

(No Model.)

H. E. SHAFFER.
AIR DISTRIBUTER FOR LAMPS.

No. 555,187.

Patented Feb. 25, 1896.

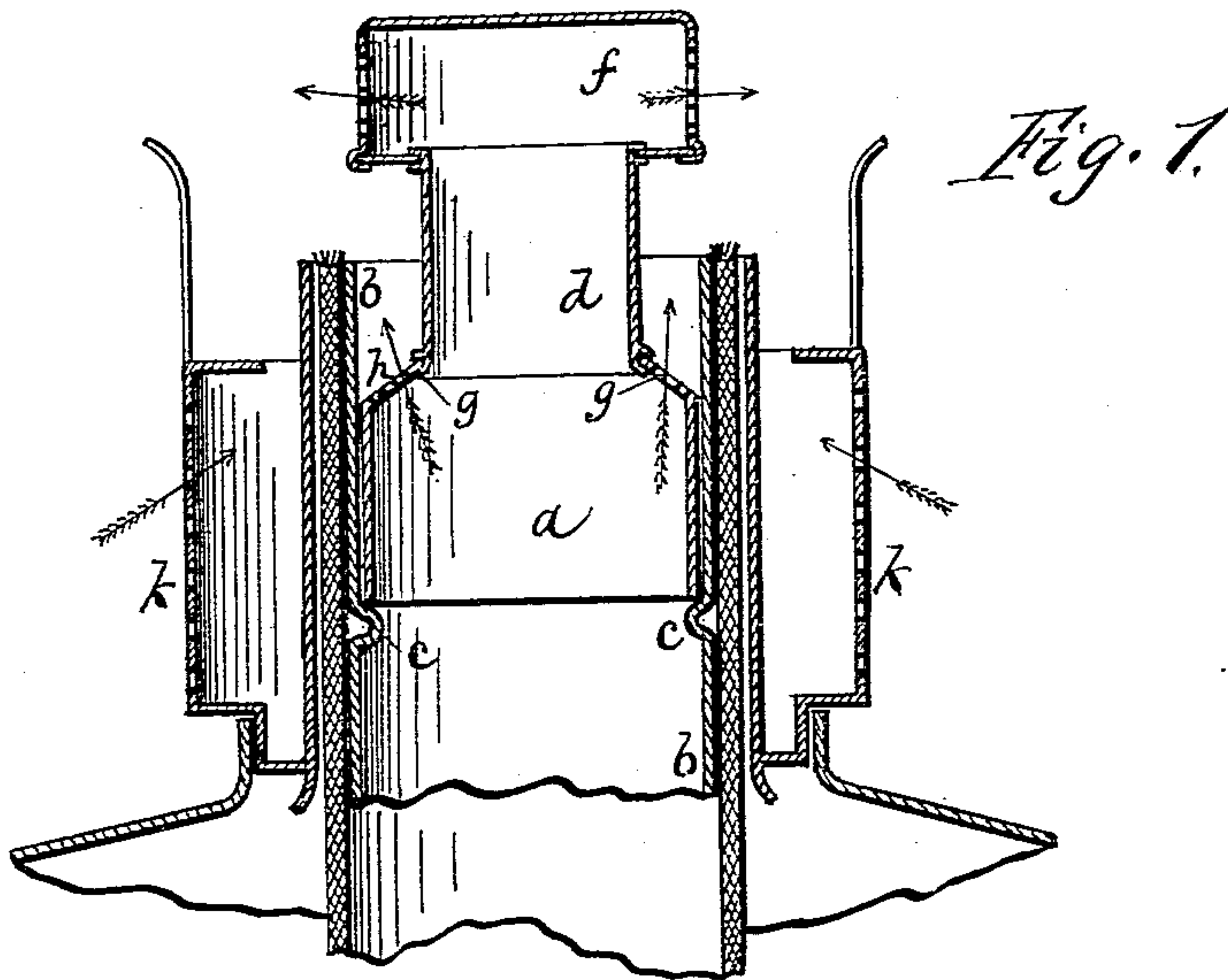


Fig. 2.

