# C. W. CAHOON.

## Lamp.

No. 40,241. Patented Oct. 13, 1863.

Fig. 1.

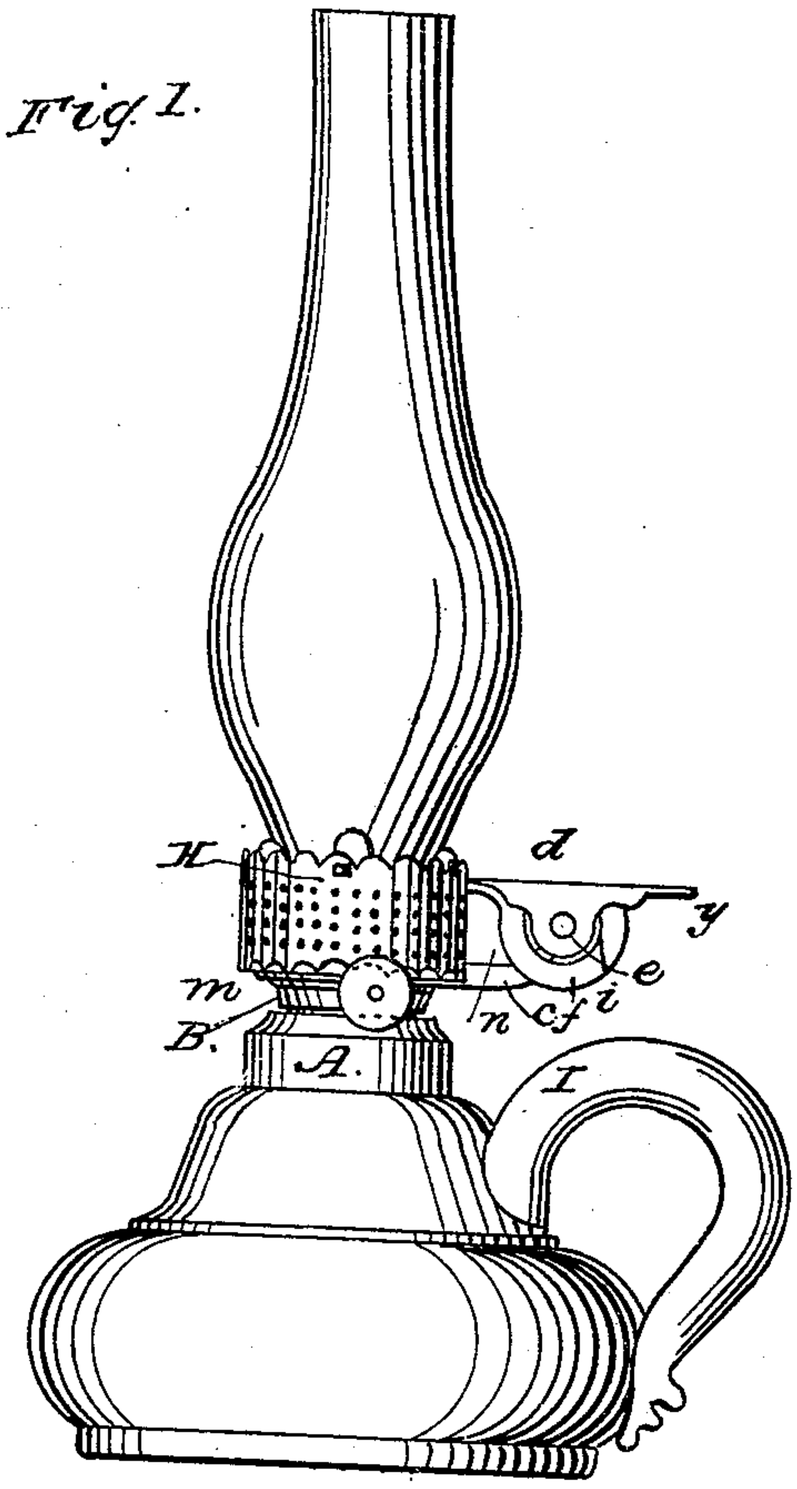



Fig. 2

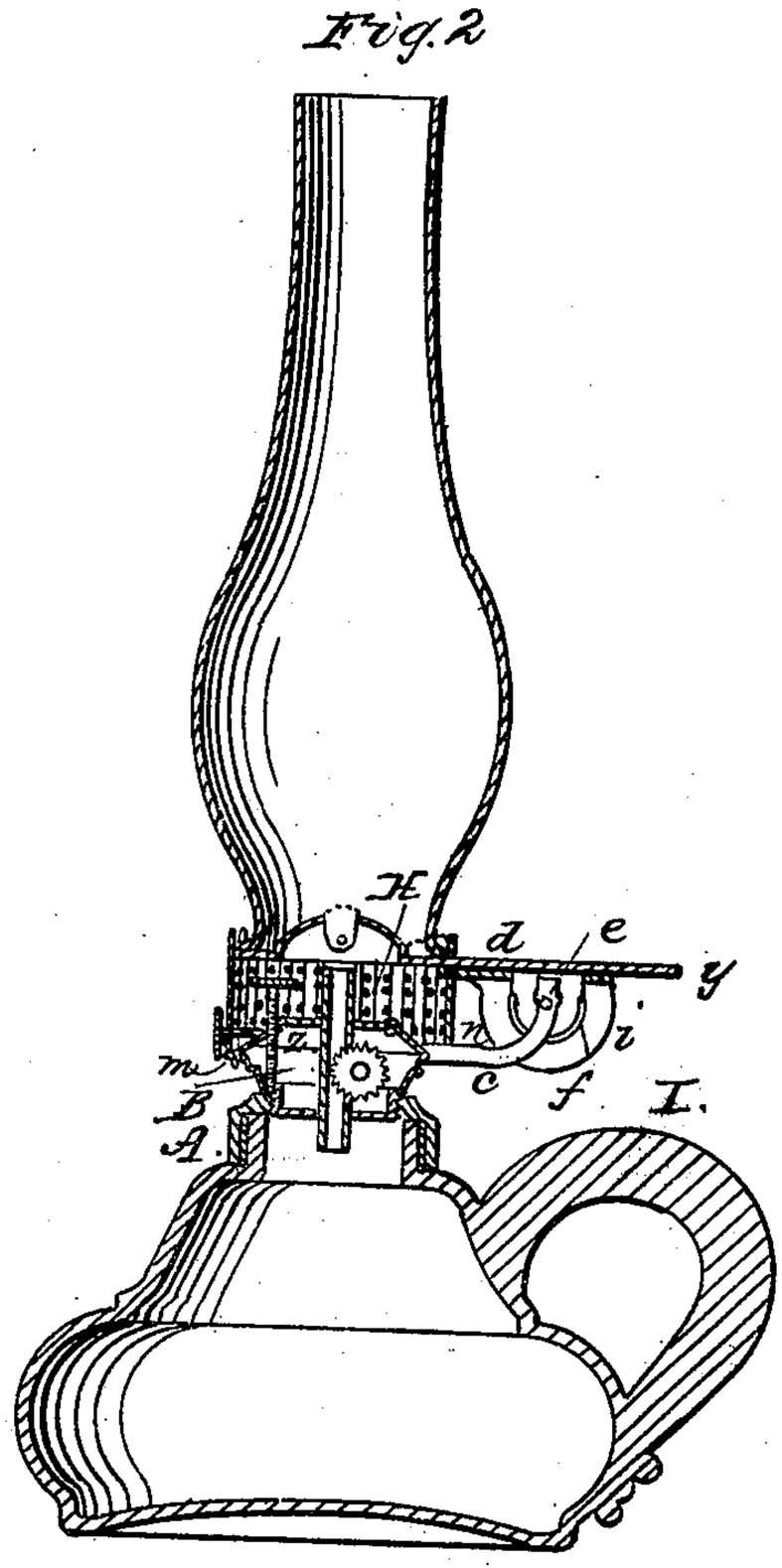



Fig. 3

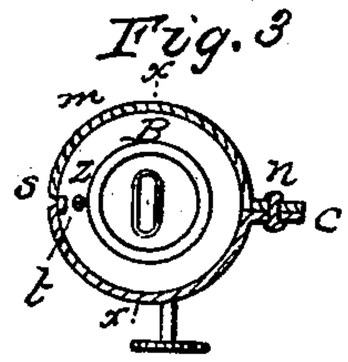
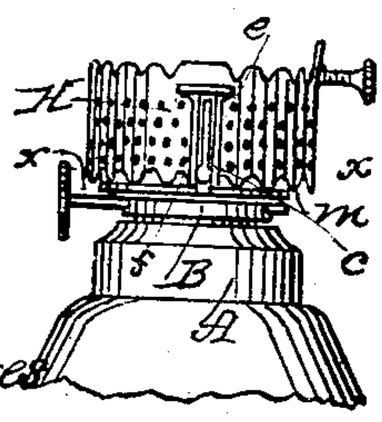



Fig. 4




Witnesses
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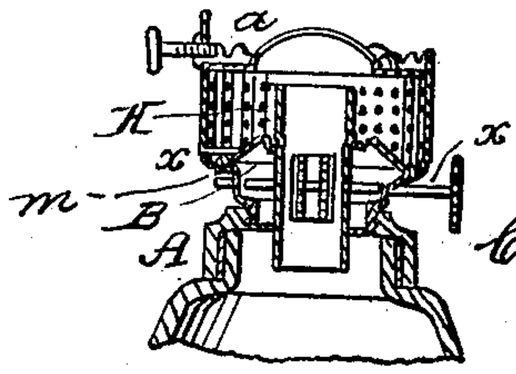
Fig. 5

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# UNITED STATES PATENT OFFICE.

CHARLES W. CAHOON, OF PORTLAND, MAINE.

## IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **40,241**, dated October 13, 1863.

*To all whom it may concern:*

Be it known that I, CHARLES W. CAHOON, of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Lamps; and I do hereby declare that the following is a full, clear, and exact description of my said invention, reference being had to the accompanying drawings, in which—

Figure 1 represents a side elevation of a lamp embodying my improvements. Fig. 2 represents a vertical section of the same through the center of the handle. Fig. 3 represents