I. JENNINGS.

Vapor Burner.

No 4,935. Patented Jan'y 19, 1847.

Fig. 1

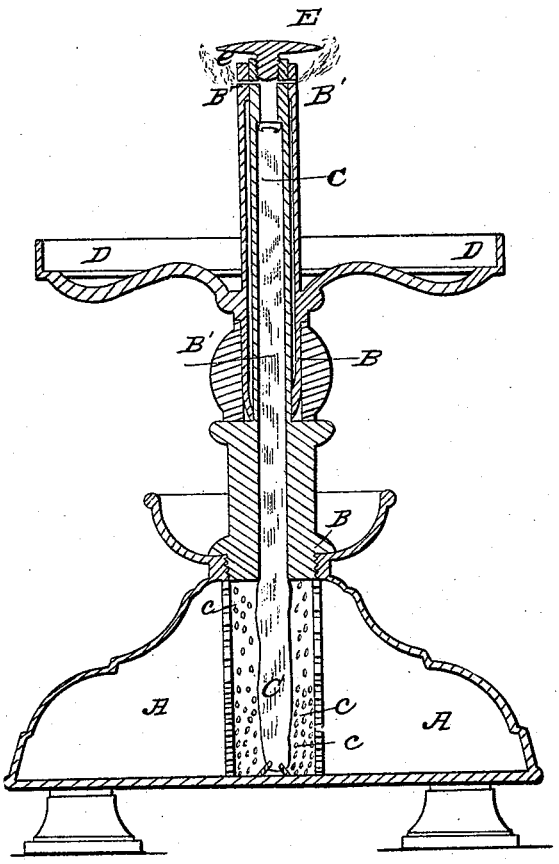

Fig. 2

UNITED STATES PATENT OFFICE.

ISAIAH JENNINGS, OF NEW YORK, N. Y.

LAMP.

Specification of Letters Patent No. 4,935, dated January 19, 1847.

To all whom it may concern:

Be it known that I, ISAIAH JENNINGS, of the city of New York, in the State of New York, have made a new and useful Improvement in the Manner of Constructing Lamps for the Burning of Volatile Ingredients, Such as the Compounds of Alcohol and Oil of Turpentine; and I do hereby declare that the following is a full and exact description thereof.

The general construction of my improved lamp is the same with that for which I obtained Letters Patent, in which the volatile mixture was made to ascend in a wick of cotton or other fibrous material, contained within a tube, in the upper part of which it is converted into vapor, and is allowed to issue from small orifices, where it is ignited and burns in the manner of gas-lights.

My improvement in this lamp consists in the so constructing it, as that by turning the burner around to a small distance, the number of jets may be diminished or increased at pleasure, or the whole may be extinguished.

In the accompanying drawing Figure 1 is a vertical section; through the middle of my lamp, A, A, is the reservoir for containing the ingredients to be burnt and into which the burner B, B, is to be screwed.

C, C, is the wick, that descends nearly to the bottom of the reservoir, and reaches up to nearly the top of the burner. The wick that I use is of cotton yarn, that is wound upon a wire having two forked ends as seen at *a*, *a*. This is slid into the inner tube B′, B′, of the burner. The lower part of the wick is surrounded by a safety tube *c*, *c*, that is perforated with small holes that allow the fluid contained in the reservoir to flow—but slowly into the chamber containing the wick, thereby preventing the ingredients from running out in case of the upsetting of the lamp, a device which with other improvements was secured to me by former Letters Patent.

The inner tube B′, B′, of the burner is surrounded by an outer tube B_1, B′, these tubes are made slightly conical at their upper ends, as at *e*, where they are ground together so as to fit air-tight; the small holes through which the vapor is to escape to form the jets of flame are drilled through the conical part of the tubes B and B′, and as the outer tube is made to turn around on the inner, the holes through the two tubes may be made to coincide, or they may be so placed as to cut off the communication between them.

The holes are drilled in a regular circle around the upper ends of the tubes, and they are so arranged as to admit of the number of jets being varied, suppose, for example, that the number of jets is ordinarily eight, the outer tube may be made to turn upon the inner, so as instantaneously to change the number to four and vice versa. I mention these numbers as those that I have employed, but the principle allows of these numbers being varied. By drilling eight holes through the inner tube, at equal distances from each other, and by drilling twelve holes through the outer tube, the variation from four to eight jets may be made; but the twelve holes in the latter must form four series of three, there being a space between each series equal to twice the distance of the holes from each other in each of the series of three; or in other words, the circle of the outer tube which is to be perforated is to be divided into sixteen parts, and every fourth division is to be imperforate.

Fig. 2, shows the outer tube separately from the other parts of the lamps; at its lower part B″ it is slit, so as to allow it to be sprung in slightly on the inner tube, to regulate its turning around. D, D, is a ring for supporting a glass globe. E is a button above the jets, which when screwed down holds the tubes in their places, and serves also to retain the heat, and regulate the jets.

Having thus fully described the nature of my improvement in the lamp for burning volatile ingredients, what I claim therein as new, and desire to secure by Letters Patent, is—

The so arranging of the tubes B_1 and B′ and of the apertures through them, as that the outer tube shall, by turning on the inner, be made to vary the number of jets, or to extinguish the whole at pleasure, substantially in the manner herein fully made known; and this I claim whether the proportions for the jets be made to coincide precisely in the manner set forth, or in any other that is substantially the same, producing the same effect by equivalent means.

ISAIAH JENNINGS.

Witnesses:

THOS. P. JONES,

HENRY W. BALL, Jr.