

(No Model.)

E. J. HALE.
BURNER FOR LAMPS.

No. 285,029.

Patented Sept. 18, 1883.

Fig. 1.

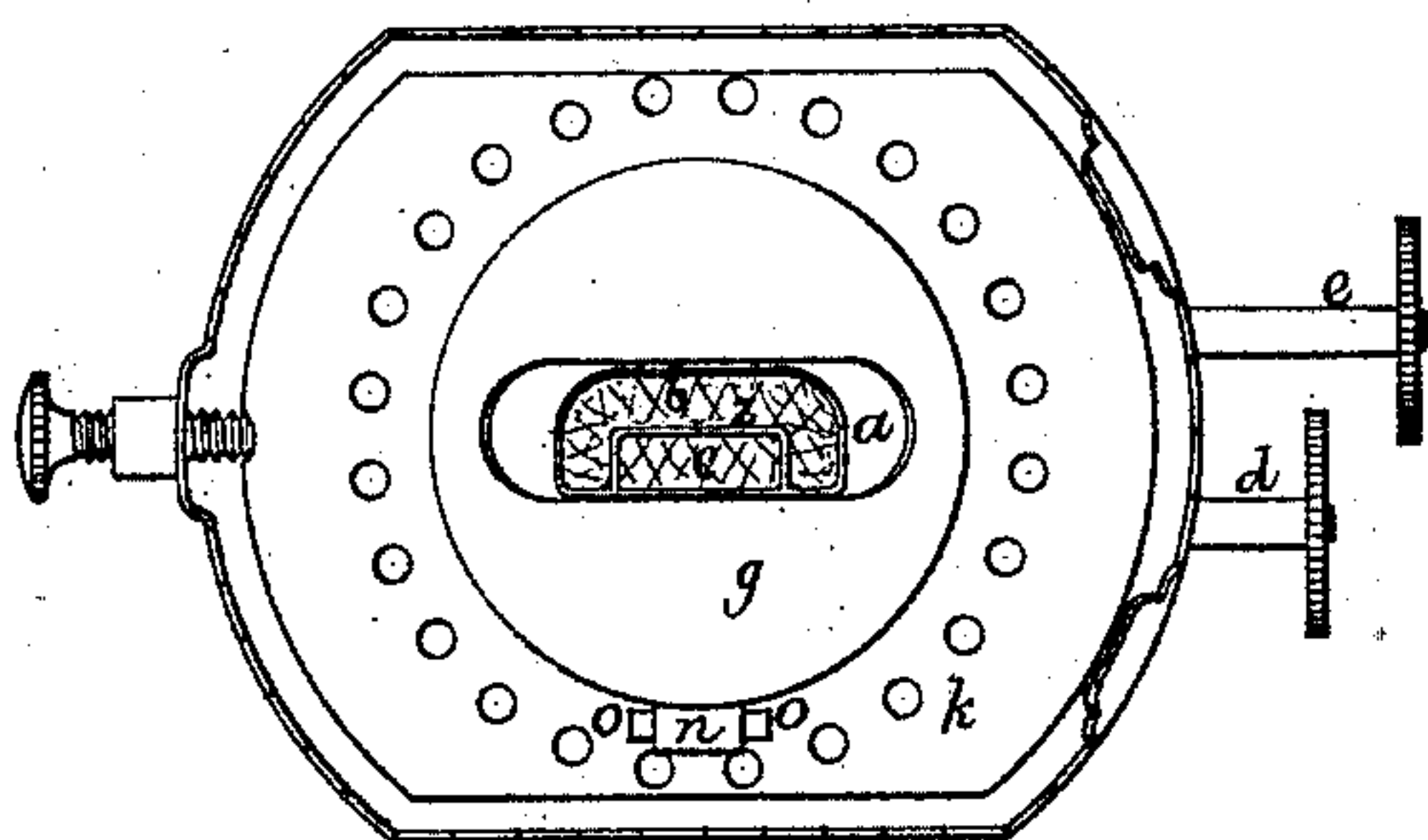


Fig. 7.

