

E. H. Green,

Lamp.

No. 49,752,

Patented Sep. 5, 1865

Fig. 1.

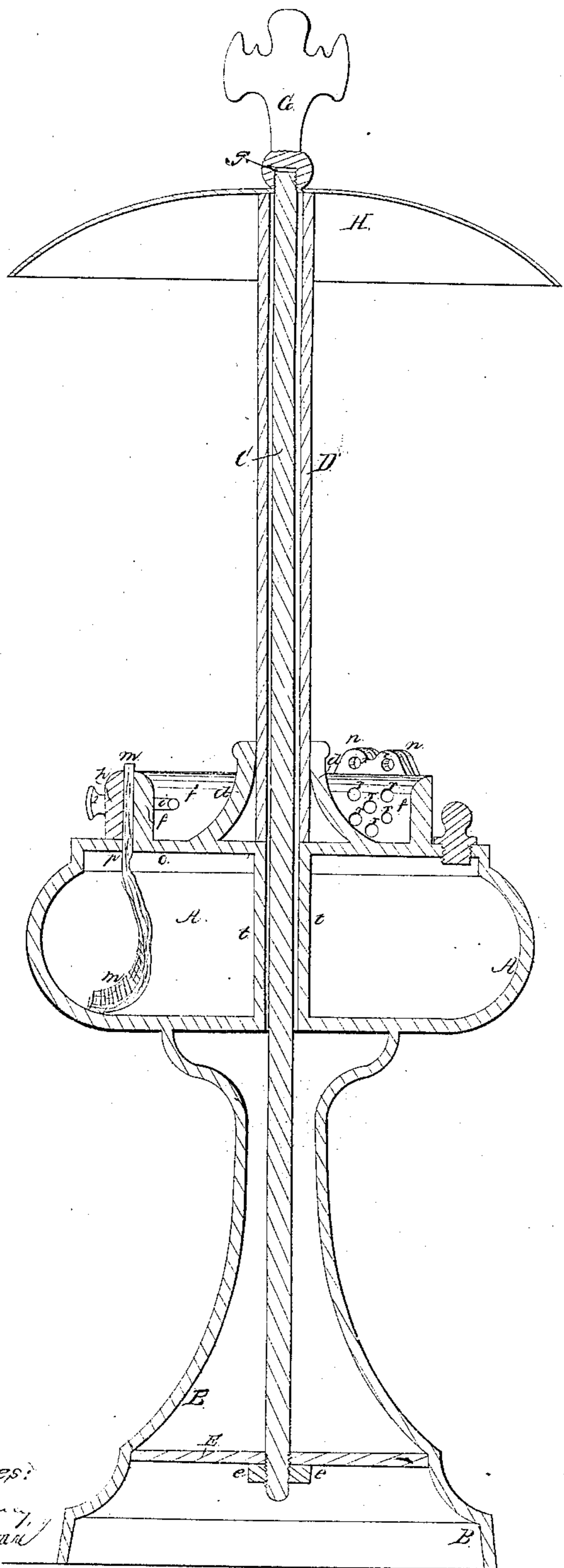


Fig. 2.

