

H. L. GRAVES.
LAMPS AND LANTERNS.

No. 179,548.

Patented July 4, 1876.

Fig. 1.

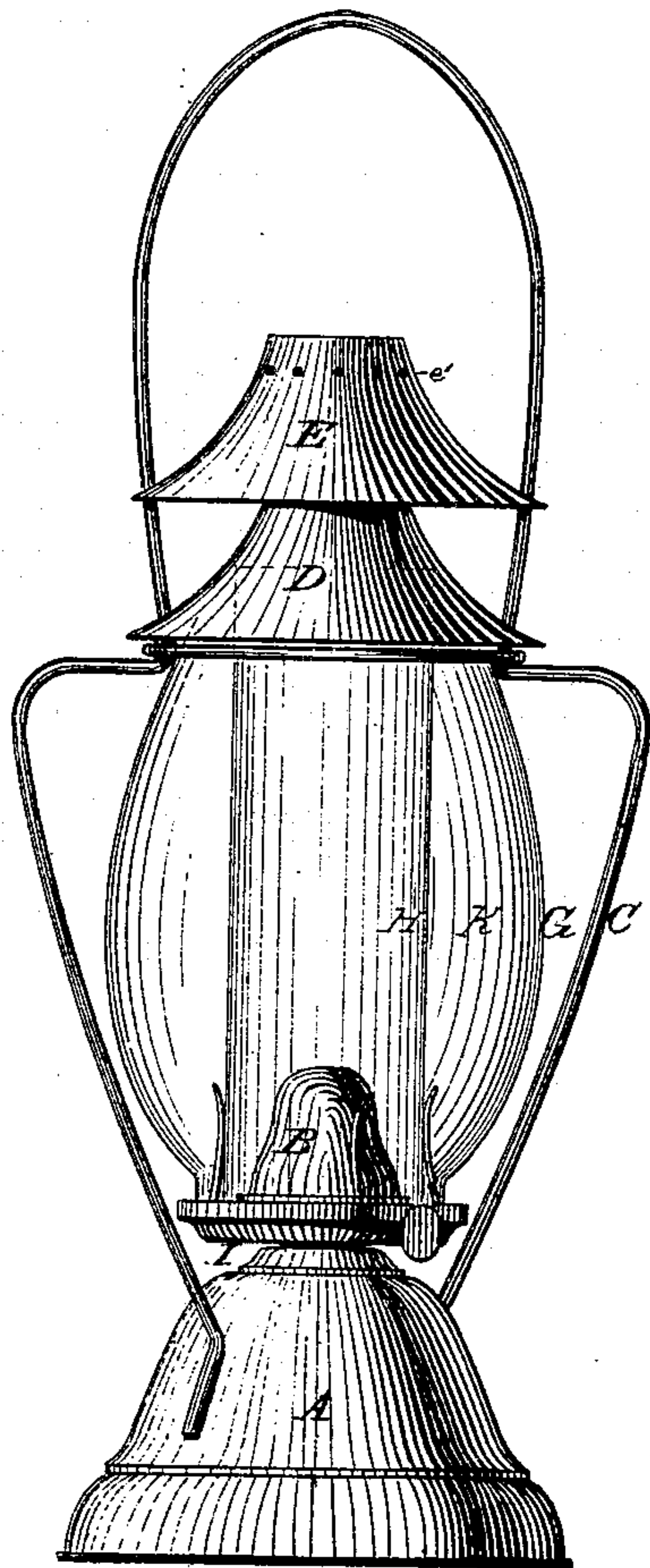
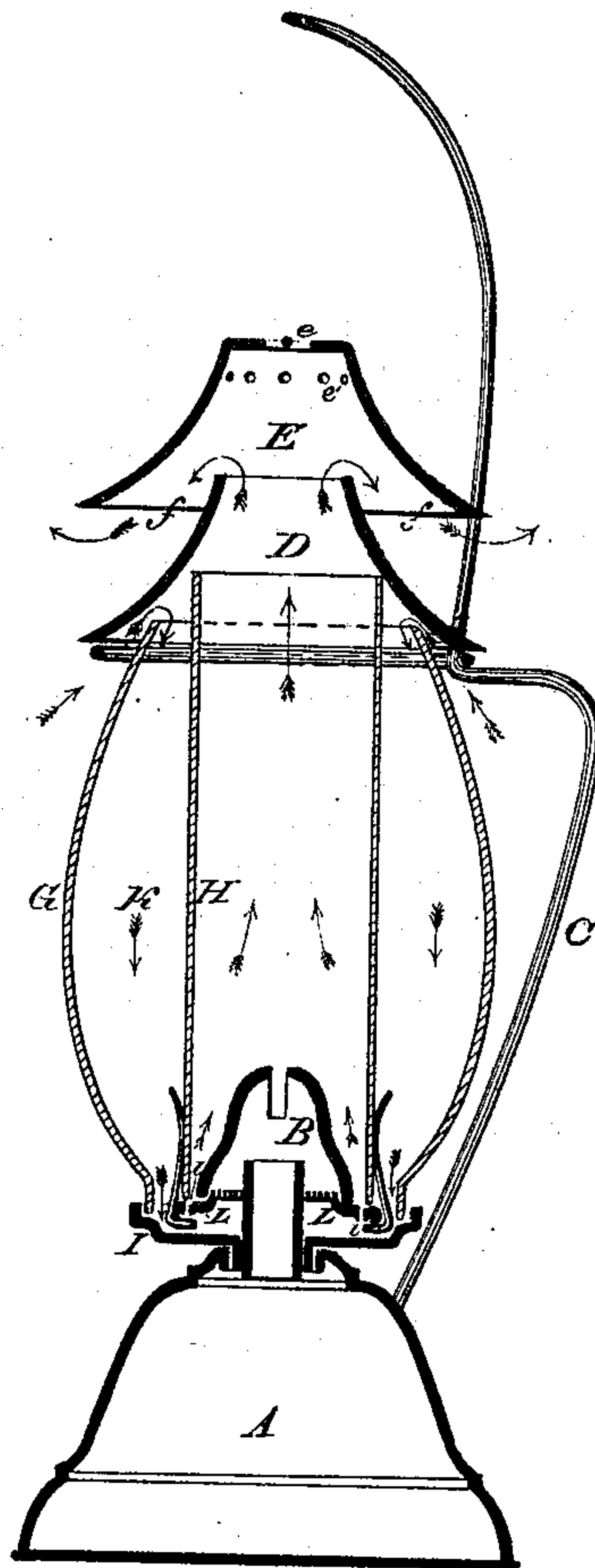