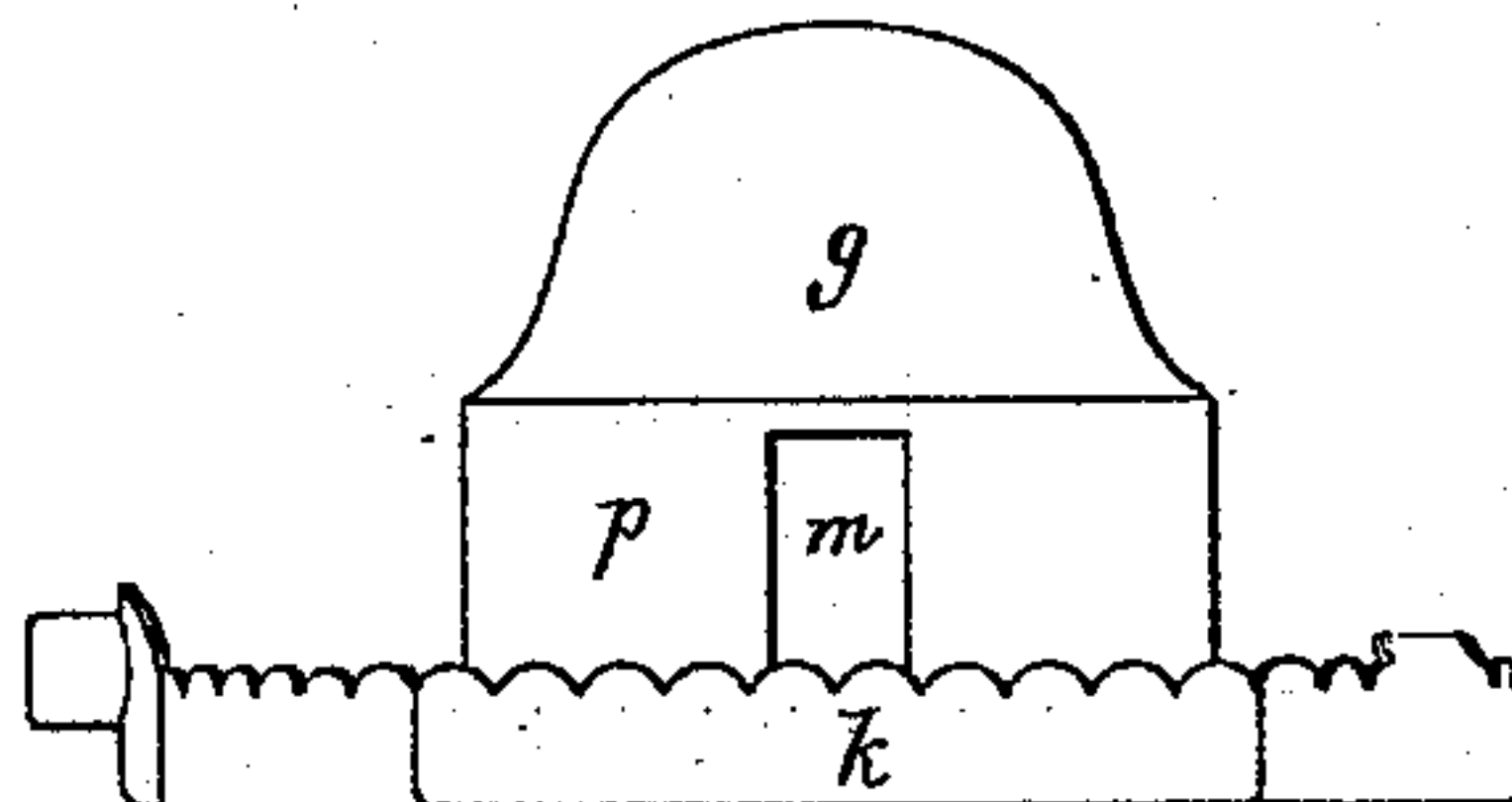


Fig. 2.

