

100578

ARNOLD WITHMAR.

PATENTED MAR 8 1870

LANTERN.

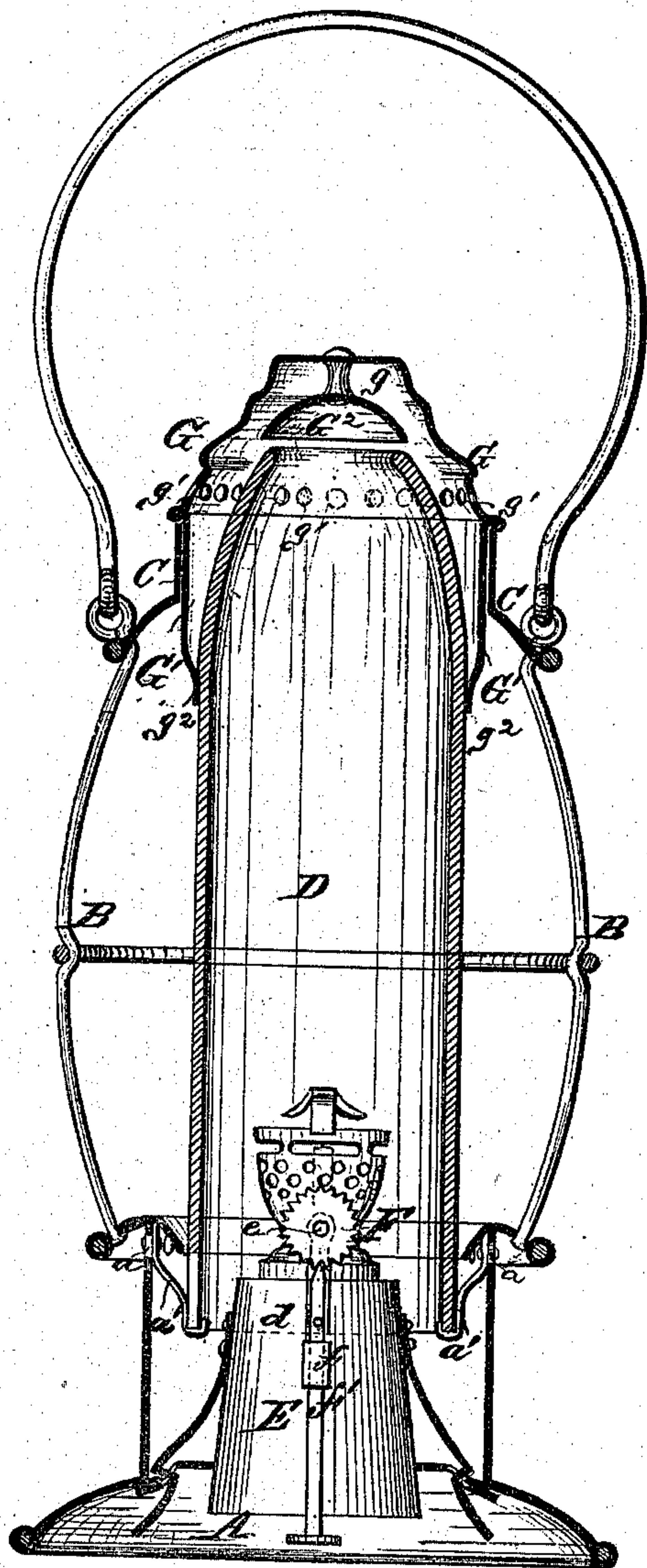


Figure 1

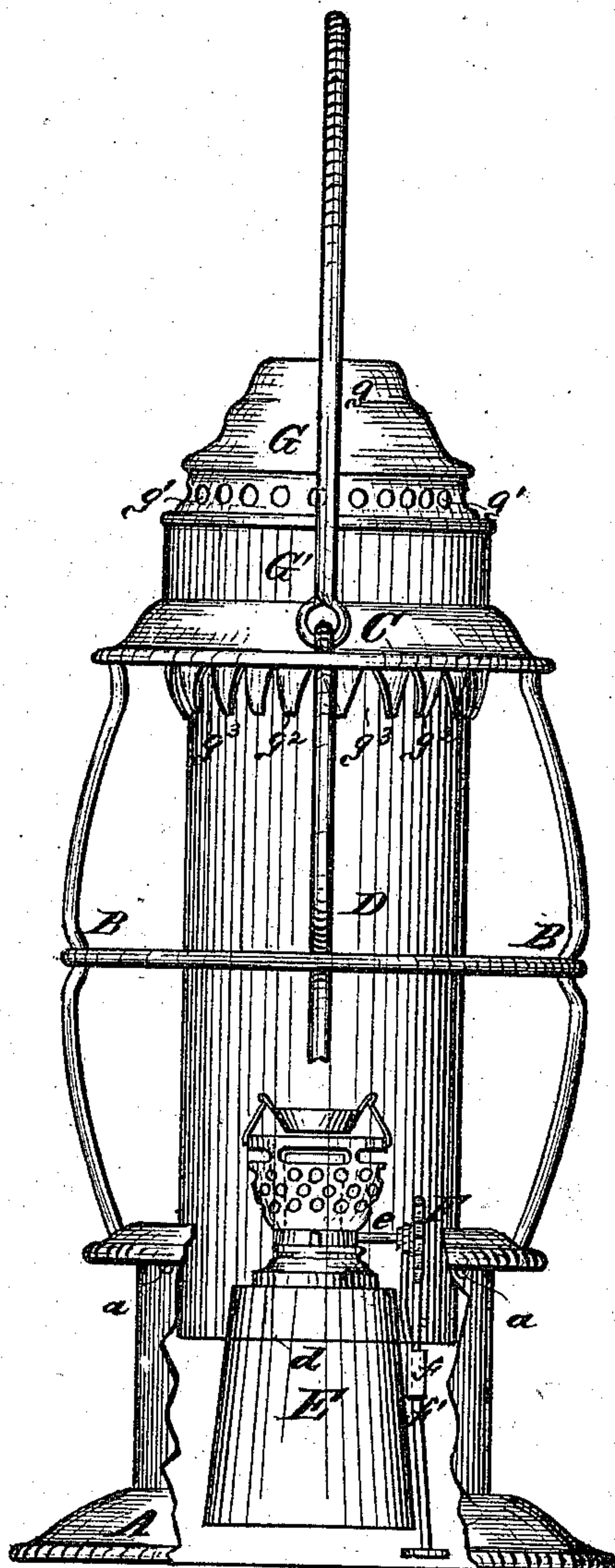


Figure 2

Witnesses:

William W. Herchel

Robert Burns

Inventor:

Arnold Withmar
by his attys
Herchel & Co

United States Patent Office.

ARNOLD WITHMAR, OF ST. LOUIS, MISSOURI.

Letters Patent No. 100,578, dated March 8, 1870.

IMPROVEMENT IN LANTERNS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ARNOLD WITHMAR, of St. Louis, in the county of St. Louis, and State of Missouri, have invented a new and useful Improvement in Lanterns; and I do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

In my improved lantern it is my purpose to avoid the use of a "globe," such as is usually now employed to shield the flame, substituting therefor an ordinary so-called coal-oil-lamp chimney. This is purchasable at every country or town store, whilst the "globes" are not such stock in ordinary trade.

With regard to the application of the usual cylindrical and truncate-ended chimney to my said lantern, and with regard to the action thereof to give a good and especially a steady light, when said lantern is carried in the open air, and subject to gusts of wind, this invention relates to the arrangement of the lower draught-holes above the bottom of the glass, so that direct ingress of air to the flame is avoided, and similarly, the top draught or ventilation holes are below the upper edge of the truncated end of the glass.

Lastly, as the glass in this arrangement extends below the axis of the usual wick-shaft and wheel, I have arranged to operate the wick by a ratchet-wheel and suspended pawl from below, thus avoiding the cutting of the glass.

To enable those herein skilled to make and use my said invention, I will now more fully describe the same, referring herein to the accompanying—

Figure 1 as a sectional elevation, to

Figure 2 as a side view with lower parts removed.

A is the usual lantern base or foot; hereupon is the iron fender B, supporting the top ring C with the usual bail attachment.

Near the upper edge of the base A are the draught-holes *a*, through which the main volume of air passes to feed the flame.

On its inner surface there are secured to said base A the spring chimney or globe-rests *a'*, upon which the chimney or globe D is placed and is held.

Said globe, as indicated in the figures, does not approximate to the usual spherical globe now used on lanterns, but the same is the usual coal-oil lamp chimney.

