No. 32,755, dated July 9, 1861.

To all whom it may concern:

Be it known that I, NEIL CLIFFORD, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Vapor-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 a sectional elevation of my invention; Fig. 2, a detached view of an extinguisher pertaining to the same; Fig. 3, a detached view of a key or wrench pertaining to the same.

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

This invention relates to an improved lamp of that class in which volatile hydrocarbons are burned and the burning material vaporized by a supplemental flame in order to supply or feed the illuminating flame.

The object of the invention is to obtain a simple and efficient lamp for the purpose, less cumbersome than those usually constructed and which will admit of being used with facility as a hand lamp and capable of having its illuminating flame graduated with great nicety according to the light required.

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

A, represents the body or fountain of the lamp which may be constructed in any of the known forms and B, is the lamp top which is screwed into the body or fountain A, as usual.

C, is a flat tube which is fitted in the top B, extends upward a certain distance and is bent or curved down in semi-circular form as shown at *a*, in Fig. 1. The tube C, is closed at its upper end, but it has a socket D, fitted transversely in it, the inner end of said socket having a conical or taper orifice *c*. The socket D, has an internal screw thread in which a screw plug E, is fitted the end of said plug being of taper or conical form corresponding to the conical or taper orifice *c*, of the socket D. The outer end of the plug E, has a square *d*, formed on it to receive a key or wrench F, shown in Fig. 3. Within the tube C, there is placed a wick G, which extends up to the commencement of the curve *a*, and passes down into the body or fountain A, of the lamp.

H, is a tube which is also fitted in the top B, and is provided with a wick I. The tube H, is round and is provided with a sliding quill J, to regulate the height of the flame.

K, is a round tube which is attached to the flat tube C, projecting vertically from its curve or semi-circular portion *a*, as shown in Fig. 1. The tube K, is provided at its upper end with a burner L, of the ordinary slotted kind such as is generally used in vapor or gas lamps.

M, is a cylindrical hood or heat retainer which is placed on the tube K, and extends down below the curved or semi-circular portion *a*, of the flat tube C, as shown clearly in Fig. 1. The plug E, projects through an opening in the side of the hood M, so that the square *d*, will be always accessible.

On the tube K, there is placed a socket N, said socket having its upper end bearing against the burner and its lower end bearing on the hood M, as shown in Fig. 1. This socket keeps the hood in proper position on the tube K.

The round wick tube H, is under the curved or semi-circular top part *a*, of the flat wick tube C, and in the same plane with the socket D.

The operation is as follows: The wick I, of the tube H, is first lighted and the tube C, which should be of copper or other good conductor of heat is warmed and the fluid with which the wick G, is saturated is volatilized, the vapor passing up into the tube K, and burning at the orifice of burner L. The plug E, is then unscrewed and a jet of vapor issues over the flame of wick I, and is ignited by said flame. The latter is then extinguished by the extinguisher O, Fig. 2, and the vapor flame *a'*, keeps the fluid in a vaporized state. This flame *a'*, may be graduated with great nicety according to the heat required and the brilliancy of the illuminating flame therefore is placed under the complete control of the attendant or operator. The conical or taper end of plug E, fitting in the taper or conical end of socket D, and the screw of plug E, admits of such a nice graduation of the jet orifice that there is no difficulty whatever in graduating the intensity of the illuminating flame. Another advantage the plug possesses is that it

will not casually change its position as is the case with the usual sliding quill such as is shown on tube H, and the illuminating flame will therefore be constant in intensity so long as the supply of fluid in the body or fountain A, continues, and the vapor flame a', heats in a more perfect manner the upper part of the tube C, than can be done by the flame of wick I.

I am aware that vapor lamps have been arranged in various ways with supplemental flames, and I do not claim broadly, or irrespective of arrangement, the employment of the latter; but,

I do claim as new and desire to secure by Letters Patent—

The arrangement of the tubes C, K, and wick tube H, when used in connection with the plug E, and socket D, placed in the curved part a, of the tube C, and in relation with the wick tube H, and straight or upright portion of tube C, to operate as and for the purpose set forth.

NEIL CLIFFORD.

Witnesses:
S. H. Wales,
M. M. Livingston.