Fig. 2.



Attest:

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UNITED STATES PATENT OFFICE.

HENRY L. GRAVES, OF ALBANY, NEW YORK.

IMPROVEMENT IN LAMPS AND LANTERNS.

Specification forming part of Letters Patent No. **179,548**, dated July 4, 1876; application filed June 6, 1876.

To all whom it may concern:

Be it known that I, H. L. GRAVES, of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Lamps and Lanterns; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation, and Fig. 2 is a vertical section.

Similar letters of reference indicate corresponding parts in both the figures.

This invention relates to certain improvements in lamps or lanterns for in-door and outdoor use; and its object is to provide a lamp or lantern that will not blow out when exposed to the wind or rain, and that will also consume the products of combustion that pass off through the chimney in lamps or lanterns of the ordinary construction.

In the drawing, A is the body or oil-chamber of a lamp, having a burner, B, of any suitable construction. C is a wire bail, forming the handle, and having affixed to its upper end two cone-shaped caps, D and E, one above the other, as shown. The lower cap, D, is open in the top, but the upper cap, E, is partially closed, having a central perforation, *e*, and other perforations, *e'*, surrounding the upper edge of the conical-shaped top. Caps D and E are placed at a suitable distance from each other, so as to form an air-space, denoted by *f*, between the two. G and H are the chimneys, one of which, G, passes from the under side of the lower cap D down to the base-plate I of the burner B. The other chimney, H, is inserted within G, so as to leave an air-chamber, K, between the two. This inner chimney does not reach all the way down to the base-plate I, but only to the perforated burner-plate L, so that the air, coming down through the air-chamber K, may enter through the perforations *l* in plate L into the inner chimney H, and supply the air necessary for combustion. The inner chimney H reaches up above the outer chimney G into the top of the cap D, as shown in the drawing. Care should be taken to so adjust the outer chimney upon the base-plate I that no air can enter between this plate and the lower end of the chimney, so that the air for feeding the

flame will be compelled to enter from the top through the air-chamber K.

From the foregoing description the operation of my improved lamp or lantern will be readily understood. The air enters from the top, passes down, as indicated by the arrows, through the air-chamber K, then through the perforations *l* up into the burner B and flame; the products of combustion passing up and out through the top of cap D, which will throw any smoke or smell back into the air-chamber K, where it will go down with the fresh air, and be consumed by the flame, thereby avoiding the disagreeable odor usually incident to the use of lamps of the ordinary construction, in which kerosene or any kind of oil is burned.

My improvement also permits lamps or lanterns of this construction to be used out of doors when the wind is blowing, without danger of being put out, while the outer chimney will effectually protect the inner chimney from coming in contact with rain or cold, thereby preventing its breaking by being too suddenly cooled off while heated.

It is obvious that this improvement is applicable alike to lamps and lanterns; and also that instead of the chimneys shown in the drawing elliptical chimneys or globes may be used with the same result.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a lamp or lantern the combination of the body or oil-reservoir A, having frame or bail C, with an upper closed conical cap, E, having perforations *e* and *e'*, and an inner cap, D, so arranged in relation to the former as to leave an open air-space, *f*, between the two, substantially as and for the purpose hereinbefore set forth.

2. In a lamp or lantern the combination of the double chimneys G and H, having the air-space K, with the base-plate I, burner-plate L, open cap D, and closed cap E, the latter so arranged in relation to the former as to leave an open air-space, *f*, between the two, substantially as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

Witnesses: HENRY L. GRAVES.
JULES B. KAMPE,
T. A. COYNE.