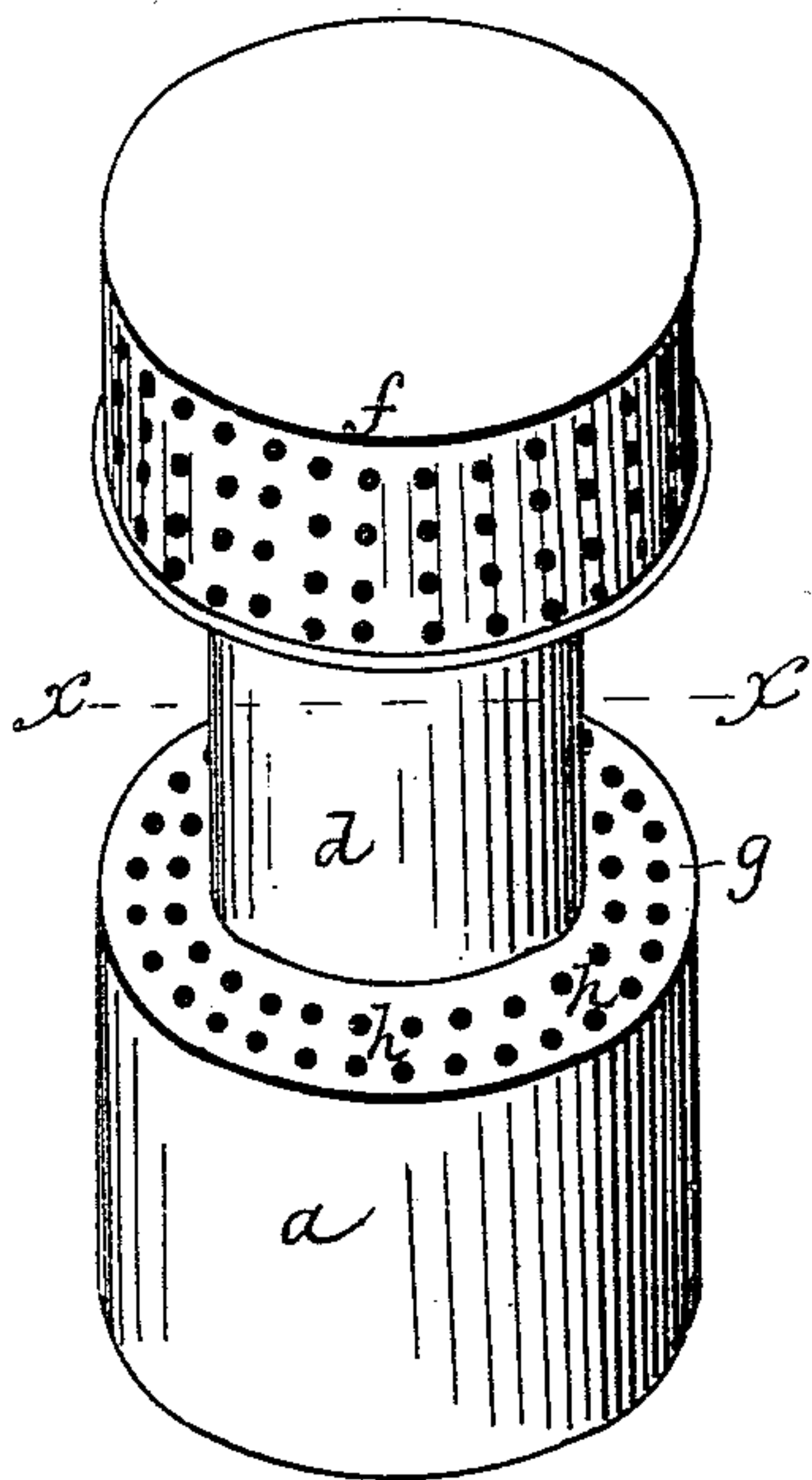
