

TAYLOR & JENNEY.

Lamp Chimney.

No. 110,308.

Patented Dec. 20, 1870.

Fig. 1.

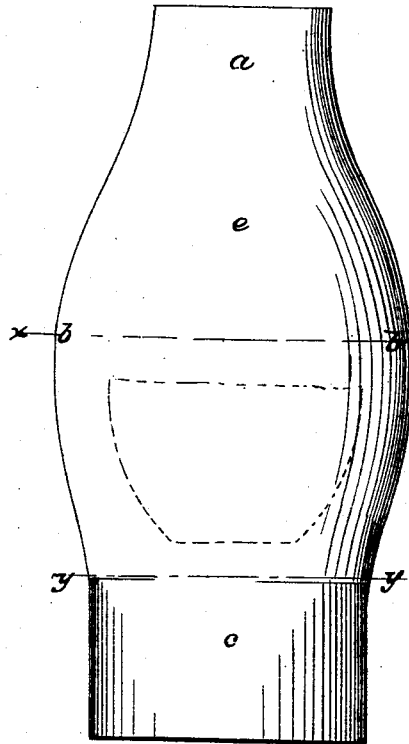


Fig. 2.

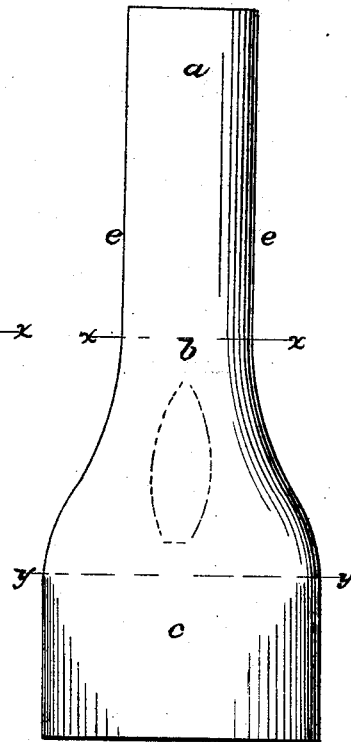
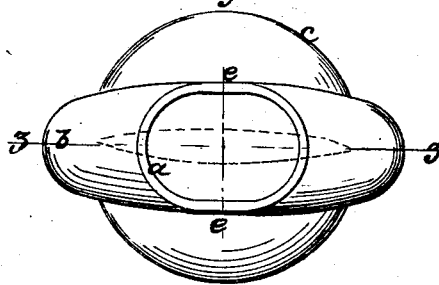


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN LAMP-CHIMNEYS.

Specification forming part of Letters Patent No. **110,308**, dated December 20, 1870; antelated December 8, 1870.

### *To all whom it may concern:*

Be it known that we, GEORGE W. TAYLOR and WALTER P. JENNEY, of Fairhaven, in the county of Bristol and State of Massachusetts, have invented a new and Improved Lamp-Chimney; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a view of the broadest side of the chimney. Fig. 2 is a view of the narrowest side of the chimney. Fig. 3 is a top view of the chimney.

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

The object of our invention is to improve lamp-chimneys by constructing their lower or base portions cylindrical, or nearly so, their middle portions bulging on two sides and flattened on the other sides, and their upper ends contracted and elliptical, whereby the greatest breadth and least thickness of the chimney are at the highest point of the flame when the latter is adjusted as high as possible without smoking, and whereby the currents of air which are admitted into the chimney at its base are compressed about the flame uniformly and directed into it at its highest or hottest point, thus rendering combustion as complete as possible, as will be hereinafter explained.

The following description will enable others skilled in the art to fully understand our invention.

In the accompanying drawings, *c* represents the cylindrical lower portion of the chimney, which is adapted for being received and held by lamp-burners of well-known kinds. From the horizontal plane (indicated by dotted lines *y y* in Figs. 1 and 2) two of the sides of the chimney, corresponding to the flat sides of the flame, converge upwardly to the plane *x x*, and terminate at this plane in vertical flat sides *e e*, which extend up to the top *a*. Those portions of the chimney above the plane *y y*, which correspond with the lateral edges of the flame, diverge upwardly to the plane *x x*, then converge upwardly to the top *a*, so as to give con-

siderable of a bulge or curved swell to the lateral or narrowest sides *b* of the chimney, as shown in Fig. 1. Thus it will be seen that the chimney is cylindrical at its base, elliptical at its top, flattened on two sides, and bulging on the two opposite sides. At every point above the line *y y* the chimney is elliptical when taken horizontally. This chimney has its greatest width and least thickness at that part which is opposite the top or hottest part of the flame when turned up as high as possible without smoking. The chimney has a perfectly-symmetrical shape, and does not present angles or edges, which would intercept the light and increase the damage of breaking.

The mode of operation is as follows: As the sides of the chimneys slope inwardly, they cause the currents of air, which are admitted from below, to converge to the top of the flame and impinge upon it at the point where the air is most needed, and cause a complete combustion and considerable draft. The peculiar shape of the chimney causes the flame to spread, for the reason that it causes the air-currents to diverge where they impinge upon it. Finally, owing to the strong draft and elliptical orifice, it is almost impossible to smoke this chimney.

We do not claim a lamp-chimney having a cylindrical base, a contracted neck, a flattened and laterally-bulging middle portion, and an elliptical upper portion; but

What we do claim as new, and desire to secure by Letters Patent, is—

A lamp-chimney in which the base portion *c* is cylindrical, and in which two of the sides converge from the point *y* to the point *x*, and there terminate in vertical flat sides, which extend to the top, the opposite or narrow sides of the chimney having a curved swell, and all the chimney above the point *y* being elliptical in form, as herein shown and described.

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Witnesses:

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