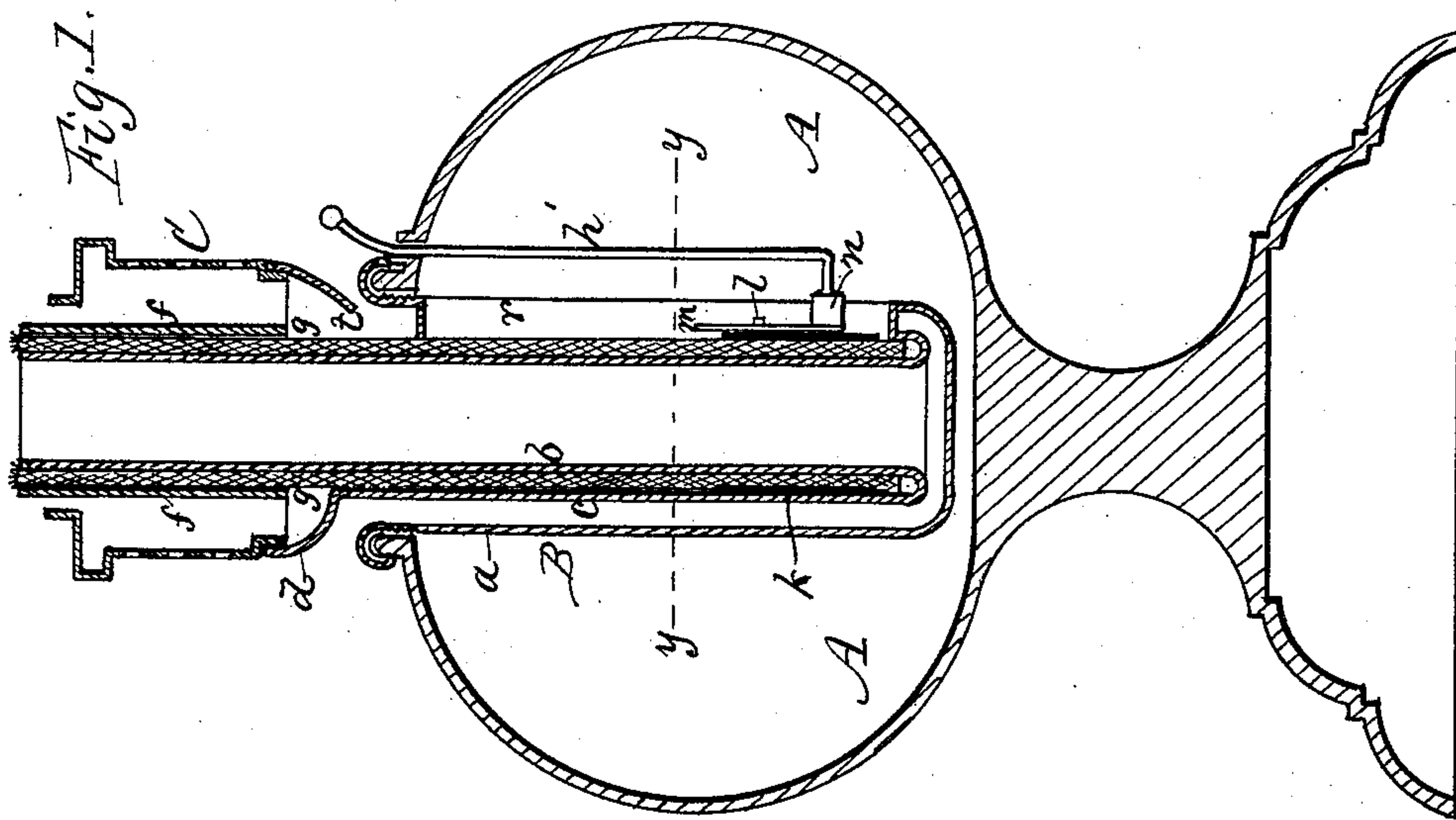
