

(No Model.)

E. M. WRIGHT.  
LAMP.

No. 331,933.

Patented Dec. 8, 1885.

Fig. 1.

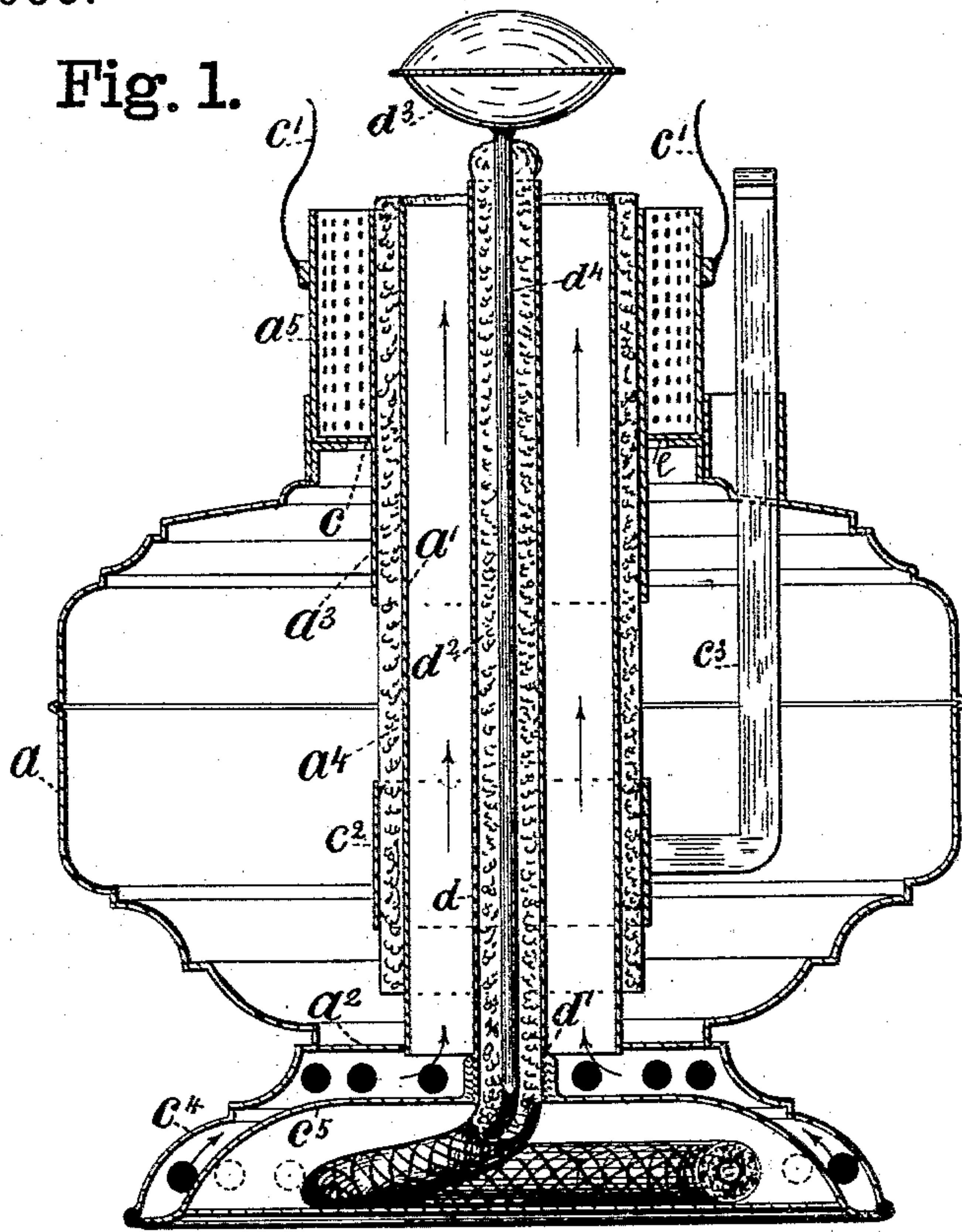
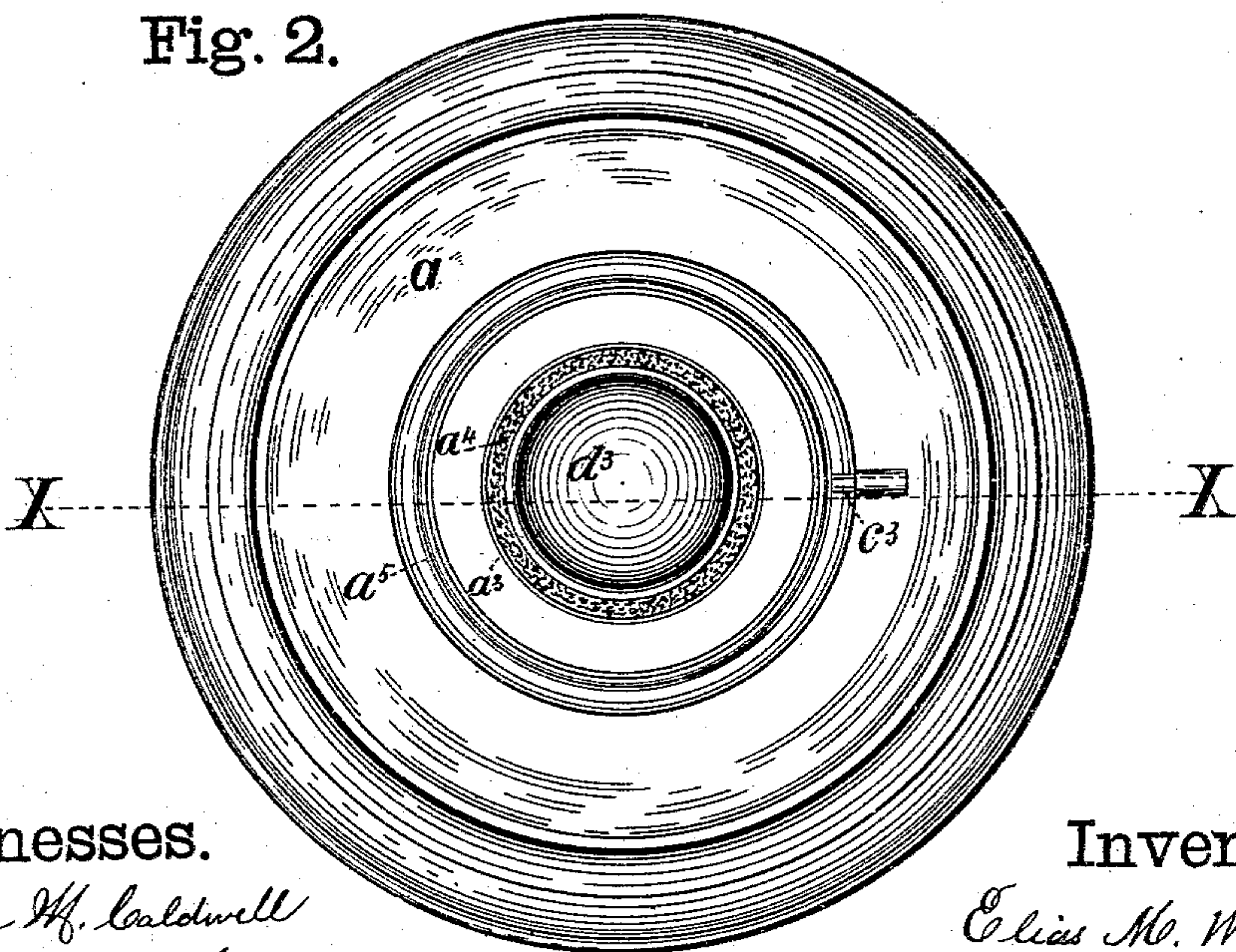


