

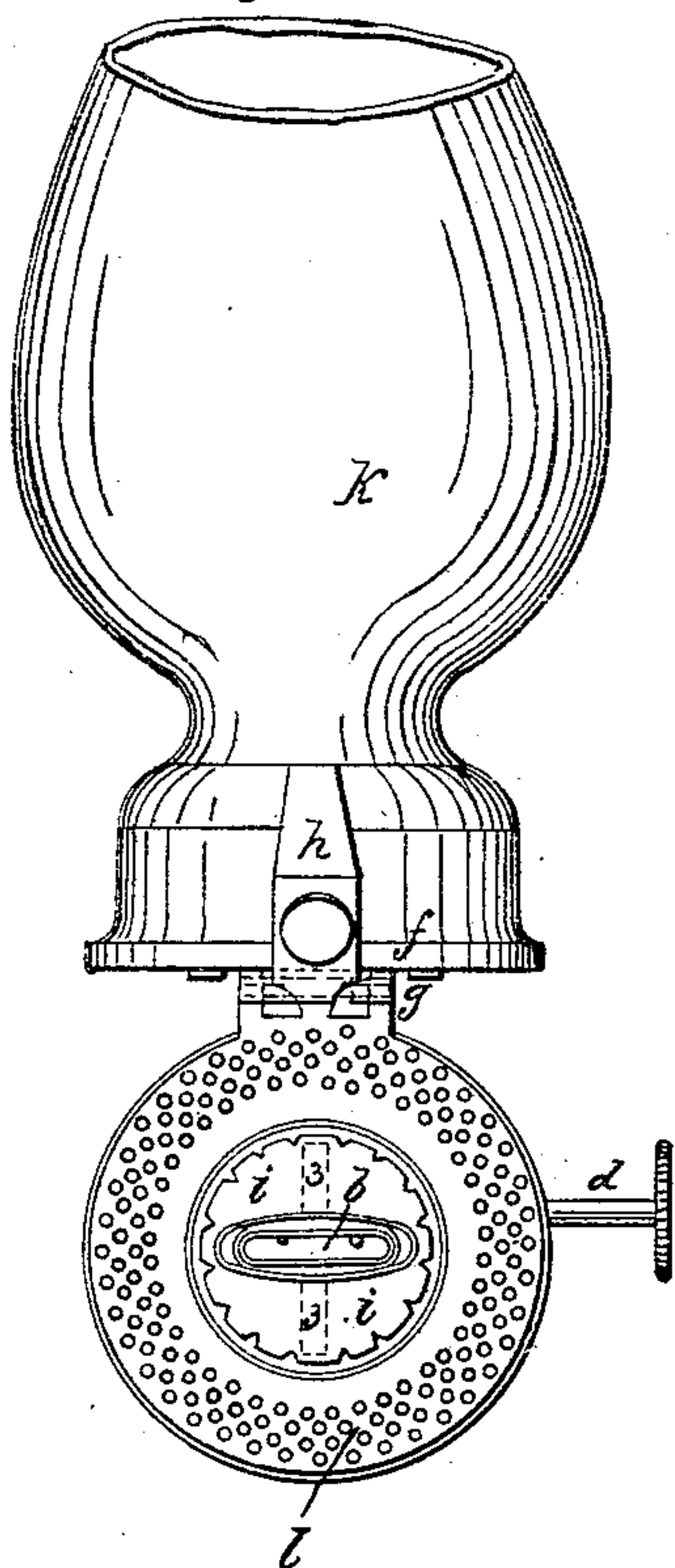
L. J. ATWOOD.

Lamp.

