

H. C. HUTCHINSON.

Lamp Burner.

No. 35,157.

Patented May 6, 1862.

Fig. 1.

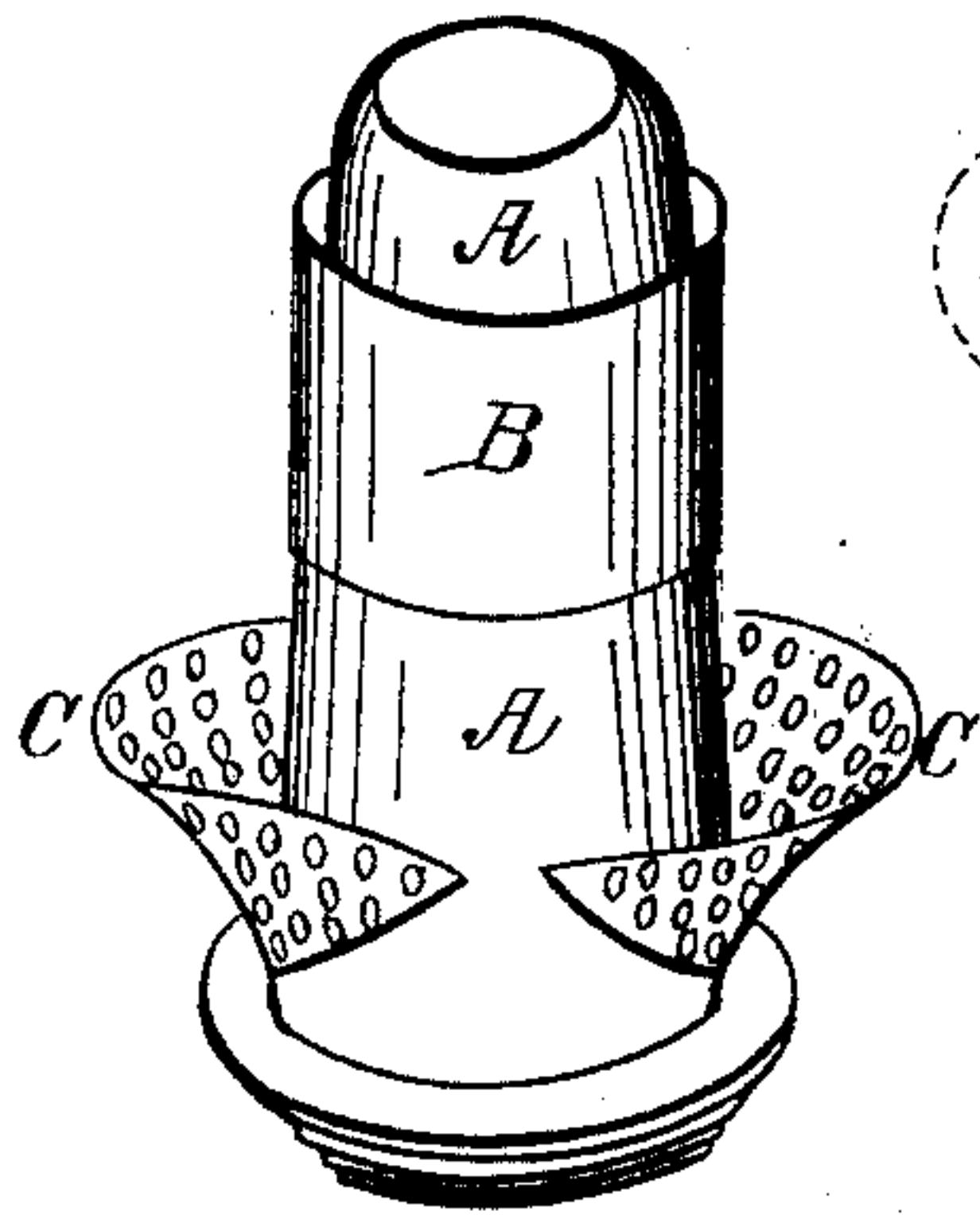


Fig. 3.

