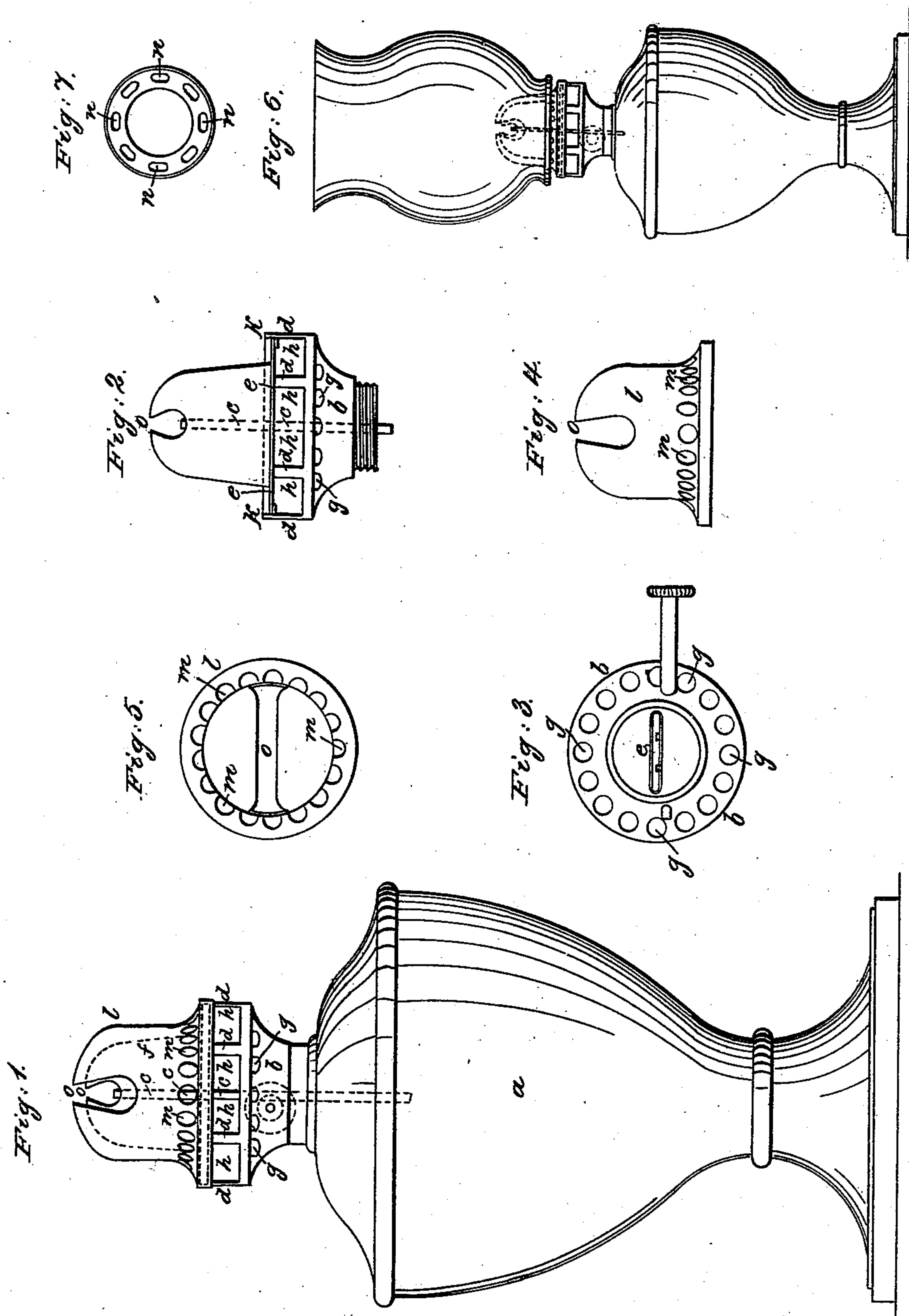


T. ROWATT, Jr.

Lamp Burner.

No. 61,634.

Patented Jan'y 29, 1867.



Witnesses:
 E. H. Hughes,
 Chas. W. Chapman.