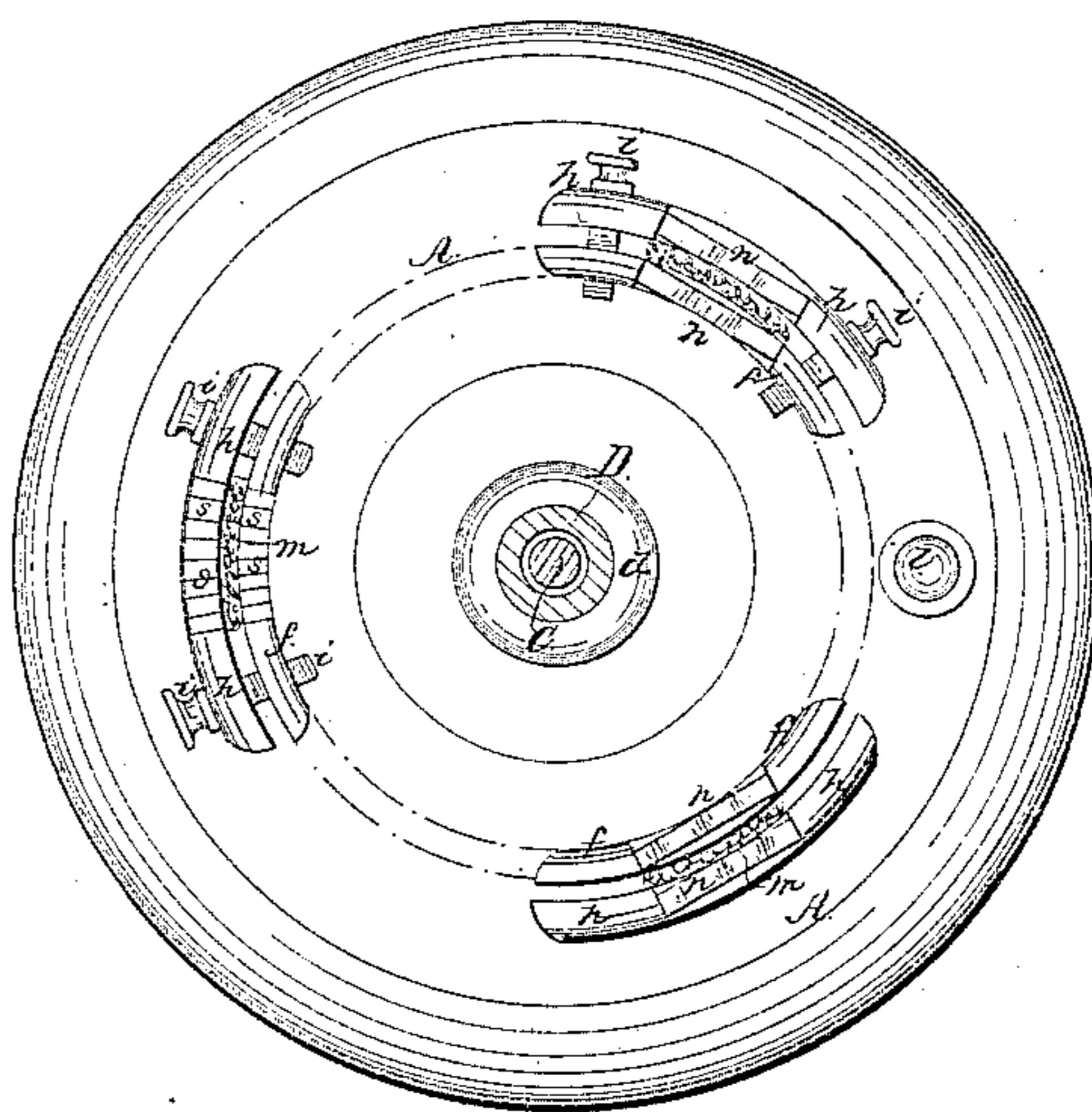
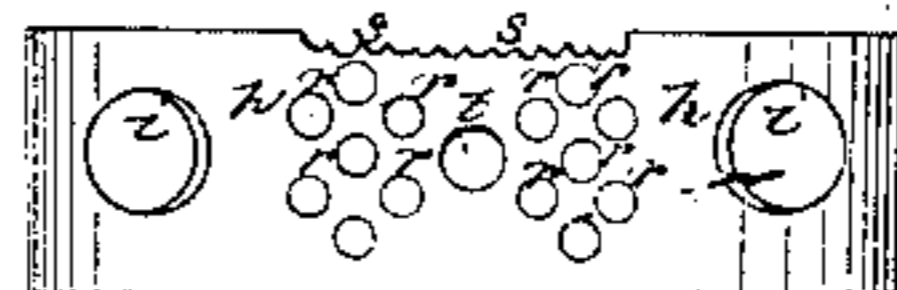


Fig. 3.



Witnesses:

*S. H. Green,
C. T. Brown*

Inventor:

*E. H. Green,
By his atty.,
J. S. Brown.*

UNITED STATES PATENT OFFICE.

ELI H. GREEN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. 49,752, dated September 5, 1865.

To all whom it may concern:

Be it known that I, ELI H. GREEN, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and Improved Lamp; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a central vertical section of the lamp; Fig. 2, a plan of the body thereof; Fig. 3, a side view of a part detached.

Like letters designate corresponding parts in all of the figures.