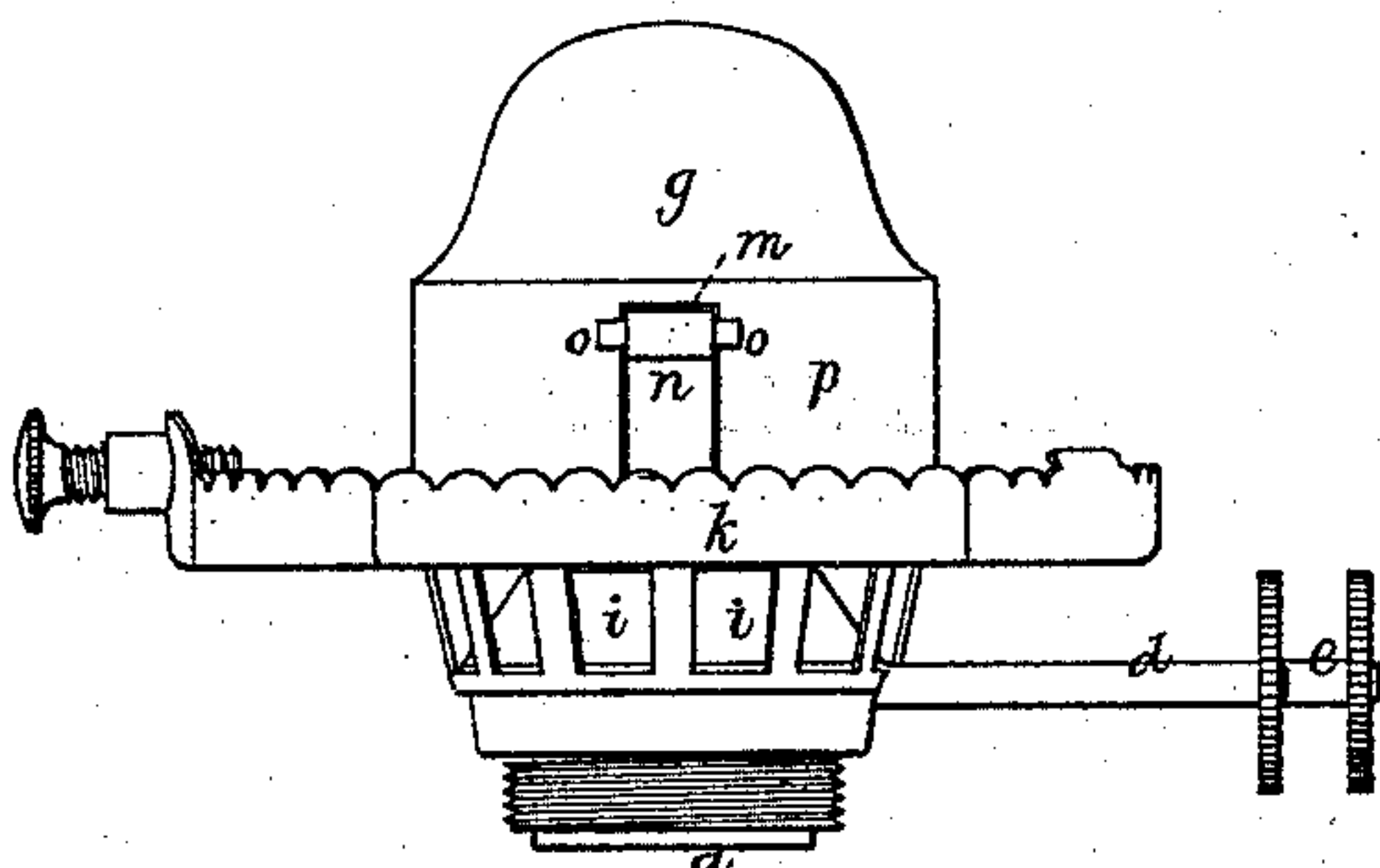


Fig. 3.