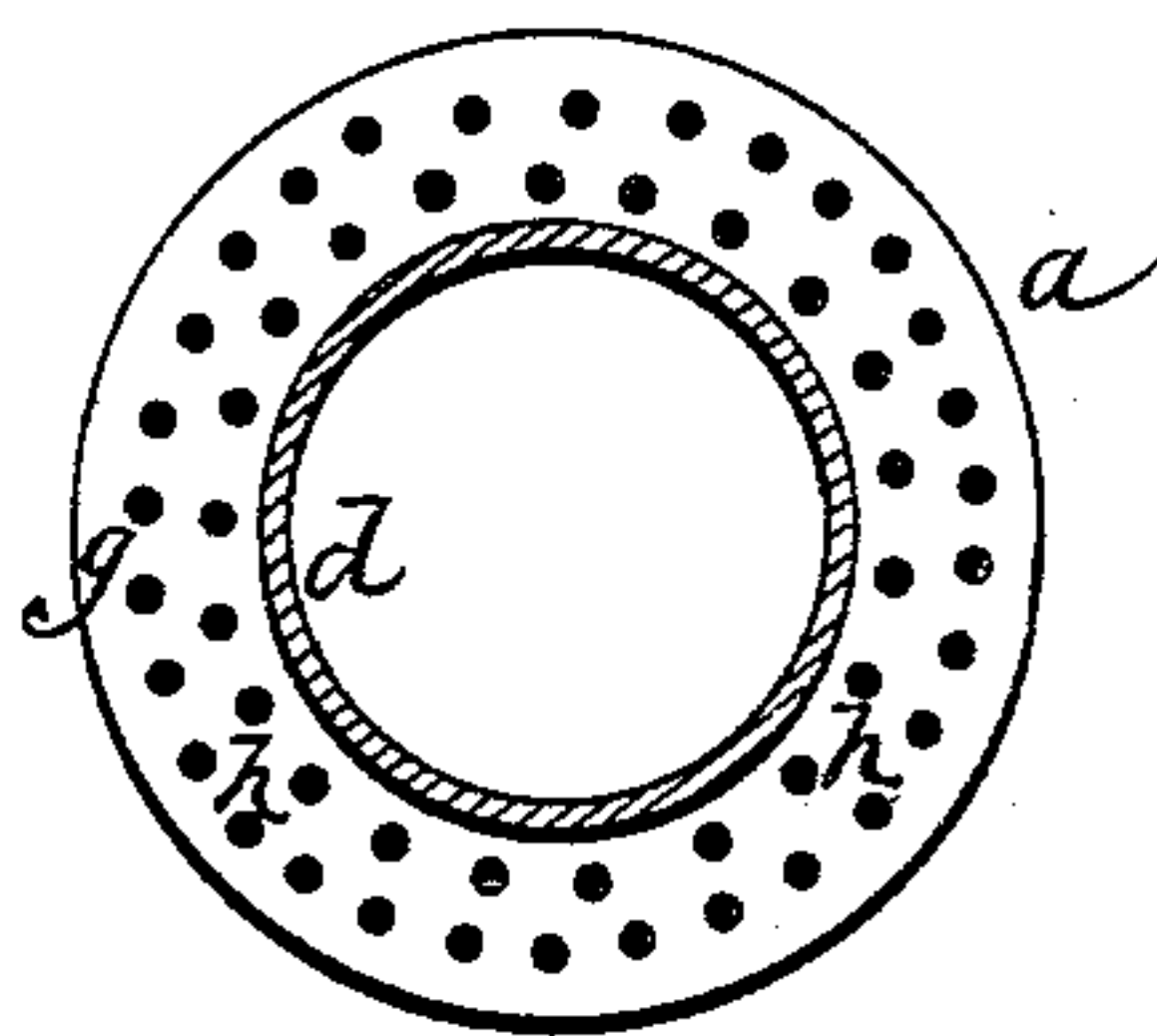