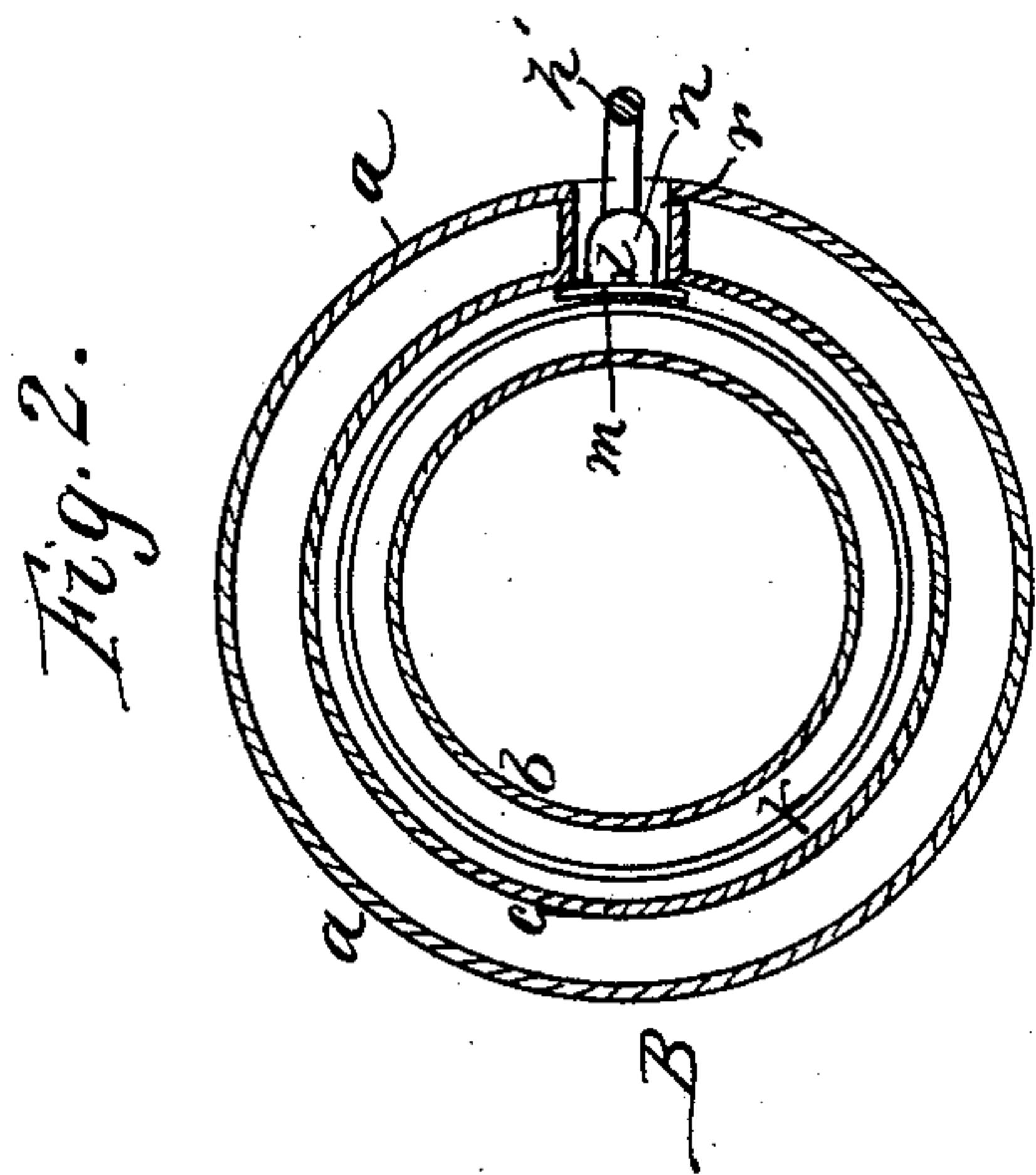