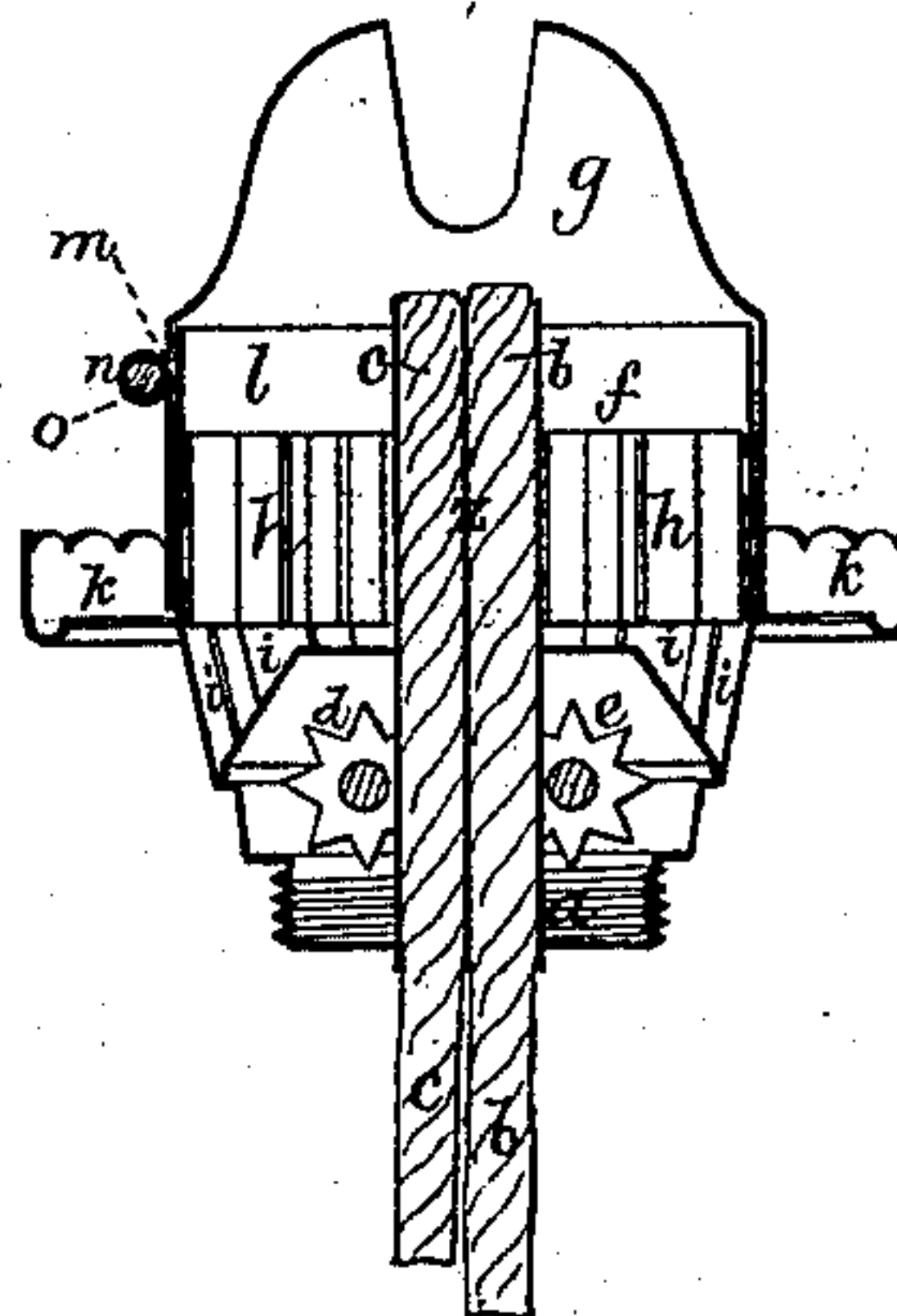


Fig. 5.