a top view of the burner, with the clamp-ring in section. Fig. 4 represents an elevation of a portion of the lamp, looking over the handle; and Fig. 5 represents a vertical section of a part of the lamp following the line *x x* of Fig. 3.

My present invention consists of certain improvements in lamps, which are represented in the accompanying drawings as applied to a lamp with a vibratable chimney-holder.

The object of the first part of my invention is to enable the support of the chimney-holder, although constructed separately from the burner and clamped upon it, to be rigidly secured thereto, so that it will not turn thereon, and consists in combining the two by means of a tooth upon one and a recess in the other, in addition to the clamp-fastening.

The second part of my invention consists in a perforated corrugated air-chamber, which is light, ornamental, and rigid, and which takes the place of the non-perforated corrugated air-screen and smooth perforated air-chamber previously used in such lamps, a single device thus taking the place of the two devices previously used.

The object of the third part of my invention is to prevent the chimney-holder, when secured to the burner, from being bent laterally in unscrewing the burner from the collar of the lamp and screwing it fast again, and consists in combining the chimney-holder with two tongues—one on each side of the burner—which bear laterally against the burner or some piece secured thereto, and prevent the chimney-holder from being bent out of place by unscrewing and screwing in the burner.

The fourth part of my invention is important in a lamp in which the support of the chimney-holder is screwed to the burner, and its object is to limit the distance to which the burner can be screwed into the lamp-collar, so that the chimney-holder may always be returned to the same place upon the lamp by screwing the burner into its collar. This part of my invention consists in combining the burner of the lamp with a screw-stop, or its equivalent, which acts upon the collar of the lamp and limits the distance to which the burner can be screwed into the collar.