(No Model.)

H. E. SHAFFER.
LAMP.

No. 486,510.

Patented Nov. 22, 1892.



Witness
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UNITED STATES PATENT OFFICE.

HENRY E. SHAFFER, OF ROCHESTER, NEW YORK.

LAMP.

SPECIFICATION forming part of Letters Patent No. 486,510, dated November 22, 1892.

Application filed December 22, 1891. Serial No. 415,848. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. SHAFFER, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Lamps, of which the following is a specification.

My improvement relates to an attachment that can be placed in the mouth of a closed fount and supply air to the blaze without carrying it through the bottom of the lamp. It also relates to a wick-raising handle that is seated in the lamp and is non-removable from the same.

The invention consists in the construction and arrangement of parts hereinafter described and claimed.

In the drawings, Figure 1 is a central vertical section of a lamp, showing my invention. Fig. 2 is a cross-section of the interior attachment in line *y y* of Fig. 1.

A indicates the lamp, which has a closed fount. B is the attachment placed therein. The attachment is of such diameter as to enter easily through the mouth of the lamp and of such length as to extend nearly to the bottom. It consists of three concentric tubes *a b c*. The outer tube *a* is shorter than the others and is provided at the top with a curved out-turned flange, that rests on the lamp-collar, by which means the attachment is supported. The two inner tubes *b c* form the wick-tubes inclosing the wick and extend to the proper height above the lamp. The bottom of the tubes *b c* are closed and the bottom of the outer tube *a* is also closed. By this means the air is admitted at the top of the lamp, flows down in the space between the tubes *a c*, and thence up through the interior of the inner tube *b* to the blaze. On one side of the attachment is a vertical slot or opening *r*, which extends from the bottom of the attachment to the top of the lamp. This slot extends through the two tubes *a c* and its sides are curved in or closed, so that, while the oil in the lamp has free passage therethrough to reach the wick, such oil cannot pass into the air-space between the tubes *a c*. The primary object of the slot, however, is to allow connection between the wick-holding band and the handle outside the attachment by which the wick is operated.

k is the band or holder inclosing the wick,

said band sliding up and down with the wick between the tubes *b c*, and *h'* is the handle by which it is operated. This handle is located entirely outside and independent of the attachment B, and it passes up through and is seated in the top of the lamp on one side of the collar of the same, as shown in Fig. 1. The connection between the handle and wick-band is made by cranking the lower end of the handle, carrying it in through the slot *r*, and there attaching it to a boss *n*. To the boss is attached a thin spring *m*, having a hole in its upper end, which engages with a short pin *l*, projecting from the wick-band. The elasticity of the spring holds the parts in connection; but to disconnect them the spring is drawn back till the hole frees from the pin. The wick is raised by drawing up the handle, and when the wick-band is fully elevated to the top of the lamp the pin and the end of the spring passes out through the opening *t* at the top of the lamp, where it can be readily reached and operated. The upper end of the spring is broadened laterally, as shown at *m' m'*, sufficiently for its ends to lap past the slot and rest inside the edge of the curb, as shown in the cross-section, Fig. 2, by which means it is guided as it goes up. These enlargements *m' m'* by lapping past the slot and bearing inside the tube prevent disengagement of the spring from the pin under any unusual strain in raising the wick.

C is the burner-cap fitted around the wick-tubes at the top. Its lower end rests in an open cup or gutter *d*, forming a part of the outer tube *c*. It has an inner tube *f*, attached to the cap in any suitable manner, said inner tube *f* forming a continuation of the tube *c*, but disconnected therefrom and leaving a break *g*, which tends to prevent conduction of heat down into the oil.

This invention has particular relation to an attachment of the kind above described, where the air is conveyed in at the top. In the standard lamps as now made the mouth-openings are of given size and comparatively small. The attachment that fits therein must be made of corresponding size. It has been found by experiment that there is not sufficient space between the tubes *a c* for the shaft of the wick-raiser to be located therein. The greatest space between said tubes in the largest size

in standard lamps is only about one-fourth of an inch. I have therefore found it necessary to locate the wick-raising handle *h'* entirely outside the attachment B and seat it in the lamp-body itself, from which it is not removable, but has free play up and down. At the same time, since the wick rests between the two inner tubes *b c*, the outer tube *a* has to be slotted, as above described. This gives room for the cranked end of the handle that connects with the wick-band to run up to the top of the lamp, bringing the locking devices above the lamp for adjustment.

Having described my invention, I do not claim, broadly, a center-draft attachment for a closed-fount lamp; neither do I claim, broadly, slotting the wick-tube vertically.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the attachment B, provided with the vertical slot *r*, of the handle *h'*, seated in the lamp-body outside the attachment, the wick-band *k*, encircling the

wick, provided with a projecting pin, and a spring connected with the handle engaging with the pin and provided at the top with enlargements, which project laterally beyond the sides of the slot and rest inside the tube, as shown and described, and for the purpose specified.

2. In combination with the attachment B, provided with a vertical slot *r*, a wick-band *k*, encircling the wick, a handle *h'*, seated in the body of the lamp and connecting with the wick-band, and a cup *d* on the attachment above the lamp provided with a passage *t* within the attachment, through which the wick-raising devices extend when raised, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY E. SHAFFER.

Witnesses:

R. F. OSGOOD,

CHAS. A. WIDENER.