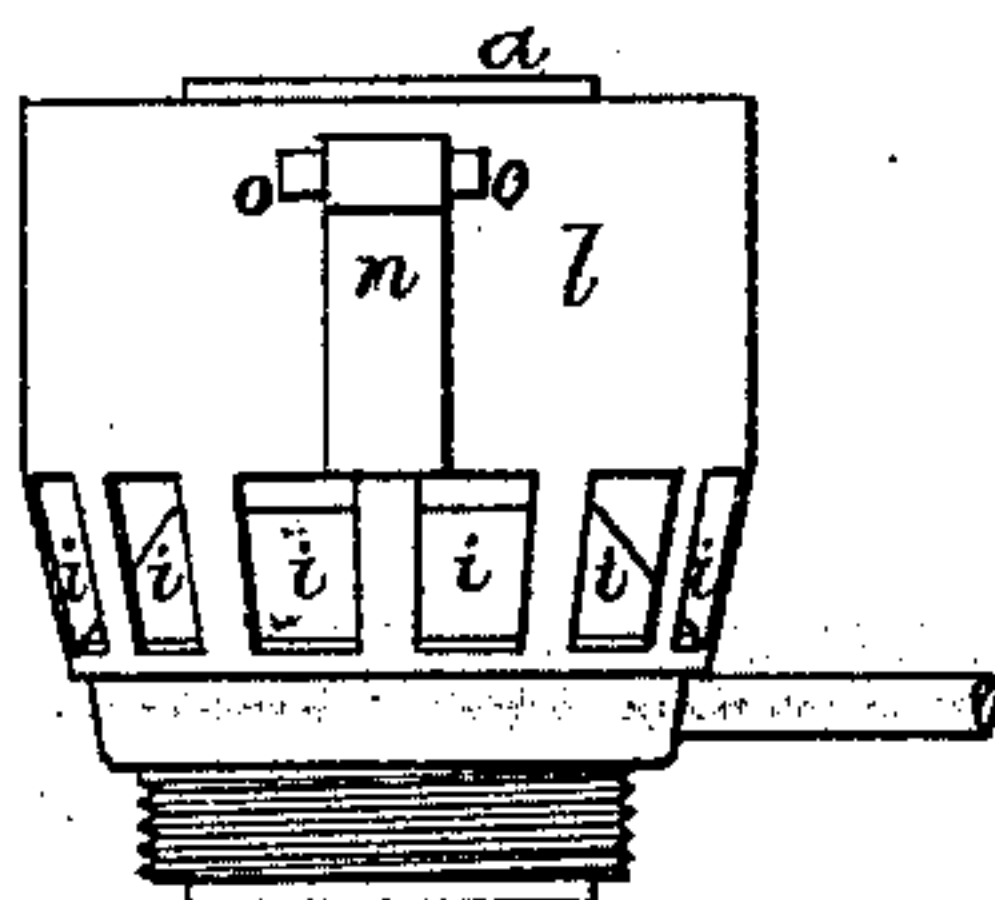


Fig. 6.

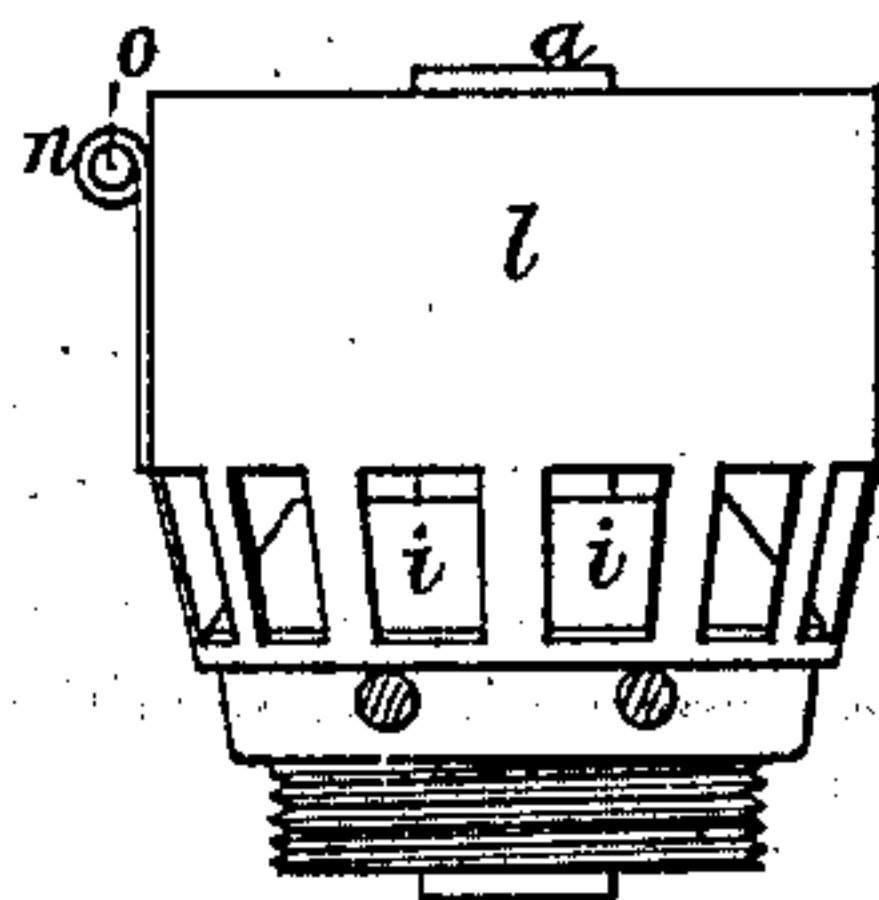


Fig. 4.

