

J. TRENT.
Lamp-Burner.

No. 113,472.

Patented Apr. 4, 1871.

Fig. 1.

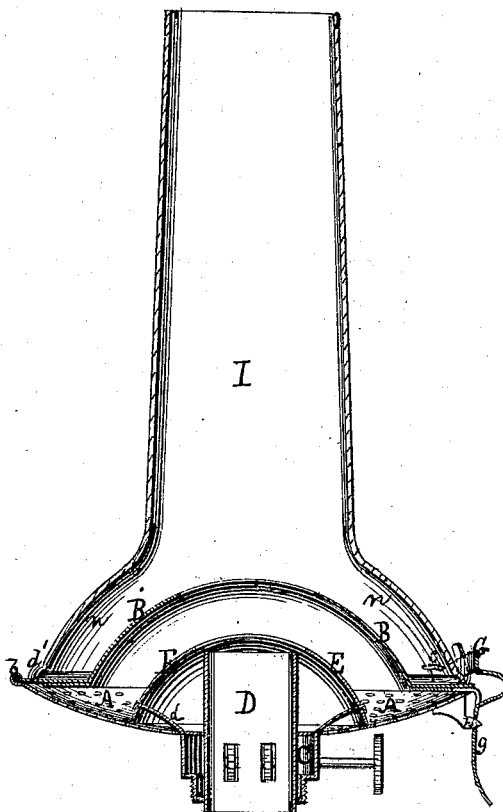
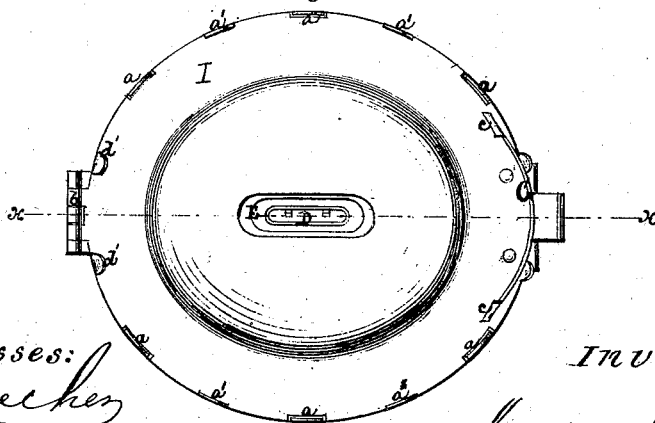


Fig. 2.



Witnesses:
J. B. Beecher
Mr. A. W. Achmer

Inventor:

Joseph Trent

United States Patent Office.

JOSEPH TRENT, OF MILLERTON, NEW YORK.

Letters Patent No. 113,472, dated April 4, 1871.

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, JOSEPH TRENT, of Millerton, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Lamp-Burners; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing which forms part of this specification.

My invention consists in a spring for holding the chimney by pressure at two remote points, and also for holding the hinged cone in a lamp-burner, which spring is constructed of a single piece, and as a whole is novel and simple, and can be manufactured and applied much cheaper than the separate devices now employed for the said two purposes; and

My invention also consists in the combination, with a primary and secondary cone in a lamp-burner, of a lamp-chimney whose base is of such form as to constitute a third cone, whereby I obtain a high taper flame of great brilliancy.

In the accompanying drawing—

Figure 1 is a transverse vertical section of my invention taken on the plane of the line *x x*, fig. 2.

Figure 2 is a plan or top view thereof.

A designates the base-plate of the burner, which is perforated in the usual manner, and provided with an upwardly-projecting rim, or with projections *a a*, for retaining in proper place a cone, B, which latter is hinged to said base-plate, as shown at *b*, and provided with an upwardly-projecting rim or with projections *a' a'* for steadying the chimney.

The body C, with its ratchet-wheel and shaft and wick-tube D, are secured to the base-plate in the usual or any suitable manner.

E designates a cone, which I term a primary cone, to distinguish it from the above-referred to cone B which latter I term a secondary cone.

This primary cone E may be secured in place in any suitable manner—say, by a cross-bar, *d*, provided with a slot, through which the wick-tube projects and the said cone is of such height as to rise but a short distance above the wick-tube; and the slot is cut through its apex or rounding top, so as to be directly over the wick-tube so as to permit the flame to rise in a vertical direction through it. As in the operation of my burner there is little or no lateral expansion of the flame, its form is that of a high thin column, as will be presently described; and this primary cone is of such diameter as to include, say, two or three rows of perforations, and serves to deflect the air received through said perforations more particularly upon the top of the wick-tube, thereby keeping the same cool, as well as deflecting air against the flame at its very base, and hence insuring a sufficient supply of oxygen to the flame at this important point.

The secondary cone is provided with a slot for the flame substantially like that in the primary cone, and this secondary cone includes the remainder or a greater portion of the perforations, and deflects the air upon the flame at a point above the primary cone.

G designates the chimney-holding spring, which is of a novel construction. It consists of a spring-bar suitably secured to the plate, and bearing against the chimney at two separate and distinct points.

I have shown each end of the spring as preferably provided with a nose or horizontal lip, which lips rest over the flange on the bottom of the chimney, and, in connection with one or more ears *d' d'*, or an equivalent therefor, on the opposite side of the burner, keep the chimney securely in place; and this spring G is provided with a downwardly-projecting arm, *g*, which is provided with a slot for receiving a projection, *h*, on the base-plate.

This spring G *g* is stamped out of metal—say, spring-brass—in one piece, as will be clearly understood by reference to the drawing.

This spring G *g* is particularly applicable to a lamp-burner now in the market known as the "Excelsior Lamp-Burner."

I thus combine in a single device two very important features in a lamp-burner; namely, a spring which holds the chimney by pressure at two remote points, and a catch for locking a hinged cone.

I designates the chimney I design using with the above-described burner. It is of such construction that its base *w* constitutes a third cone for the burner. The flue is of a steeple-shape, and when the burner, with its two cones, and the chimney, with its one cone, are all adjusted properly, I produce a burner possessing excellent qualities.

I have found that, by comparing it with the Drummond-light burner, which gives, probably, the most intense light of any burner in the market, I produce very nearly as brilliant a light by the consumption of three-fifths less oil during the same time; hence I may say that the burner herein described, with the two metal and one glass cones, will produce a light of a given brilliancy at a less consumption of oil than any other burner in the market; and instead of the broad bat-wing flame which the said Drummond burner gives, and which is so liable to break chimneys, I produce a high taper or candle flame, not at all liable to break chimneys.

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

1. The combination, with a lamp-burner, of the spring G *g*, constructed in one piece, and answering the twofold purpose of holding the chimney by pressure at two remote points, and also locking the hinged cone securely in position, substantially as herein specified.

2. The combination, with the primary and secondary cones E B, of the chimney I, whose base *n* constitutes a third cone, substantially as and for the purposes herein specified.

JOSEPH TRENT.

Witnesses:

T. B. BEECHER,
W. H. WALHNER.