The lamp represented in the accompanying drawings has a collar, A, into which the burner B is screwed, and the burner has the support *c* of the chimney-holder *d* clamped upon it. The chimney-holder in this example is vibratable upon a pivot, *e;* and in order to prevent it from moving while the lamp is carried about a curved friction-spring, *f*, is secured to it. This friction-spring consists of a ring-formed plate of metal, doubled up so that a half-circular plate embraces each side of the support *c* of the chimney-holder, and, bearing against it by the spring of the metal, furnishes sufficient friction to prevent the too free movement of the chimney-holder. The two sides of this spring are pinched closely together at a short distance, *i*, from the bend, so as to form stops which prevent the chimney from being vibrated so far as to turn its upper end downward. The support of the chimney-holder has a ring-base, *m*, which is clamped upon the rim of the burner B by a rivet, *n*, and in order that it may not turn upon the burner when an effort is made to unscrew the latter from its collar, the two are further secured by a tooth, *s*, which enters into a recess, *t*, made in the rim of the burner. This tooth is readily formed in the manner represented in the drawings, by indenting the exterior of the ring-clamp, and thus causing a corresponding protuberance or tooth upon its interior. The air-chamber H of the lamp is made fast to the chimney-holder and is corrugated, so that it is very rigid, although of but light weight. It is also perforated, to permit the entrance of air, and thus takes the place of the solid corrugated air-screen and plain perforated air chamber found in previous lamps. As the air-chamber is screwed to the chimney-holder, the application of the hand to the former for the purpose of unscrewing the burner from its collar tends to bend the chimney-holder laterally from its central position

over the wick-tube. In order to prevent such lateral bending, two tongues, *x x*, at the opposite sides of the lower edge of the air-chamber, are bent inward, so that their points embrace the ring base *m* of the support of the chimney-holder, which is clamped upon and sustained by the rim of the burner; hence, when an effort is made to unscrew the burner or to screw it into place, one of these tongues, bearing against the base *m*, prevents the lateral bending and consequent distortion of the chimney-holder. It is not necessary that these tongues should be bent in far enough to touch the burner or the part against which they are to bear, as the elasticity of the chimney-holder will permit a certain amount of lateral movement without permanent distortion, and when the force is removed the parts will reassume their positions. As these tongues form part of a series which are made around the lower edge of the air-chamber for ornament, the bending of two of them inward to resist the lateral distortion of the chimney-holder, to which the air-chamber is secured, is a very simple and cheap means of producing the required result.

In making lamps in quantities, it is not easy to secure the collars to the lamps in such manner that the chimney-holders of all the lamps will occupy the same positions in reference to the handles; hence, the support of the chimney-holder will not always project over the handle of the lamp (which is the place it should occupy) when the burner is screwed in to the full extent of its screw. I obviate this defect by the application of a stop, which prevents the further turning of the burner after the chimney-holder has arrived over the handle of the lamp (or other position where it is desirable to have it) during the last turn of the screw. This stop, in the present case, is made adjustable, and consists of a screw, *z*, which is screwed through the burner so that its projecting lower end can bear against the upper surface of the collar A of the lamp. The mode of adjusting this stop is as follows: When the burner is first applied to the collar of the lamp, it is screwed down to its full extent. It is then screwed back a fraction of a revolution, sufficient to bring the support *c* of the chimney-holder over the handle I. Then the screw stop *z* is screwed down until its lower end bears upon the collar A. The end of the screw thus limits the distance to which the burner can be screwed into the collar, and stops it always with the chimney-holder thumb-plate *y* over the handle of the lamp in a convenient position to be moved. Such a stop may be used in lamps without chimney-holders, where, for some other reason, it may be desirable to stop the turning of the burner at a certain point.

The parts of the lamp which have not been described are sufficiently represented in the drawings to show their connection with the parts to which my invention pertains.

Having thus described a lamp embodying my improvements, what I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the clamp-support of the chimney-holder with the burner by means of a tooth and recess to prevent the support from turning upon the burner, substantially as set forth.

2. A perforated corrugated air-chamber for a lamp, constructed substantially as set forth.

3. The combination of the chimney-holder with two tongues to bear against the opposite sides of the burner or some part secured thereto, and prevent the bending of the chimney-holder laterally by the unscrewing or screwing in of the burner, substantially as set forth.

4. The combination of the burner, which is connected with the collar of the lamp by a screw-thread, with a stop, which limits the distance to which the burner can be screwed into the collar of the lamp, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

CHAS. W. CAHOON.

Witnesses:
J. B. CAHOON,
M. G. CAHOON.