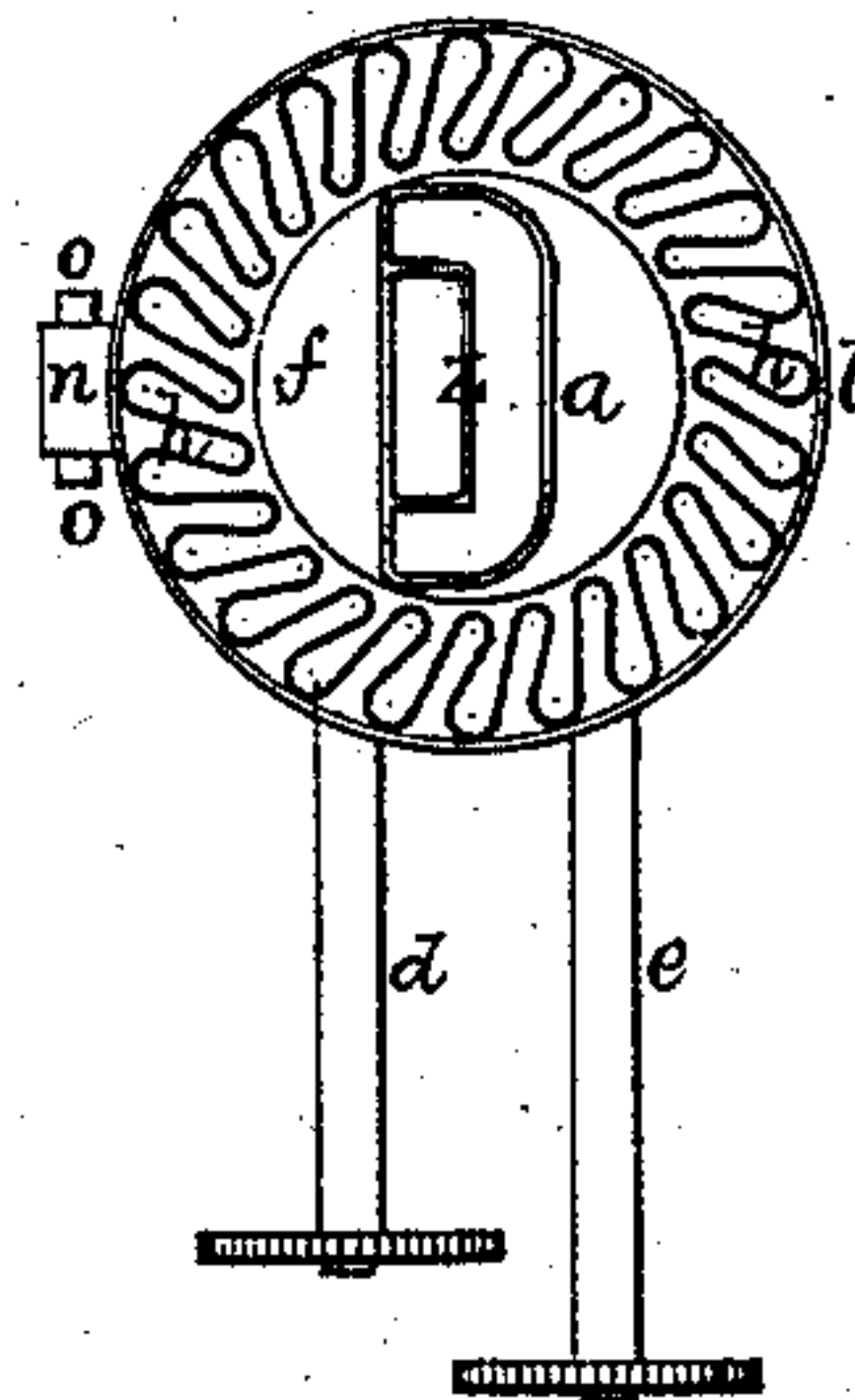