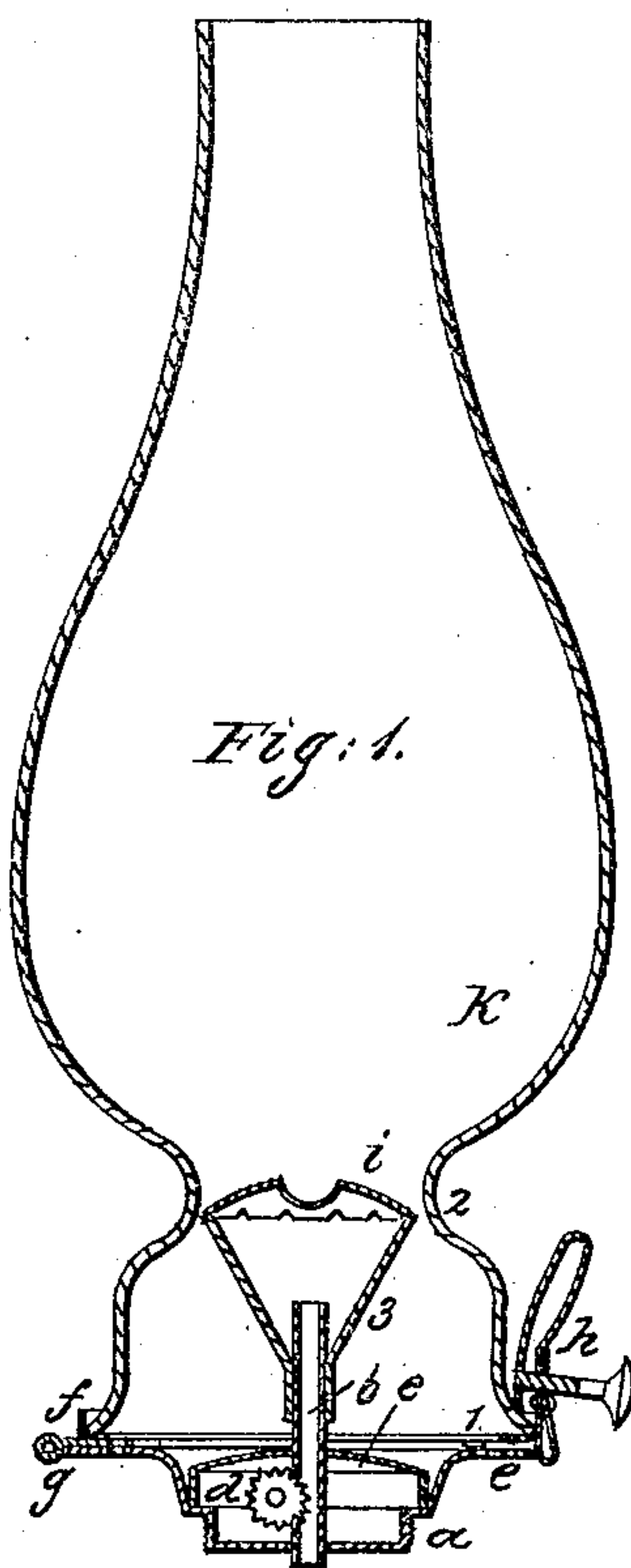
No. 40,226.

Patented Oct. 13, 1863.

*Fig: 2.*



*Fig: 1.*



Witnesses:  
J. H. Bunnell  
H. J. Briggs.

Inventor:  
L. J. Atwood

# UNITED STATES PATENT OFFICE<sup>a</sup>

LEWIS J. ATWOOD, OF WATERBURY, CONNECTICUT.

## IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **40,226**, dated October 13, 1863.

*To all whom it may concern:*

Be it known that I, LEWIS J. ATWOOD, of Waterbury, in the county of New Haven and State of Connecticut, have invented, made, and applied to use a certain new and useful Improvement in Lamps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, makings part of this specification, wherein—

Figure 1 is a vertical section of my lamp-burner, and Fig. 2 is a plan of the burner with the chimney turned back.

Similar marks of reference denote the same parts.

Lamps have heretofore been constructed with a diaphragm in the chimney, and burners have also been made with a deflector over the wick to direct the air to the flame, so that the lamp would not require a chimney.

The nature of my said invention consists in a slide supporter for a draft-plate rising above the wick-tube, in combination with a glass chimney having a contracted neck, so that the said draft-plate may be adjusted to the exact point required for producing the best light, reference being had to the character of oil being used, the exact shape of the chimney, and the amount of draft required. Thus any slight variation in the shape of the chimney can be allowed for by raising or lowering the draft-plate, and as this does not obstruct the light, but allows it to shine through the chimney both above and below the draft-plate, there is no loss of light by a slight change in the position of said draft-plate.

In the drawings, *a* represents the screw of the burner, taking the neck of any ordinary reservoir. *b* is the wick-tube, *c* is the ratchet-cap, and *d* is the wick raiser, all as usual. A perforated flange, *e*, surrounds the burner *a*, and forms an air-distributor. *f* is a ring, hinged at *g* and provided with the spring *h*, to take and retain the flange *e* of the chimney *k*.

2 represents the narrow part or neck of the chimney, and the shape of this chimney may

be varied as desired; but I prefer that shown. At the narrow part 2 of the chimney I introduce the draft-plate *i*, of metal or other material, in the center of which is an opening of the size and shape required for the flame. This draft-plate is to be supported by arms 3 3 from the wick-tube *b*.

The operation of this burner is that the draft-plate *i* and lower part of the chimney direct the draft (passing through the distributor *e*) upon the flame, and produce a perfect combustion. At the same time the light is not in the least obstructed, and the cones and deflectors heretofore employed are dispensed with.

In cases where a second or auxiliary draft is required in the chimney, an annular space may be left around the draft-plate *i*, between that and the glass chimney, or the edge of said draft-plate may be notched as represented. In either case the required amount of air can be admitted to the chimney above this draft-plate by the said opening or openings, to perfect combustion in the upper portions of the flame, which draft is regulated according to the position of said draft-plate, as aforesaid.

I do not claim a chimney fitted so as to serve the purpose of a deflector, and at the same time transmit light both above and below the flame; neither do I claim a diaphragm or draft-plate in the chimney, as these are old; but

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

The supporter and slide grasping the wick-tube and sustaining the draft-plate, in combination with a glass chimney having a contracted neck, so that the adjustment of the draft-plate can be effected in the manner represented, and for the purposes set forth.

In witness whereof I have hereunto set my signature this 6th day of January, 1863.

L. J. ATWOOD.

Witnesses:

JOSEPH A. BUNNELL,  
E. D. GRIGGS.