As the bottom edge *d* of said chimney is considerably below the line of the openings *a*, no direct gusts of wind can pass with such violence to the flame as to disturb it.

Within the base A the usual oil vessel E is placed, arranged with a wick-burner of usual construction.

Now as the wick-feeding shaft *e* would, if extended, pass through the chimney D, I avoid this by arranging a ratchet-wheel, F, on the end of said shaft, and suspend from said shaft the pawl-carrier *f* and *f'*, extending nearly to the bottom of the lantern; by holding the lantern up and operating the pawl properly, the wick may then be suitably regulated.

The cap G fits within the top ring C; this has an upper conical part, *g*, with perforations *g'*, these are below the upper end of the chimney D, thus again avoiding direct blasts of wind.

In order to furnish an outlet for surplus air, which may enter or be in the cap G, I arrange said cap with a cylindrical base, *G'*; this passes down within the top ring C, and has the serrated ends *g''*, which rest on the chimney D. Between the ends *g''* the angular openings *g'''* act as relief openings for confined air in the cap G, as aforesaid.

The chimney D will thus at its upper end be held by the prongs *g''*, and an air-chamber will be created between the chimney D and said cap, and said air-chamber has the exits *g'* and *g'''*.

The cylindrical base *G'* of the cap and the top ring C, instead of being made to fit or slide within each other, as shown in the figures, may furthermore be arranged with screw-threads, so that the same may be more securely attached if desired.

In order to prevent the heat of the flame from too strongly heating the cap G, I have arranged within the same the inner cap *G''*, as shown in fig. 1. Said inner cap also acts to prevent the heat from striking the hand of the user in carrying the lamp about when used.

Having thus fully described my invention,

What I claim is—

1. The chimney D, combined with the cap G *G'* *G''* and the openings *g'* and *g'''*, arranged in relation to each other and the chimney substantially as and for the purpose set forth.

2. The lantern described, consisting essentially of the base A with rests *a'*, removable chimney D, draught-holes *a*, oil vessel E and cap G *G'* with openings *g'* *g'''*, when constructed and arranged as described, for the purpose set forth.

In testimony of my said invention, I have hereunto set my hand, in the presence of—

ARNOLD WITHMAR.

Witnesses:

CHRISTOPH KNICKMEYER,
WILLIAM W. HERTHEL.