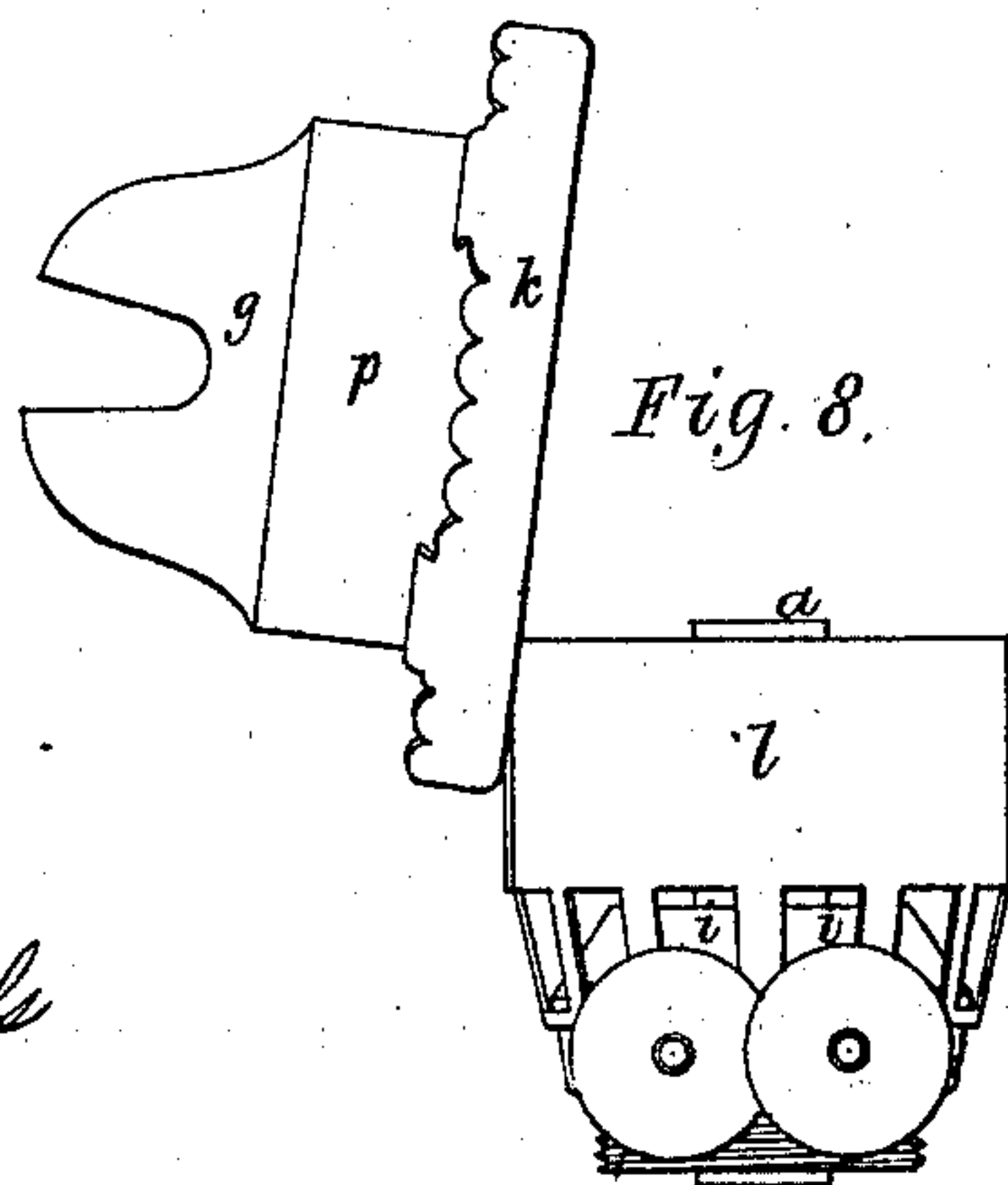