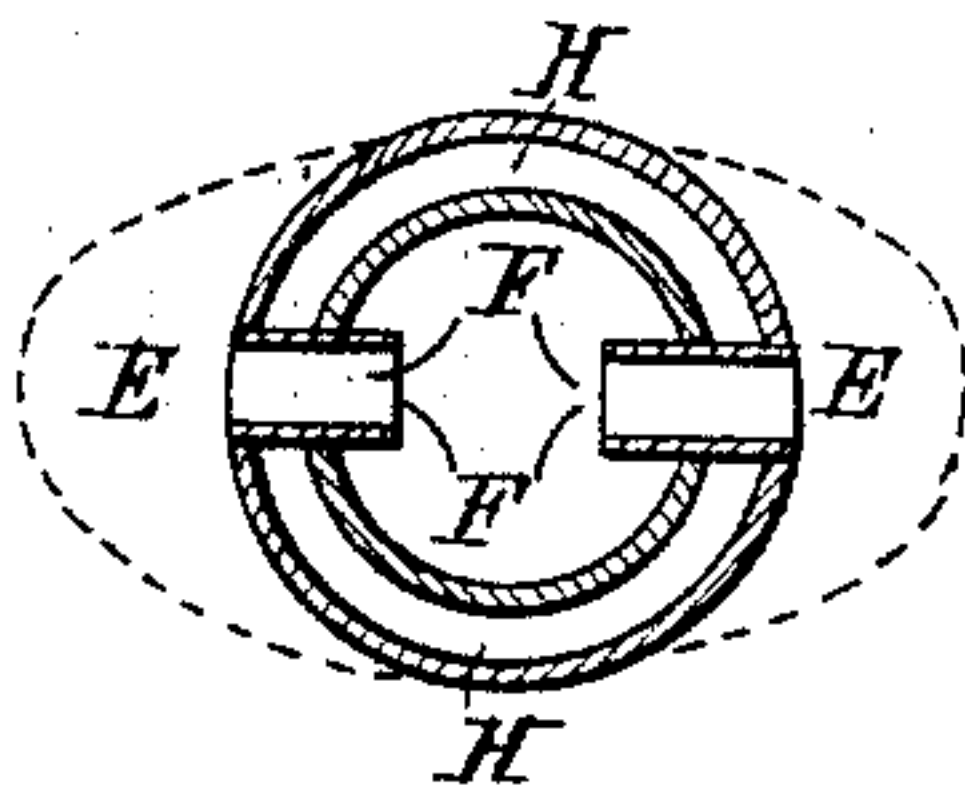
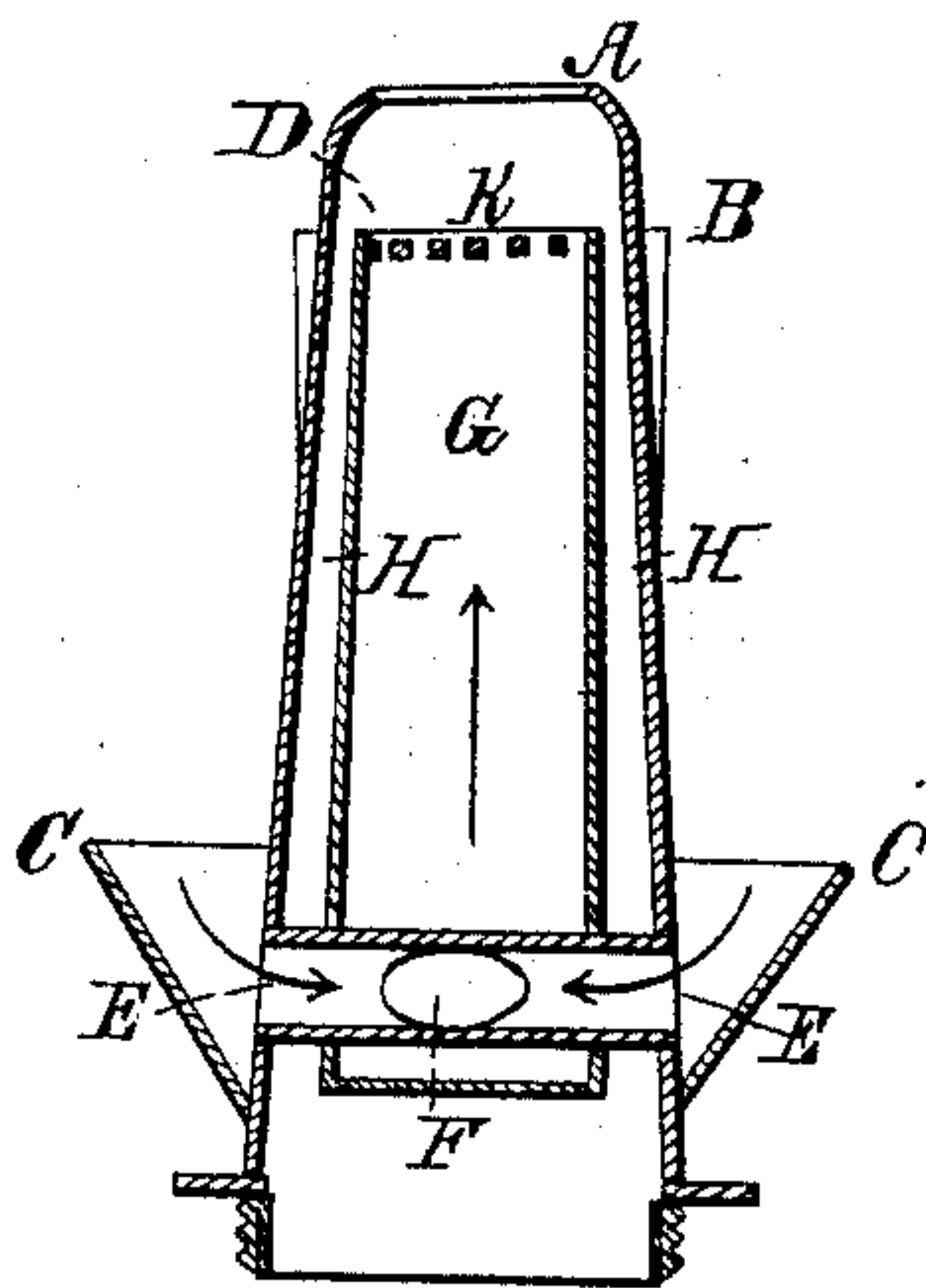