My lamp is intended for general use, either for burning lard and common oils or coal-oil. It is also intended to be unusually strong and durable, so that it may be used even roughly or carelessly without danger, rendering it peculiarly suitable for outdoor use—around railroads and shops, for instance. No chimney is used with the lamp, even in burning petroleum.

For the cheapest, strongest, and most durable lamp I make the body A and base or standard B of cast-iron, each, or even both, being cast in one piece, as shown in the drawings. It can be finished in any style by bronzing, japanning, &c. The body A is made unusually low from top to bottom, and the capacity is made sufficient by making it broad from side to side, as seen in Fig. 1. In this way I can use a very short wick, and I do not have to raise the oil far by capillary action. It also enables me to burn lard and other solid fats by locating the burner closely thereto.

In carrying out my full purpose, to make a lamp a very convenient portable one, I employ a projecting rod or tube, D, extending centrally upward from the lamp-body A several inches, as shown in Fig. 1, and I generally terminate this with a handle or equivalent holder, G, by which the lamp may be carried in the manner of a lantern. And in order to protect the hand in carrying, and also to prevent any smoke, which any lamp is liable occasionally to make, from soiling the ceiling of the room, I also make use of a concave shield, H, situated at the top of the rod or tube D, and of sufficient diameter to fully cover the lamp burner or burners below, substantially as represented. The handle G is generally made in the form of a nut, to secure the rod, cap, or shield

H upon the rod or tube D. This tube D fits at its lower end down into a socket, *d*, on the top of the lamp-body; and there is a central tube, *t*, in the lamp-body, forming a vertical aperture through the same continuous with the tube D and the hollow base B of the lamp; then a rod, C, extends down through the tubes D and *t* and the hollow base B, and through a plate or bar, F, therein, below which a nut, *e*, and screw-thread on the rod join all of the said parts of the lamp securely together, substantially as shown.

The top *a* of the lamp-body A is flat and solid, generally of one piece with the rest of body. The oil is introduced through a hole in the top, closed by a screw-stopper, *l*.

The burner or burners (there being three shown in the drawings) I construct as follows: The wick-apertures *p*, Fig. 1, are simple slots of the proper size and shape made in the top *a* of the lamp-body. On each side of the wick-slot a burner-lip is situated, of which one—say the inner one, *f*—may be cast or attached immovably on the top *a*, and the other one, *h*, be adjustable toward or from the fixed lip by means of adjusting-screws *i i* or their equivalents. For cheap and simple lamps both lips may be fixed and the adjusting-screws be dispensed with. These lips do not touch each other; but there are open spaces at the ends, and the wicks come up between them. Where there are several burners the stationary lips may be a continuous flange on the top of the lamp, as indicated in Fig. 1, and by black and red lines in Fig. 2; or they may be separate and distinct, as indicated by black lines only in Fig. 2. They are made of metal and pretty thick, so as to retain the heat of the burner and keep up the temperature of the flame. An aperture, *r*, Fig. 3, through one of the lips serves to introduce a pointed instrument for adjusting the wick. Thus every part is made simple and cheap. I also add numerous other perforations *r r*, as seen in the same figure, to admit air to the wick for supplying the flame, generally through both lips.

In addition to the perforations, or sometimes even as a substitute for them, I make transverse notches *s s*, Figs. 2 and 3, in the upper edges of the burner-lips, for admitting more air below the flame against the wick, the metal

between the notches keeping up the temperature, and thus raising the flame higher above the burner and affording room for a freer supply of air to support the combustion. This construction enables me to burn even petroleum without a chimney. The air is also admitted between the burner-lips at their ends or side edges.

Appendages of other forms may be applied to the burner, as shown at *n n*, Figs. 1 and 2; but generally they are not necessary nor desirable.

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

1. The mode of constructing the lamp-body A, base B, and projecting rod or tube D, sub-

stantially as and for the purposes herein specified.

2. The shield H, in combination with the lamp, as described, for the purpose herein set forth.

3. The construction of the burner or burners, substantially as herein specified.

4. The perforations *rr* and notches *ss*, either together or separately, in the burner-lips as a distinct improvement, substantially as and for the purpose herein set forth.

The above specification of my improved lamp signed by me this 18th day of April, 1865.

Witnesses:

ELI H. GREEN.

J. S. BROWN,

J. C. DICKEY.