Fig. 2.



Witnesses.

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# UNITED STATES PATENT OFFICE.

ELIAS M. WRIGHT, OF BUFFALO, NEW YORK.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 331,933, dated December 8, 1885.

Application filed February 2, 1885. Serial No. 154,710. (No model.)

*To all whom it may concern:*

Be it known that I, ELIAS M. WRIGHT, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

The object of my invention is to produce a better, clearer light, to deodorize the flame while burning, and to give a better light with a less quantity of oil, all of which will be fully and clearly hereinafter shown, described, and claimed by reference to the accompanying drawings, in which—

Figure 1 is a vertical section through the lamp in line X X, Fig. 2, cutting through all except the button and its supporting-rod, and wick-raising bar. Fig. 2 represents a top view of the lamp.

The body *a* of the lamp may be constructed in any well-known way and of any suitable material.

*a'* is the tube for receiving and holding the wick. It is secured in the usual way at the bottom *a''* of the lamp.

*a'''* is another tube for surrounding the wick-tube, so as to leave an annular space for the wick *a''''*.

A tube, *a''''*, is firmly attached to tube *a'''* at *c* by a flange, *e*. This tube fits in a depression, so that it may be readily lifted off or put on, as will be seen by reference to Fig. 1 of the drawings. It is also provided with the usual springs, *c'*, for holding the chimney. Near the lower end of the tubular wick is another tube, *c''*. It is made short, and is provided with inwardly-projecting pins or the equivalent thereof, for preventing it from slipping up or down the wick, which fits within it, as shown.

*c'''* represents a thin bar of metal rigidly attached to the tube *c''*. Its use is to raise or lower the wick.

It will be readily seen that, as the wick is fitted loosely on the tube *a'* and secured from slipping within the tube *c''* as the bar *c'''* is moved up or down the wick will be moved also; but as this is a well-known device for raising or lowering a wick and in common use, a further description of it here is not required.

Below the bottom and base *c''''* of the lamp

is a receptacle, *c''''*, for holding water. This receptacle is provided with a tube, *d*, either secured to it by a screw, *d'*, as shown, or made smooth, so as to slip down into a tube adapted to receive and hold it centrally within the wick-tube. It is supplied with cotton wicking *d''*, or other similar material.

*d'''* represents a lamp-button, made either hollow or solid; but I prefer a solid button of copper. To this button is attached a copper stem, *d''''*, which is made to slip down into the tube *d* through the center of the wick *d''*. It is made of copper, as being the best metal to conduct the heat, but wire or any other material may be used.

In this arrangement of providing vapor for the flame by the heat of combustion I am aware that other fluids beside water may be used; but water is the fluid I prefer, as the heat from the oil of gas-flame affording the illumination is sufficient to decompose the hot steam or vapor into its original elements—oxygen and hydrogen—which in their nascent state recombine with the elements of the odorous compounds arising from the vaporized oil in the luminous flame, and thereby deodorizing the noxious vapors which give the disagreeable odors of incomplete combustion. These elements, oxygen and hydrogen, in the decomposed state, by thus recombining with the hydrocarbon compounds in the flame, produce an increased heat, thereby subjecting the freed particles of carbon suspended in the flame to a greater incandescence, which increases the illumination.

My invention is adapted for and can be used on oil-stoves to increase the heat-power of the same, and also for other stoves or furnaces or other heating devices.

The combination of a water-reservoir, a wick, and wick-tube with the oil-tube and wick of a lamp I am aware is not new. I therefore do not claim such, broadly; but

What I do claim is—

1. The combination, in an Argand lamp, of an oil-reservoir, a central tube extending through the same, a water-reservoir below the oil-reservoir, a capillary wick-tube extending through the central tube and communicating with the said water-reservoir, a button having a heat-transmitting stem extending through or partly through the wick in said capillary

wick-tube, and a wick connecting with the oil-reservoir, substantially as and for the purposes specified.

2. An Argand lamp consisting of an oil-  
5 reservoir, a central tube extending through the same, and adapted to receive the usual tubular wick, a water-reservoir below the oil-reservoir, a capillary wick - tube extending through the central tube and adapted to re-

ceive a hollow wick and communicate with the said water-reservoir, and a button having a heat-transmitting stem adapted to pass into said wick and water-tube, as and for the purposes described.

ELIAS M. WRIGHT.

Witnesses:

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