Inventor:
 Thos Rowatt Jr.

United States Patent Office.

THOMAS ROWATT, JR., OF LONDON, ENGLAND.

Letters Patent No. 61,634, dated January 29, 1867.

IMPROVEMENT IN LAMP-BURNERS.

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, THOMAS ROWATT, the younger, of London, in the Kingdom of England, have invented new "Improvements in Lamps for burning paraffine, petroleum, belmontine, and other hydrocarbon oils, without the use of a glass chimney;" and I do hereby declare the following to be a full, clear, and exact description thereof, when taken in connection with the accompanying drawings and the letters of reference marked thereon; that is to say:

In most lamps hitherto made for burning hydrocarbon or other oils, complete combustion is effected by the aid of tall glass chimneys, which have not only the disadvantage of being easily and frequently broken, but tend to diminish the amount of light which ought to be produced from a given quantity of oil, by causing too strong a draught of air.

The object of my invention is to enable currents of air to be directed immediately upon the flame, sufficient to effect perfect combustion, but at the same time not so strong as to injuriously affect the real light-producing power of the oil consumed.

My improvements consist in applying to each burner two round-topped hollow cones or domes, one exterior and the other interior, both being so arranged as to produce two separate and distinct currents of air. The form of the domes resembles that of the ordinary dome, but the openings for the flame to pass through extend entirely across the tops of the domes, and are expanded or enlarged at their ends, the exterior opening being proportionately larger than the interior opening, as the exterior dome is larger than the interior. The bases of the domes are concentric, and are so connected together as to allow two distinct currents of air to pass to the flame, and both domes rest on supports forming part of the disk or frame, from the centre of which the wick-tube rises, and the perforations or openings in or between the supports are sufficiently large to admit of an ample supply of air passing upward to the flame through the interior dome. Round the exterior dome I make a number of perforations to admit a second current of air to act on the flame, and the effect of these outer and inner currents of air is to cause the perfect combustion required. If desired, a gallery may be fixed to the exterior dome above the perforations to support a globe, which will not only improve the appearance of the lamp, but also conduce to the steadiness of the flame, by shielding it from sudden draughts, and by creating another current of air which will be admitted through perforations in the gallery, and pass upwards round the exterior dome. In the accompanying sheet of drawings, illustrating my invention—

Figure 1 is an elevation of a lamp with my improved burner attached.

Figure 2, an elevation with part in section of the burner without the exterior dome.

Figure 3, a bottom view of the burner.

Figure 4, a side view.

Figure 5, a top view of the exterior dome detached.

Figure 6, an elevation of a lamp provided with a globe; and

Figure 7, a top view of the gallery for supporting the globe.

a represents the oil-chamber, *b* the bottom of the burner, and *c* the wick-tube. On the part *b* there are supports *d*, having lugs or projections *e*, on which rests the flange at the bottom of the interior dome *f*; and in the part *b* there are apertures *g*, and between the supports, spaces or apertures *h* for supplying air to the flame through the inside of the interior dome *f*, surrounding the wick-tube *c*. On the top of the supports *d* there is a rim, *k*, on which the exterior dome *l* rests, which dome has perforations *m* for admitting a current of air to pass between the two domes. *n* shows the perforations in the gallery supporting the globe, for admitting a current of air to pass upwards round the exterior dome to the flame; and the enlarged openings for the flame at the tops of the domes are shown at *o*, figs. 1, 2, 4, and 5.

Having now described the nature and particulars of my said invention, and the manner in which the same is to be performed, I desire it to be understood that—

I claim the two domes *f* and *l*, constructed with their openings *o*, increasing in width toward the base, and the opening in the outer dome broader than the opening in the inner dome, in combination with their respective air-passages *m*, and passages *h* and *g*, the passages to the one dome being independent of the passages to the other dome, all constructed so as to operate substantially as set forth.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

THOMAS ROWATT, JR.

Witnesses:

E. T. HUGHES, 123 Chancery Lane, London.

STE. CHS. BARNABÉ, No. 2 Pope's Head Alley, London.