

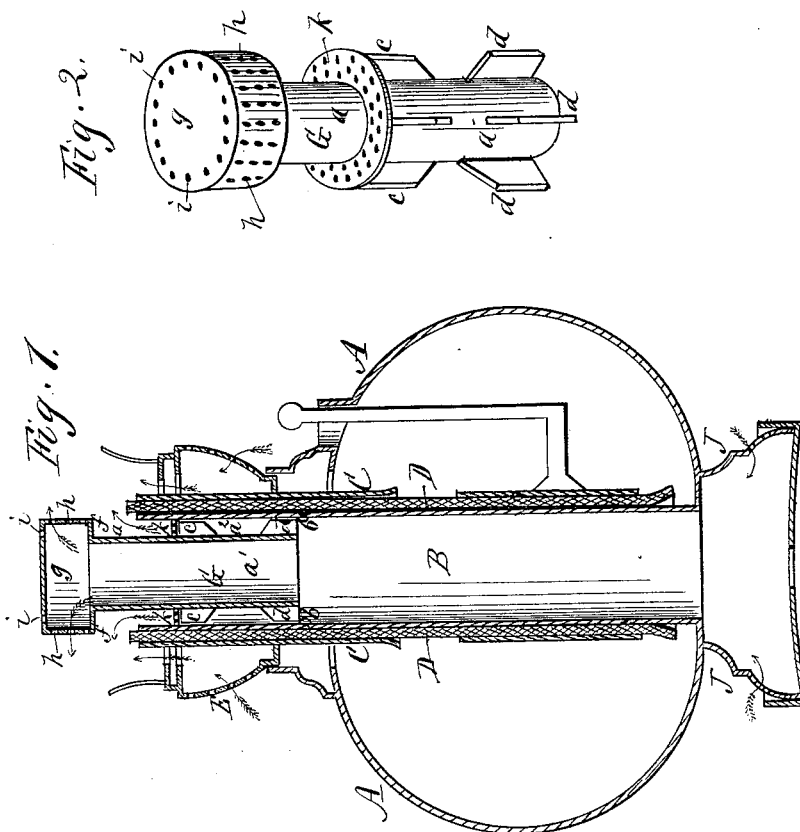
(No Model.)

H. E. SHAFFER.

LAMP.

No. 386,758.

Patented July 24, 1888.



Attest.
Chas. E. Seidenher.
C. H. Plumb.

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

UNITED STATES PATENT OFFICE.

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

LAMP.

SPECIFICATION forming part of Letters Patent No. 386,758, dated July 24, 1888.

Application filed November 25, 1887. Serial No. 256,113. (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; 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 application.

My improvement relates to center-draft lamps; and it consists in the construction and arrangement hereinafter described and claimed.

In the drawings, Figure 1 is a central vertical section of a center-draft lamp provided with my improvement. Fig. 2 is a perspective view of the attachment that forms the subject of my invention.

A designates the lamp, which may be of any desired form.

B is the central draft-tube, which receives the outside air from any desired source, that shown in the drawings being a perforated crown-plate, J, at the bottom.

C is the wick-tube, and D the wick.

E is a perforated crown-plate or dome at the top of the lamp, through which outside air is admitted to come up outside the flame, as usual.

My improvement is as follows:

G is an air-distributor, which forms the subject of my invention. It consists of a tube, *a*, of any desired length, but of a diameter somewhat less than that of the draft-tube B, so that when it is inserted in the draft-tube it forms a center channel, *a'*, and an exterior channel, *a''*, extending up to the flame and carrying two distinct currents of air to the same. A bead, *b*, is struck in from the side of the draft-tube to hold the attachment up to place.

c c and *d d* are two sets of lugs, one set above the other on the outside of the tube, projecting radially and serving as bearings to center the attachment in the draft-tube, at the same time allowing free passage of the air upward. The lower set of lugs rest on top of the bead *b* and support the attachment.

f is a right-angled flange at the top of the

tube, forming a deflector to turn the current of air outward to the roots of the flame as it passes up the channel *a''*.

g is a hollow head over the flange, the same being of cylindrical form and of a diameter equal to that of the center draft-tube, B. The sides of this hollow head have numerous small perforations, *h h*, through which the currents of air that pass up the central passage, *a'*, pass in fine jets horizontally into the flame at a point higher than the roots of the flame. In the top of the head *g* are made one or more sets of perforations, *i i*, a little distance back from the edge, the object of which is to allow air to pass up and supply the space over the top of the chamber and prevent eddies and cross-currents, which would otherwise occur.

k is an annular perforated ring that rests in the draft-tube and on the upper lugs, *c c*, covering the exterior air-channel, *a''*. The currents passing through this ring are cut up and broken before reaching the flame, so that no gusts or puffs can occur, but the blaze will be regular and uniform.

By the arrangement above described two distinct currents of air are fed to the flame, one above the other, the first through the exterior passage, *a''*, which feeds the base of the flame, the other through the center passage, *a'*, which passes up into the hollow head *g*, where it is deflected out in minute jets into the body of the flame. In addition to this is the air that reaches the outside of the flame by the ordinary arrangement.

The novelty in my invention consists, essentially, in the construction of the air-distributor G with an enlarged head at its top, which projects over the wick-tube, forming a shoulder or button at that point, and said head being carried up in cylindrical form with vertical sides, which are perforated from bottom to top to give a wide extent of air-feeding surface. By thus enlarging the head and making it vertical the flame is spread and the air is fed thereto at such a height that the combustion is perfect. By the enlarging of the head the flame is so spread as to present a thin surface,

and this surface is so extended that a large volume of air in minute jets is brought in contact therewith.

I do not claim, simply and broadly, an air-distributor provided with a hollow perforated head that discharges air into the center of the flame; but

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

1. The combination, with the center tube, B, of an Argand lamp, of the air-distributor G, set therein and provided at its top with an enlarged hollow head projecting laterally over the wick-tube, said head provided with vertical sides and perforated over its whole extent, the bottom forming a button to deflect the air

beneath the head, as herein shown and described.

2. In an Argand lamp, the combination, with the center tube, B, of the air-distributor G, constructed with the enlarged perforated cylindrical head projecting over the wick-tube, and the annular perforated ring k, located around the distributor and within the center tube, 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:

ROBERT GOWANS,
T. WATERSTON.