Fig. 3.



Witnesses:

Austin S. Smith
J. A. Culver

Inventor.

Henry E. Shaffer,
per R. F. Osgood,

Attorney.

UNITED STATES PATENT OFFICE.

HENRY E. SHAFFER, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE
SHAFFER LAMP COMPANY, OF SAME PLACE.

AIR-DISTRIBUTER FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 555,187, dated February 25, 1896.

Application filed March 20, 1895. Serial No. 542,531. (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
5 useful Improvement in Air-Distributers for Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

10 My improvement relates to air-distributers for central-draft lamps, and is of that kind where a perforated shell fits into the top of the wick-tube and discharges air laterally into the flame.

15 The invention consists in the construction and arrangement of the device, as hereinafter described and claimed.

In the drawings, Figure 1 is a sectional view of the wick-tube and burner with the air-distributer in place. Fig. 2 is a perspective view of the air-distributer. Fig. 3 is a cross-section of the same in line *x x* of Fig. 2, looking
20 downward.

The air-distributer consists of an imperforate cylindrical base-section *a*, which fits into
25 and fills the wick-tube *b* and rests on an interior bead *c*, an imperforate neck *d*, of smaller diameter, rising from the base, leaving a space between itself and the wick-tube, and a cylindrical perforated head *f*, of larger diameter,
30 above the wick-tube, the perforations being in the sides only, so as to throw the air laterally into the blaze. The bottom of this head is horizontal and at right angles to the axis of the air-distributer. At the top of the base-section *a* is an inclined shoulder *g*, which is
35 also provided with perforations *h h*, which allow a part of the air which passes into the distributer to pass up outside the neck *d* and between it and the interior of the wick-tube
40 and come in contact with the roots of the flame. By passing into the inclosed space of the wick-tube above the perforated shoulder the air is concentrated in a sheet which strikes
45 vertically against the bottom of the head *f*, and is there turned outward horizontally to impinge at the bottom of the flame. Air also passes through perforations in the sides of the burner *k* to feed the outside of the flame.

50 By the construction above described air is centered on the flame from three different di-

rections—first, from the outside through the burner; second, directly up through the center of the air-distributer and laterally outward through its hollow perforated head, and, 55 third, upward from the base of the air-distributer through the perforations in its shoulder and outside the neck to the roots of the flame, as described. The perforated shoulder lies some distance below the top of the wick- 60 tube, leaving an annular space in which the air circulates and mixes and is distributed to the flame in a uniform sheet. In addition to this the perforated shoulder *g* serves as an air-breaker to break the force of currents which 65 pass up, produced by sudden motions of the lamp. The base portion, by its extended length, serves to center the distributer and hold it steadily in position.

By making the device in one body, with the 70 sides extending out to the sides of the wick-tube and the interior entirely open, the air has free passage upward and is unobstructed in its passage outward through the perforations. That portion which passes through 75 the perforated shoulder *g* by striking the horizontal bottom of the head is carried outward laterally in a distinct current from that which passes up and out through the sides of the perforated head. These two currents strike 80 respectively into the bottom and top of the flame and are more effective than in those cases where the two currents commingle, as the latter have a tendency to neutralize each other. 85

Having described my invention, I do not claim simply an air-distributer consisting of an enlarged base portion, a contracted neck, and a cylindrical head, as shown in my patent of October 10, 1893, No. 506,408; but 90

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

The combination, with the wick-tube of a central-draft lamp, of an air-distributer consisting of an enlarged hollow base provided 95 with a perforated top and resting adjacent to the wick-tube and below the top thereof, an imperforated neck of smaller diameter extending from the base to a point a little distance above the top of the wick-tube, and an 100 enlarged head at the top of the neck provided with a horizontal closed bottom and with per-

forations in its sides, the whole so arranged
that the air which passes through the perfor-
ated shoulder of the base is directed upward
by the top of the wick-tube, strikes the base
5 of the head, and is deflected outward horizon-
tally in a current distinct from the current
which passes through the perforated sides of
the head, as and for the purpose specified.

In witness whereof I have hereunto signed
my name in the presence of two subscribing 10
witnesses.

HENRY E. SHAFFER.

Witnesses:

R. F. OSGOOD,
W. H. SHAFFER.