Fig. 2.



Witnesses.

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IMPROVEMENT IN BURNERS FOR LAMPS.

Specification forming part of Letters Patent No. 35,157, dated May 6, 1862.

To all whom it may concern:

Be it known that I, HENRY C. HUTCHINSON, of the village of Cayuga, county of Cayuga, and State of New York, have invented a new kind of Burner for a Lamp; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, a vertical section, and Fig. 3 a transverse section.

Fig. 1: A A represent the outer tube; B, collar; C C, ears around air-passages.

Fig. 2: A is a section of outer tube; B, section of collar; C, section of ear; D, section of inner chamber; E E, air-tube; F, apertures from air-tube to inner chamber; G, space within inner chamber below screen; H H, spaces between outer tube and inner chamber for wick; K, screen.

Fig. 3: E E represent entrances to air-tube; F F, apertures in the sides of air-tube opening to inner chamber; H H, spaces for wick. The dotted curves represent the ears perforated.

The whole burner is designed to stand above the body of the lamp, and may be screwed into any lamp. The inner chamber is made tapering toward the top, so that its circumference at the top is not greater than its circumference at the point where the air-tubes enter, less the space occupied by the air-tubes, giving room sufficient between the air-tubes for the width of wick necessary to surround the top of the inner chamber. The wick is cut in two or more strips, according to the number of air-tubes, which may be as many as desired. The air from without enters the inner chamber through the air-tubes, as shown by the arrows at E E, where it becomes heated, and, rising, creates a draft, which supplies the inner side of the flame with heated air, which is so surrounded by the flame that it cannot escape without imparting a portion or the whole of its oxygen. The object of the ears is to gather the air against the mouths of or into the air-tube when the lamp is lifted upward, giving the effect of a column of cold air overbalancing the column of warm air in the inner chamber so effectually as to keep up a perfect draft

while the lamp is lifted upward or the wind blows downward. The perforations in the ears permit the air from below to pass through and enter the air-passages while the lamp is at rest or moving slowly, while the inclined position of the ears slides the air over the perforations when the lamp is moved rapidly sufficiently to regulate the draft in whatever direction the lamp may be moved. The inner chamber is closed at the bottom. The outer tube is made proportionally larger at the base than the inner chamber, giving an easy passage to the wick.

The whole burner is made of some good heat-conducting metal, and the air begins to heat as soon as it comes in contact with any part of it, increasing in degree until it reaches the flame. The collar is formed by a tube fitting around the outer tube of the burner tight at the lower end of the collar, and at the top standing far enough off to catch the oil that may draw over the top of the burner, which, running down into the narrow space between the collar and the tube, is evaporated by the heat and the gas carried up into the flame by the outside draft.

The object of the collar is to keep the burner and the lamp below dry and free from oil on the outside. It may be fixed or movable, always being used on that part of the burner which is warm enough to evaporate the oil with the aid of the collar.

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

1. A central draft entering above the lamp through lateral air-tubes E E, leading to the inner chamber, G, closed at the bottom and surrounded by the wick at the top.

2. The perforated basin C C, so constructed as to cause a counterpoise air-pressure against the openings of the air-tubes E E when the lamp is suddenly raised.

3. A round or oval hollow wick formed around the central tube of the burner from two flat strips hanging loose in the lamp.

4. The screen or perforated guard K, made in a flat, conical, or convex form across inner chamber.

HENRY C. HUTCHINSON.

Witnesses:

W. P. POLLARD,
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