Fig. 8.



Witnesses.

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ELIAS JONES HALE, OF FOXCROFT, MAINE.

BURNER FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 285,029, dated September 18, 1883.

Application filed June 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, ELIAS JONES HALE, of Foxcroft, in the county of Piscataquis, of the State of Maine, have invented a new and useful Improvement in Burners for Lamps; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a transverse section, of a burner provided with my invention, the nature of which is defined in the claims hereinafter presented. Fig. 4 is a top view as the burner appears independently of its cone and chimney-supporter. Figs. 5 and 6 are side views of the burner body and its projection *n*, and the ears thereof, to be described. Fig. 7 is a side view of the connected cone and chimney-supporter, such view showing the hinge-slot in the side of the cone. Fig. 8 represents a side view of the burner, with the cone and chimney-supporter raised and turned back to uncover the wick-tube.

In this burner there is a single wick-tube, *a*, provided with two wicks, *b* and *c*, one of which has a width less than that of the other, whose width is equal, or about equal, to that of the smaller one, plus twice the thickness of such lesser wick. The burner is provided with two wick-elevators, *d e*, of the kind generally employed in burners, one for each of its wicks. The wicks are arranged side by side in the wick-tube *a*, or with a partition, *z*, between them, and the larger is bent so as to lap upon or extend across the opposite edges of the smaller of them, the purpose of the said smaller wick being not only to increase the amount of oil drawn up for combustion, but to regulate or modify the flame of the larger, or that of both wicks. Should there be a tendency of the flame of the larger wick to "fork" or become more or less pointed, by raising or lowering the smaller wick relatively to the larger one, the flame of it or both can be changed in form or be prevented from becoming forked or pointed.

Within the air-chamber *f*, surrounding the wick-tube *a*, and opening into the cone *g*, is a serpentine air-director, *h*, it consisting of a thin strip of plate metal bent in a serpentine form, and also around in a circle, as represented. It is arranged with the air-inlets *i* of the burner in manner so that the air, after passing into

and through them, shall be received within it, (the said director,) in the spaces within its coils, and by such be directed in separate streams upward regularly about the wick-tube and into the cone. Without the director the entering currents of air are liable to impinge against the wick-tube and each other in a manner to cause irregularity or flickering of the flame; but with the director to the burner these currents are separated entirely around the wick-tube and discharged upward without contact therewith, except, perhaps, at or close to its top.

The cone *g* is attached to and projects upward from the chimney-supporter *k*, the lower part, *p*, of the cone being cylindrical to encompass and fit upon the body part *l* of the burner. The cone carrying the chimney-supporter is to be capable of sliding freely upward and downward on the said body part *p*. There is in one side of the cone a rectangular slot, *m*, into and through which a projection, *n*, from the body portion *p* extends, such projection being provided at its upper part with two ears, *o o*, extending in opposite directions from it and lapping on the body part *p*. The slot, the projection, and its ears constitute a peculiar hinge-connection of the cone to the burner-body. This hinge-connection not only admits of the cone and the chimney-supporter being moved upward and downward on and relatively to the body of the burner, but allows of the said cone and supporter, when raised, being turned upward from over the wick-tube into a position, as shown in Fig. 8, to expose the wick, in order to admit of it being either trimmed or inflamed.

Instead of a single wick-tube to contain the wicks, there may be two separate tubes—one for each wick; or the single tube may be divided by a partition extending across it, the spaces on the opposite sides of the partition being to hold the two wicks. One wick-tube may lap on the other on one side and its two edges. These changes may be made without changing the main character of the invention.

A single wick-tube may be employed with a partition in it, as shown at *z* in the drawings, to go between the wicks and allow one wick to lap on or extend across the edges of the other.

Having thus described my improved burner for kerosene or other combustible oil, I claim therein as follows:

1. The wick-tube provided with two wick-elevators, and also with two wicks therefor, arranged side by side in it and differing in their widths, having the wider lapped upon or extended across the opposite edges of the narrower one, all being substantially as set forth.

2. The combination of the burner and the serpentine air-director, arranged within the air-chamber of such burner, and with respect to its air-inlets and wick-tube, substantially in manner and for the purpose as represented.

3. The cone provided with the vertical slot, arranged in it as described, in combination with the body of the burner having the eared projection to enter and extend through such slot and operate with the cone, as explained, such slot and eared projection constituting a

hinge-connection which not only admits of the cone and chimney-supporter being moved upward and downward on and relatively to the body of the burner, but allows the said cone and supporter, when raised, to be turned upward from over the wick-tube, so as to expose the wick for being either trimmed or inflamed.

4. The wick-tube provided with two wicks differing in their widths, and with a partition between them, and with the wider wick arranged to lap on the partition or the edges of the other wick.

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Witnesses:

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