

E. P. DICKIE.
Lamp Chimney.

No. 34,293.

Patented Feb. 4, 1862.

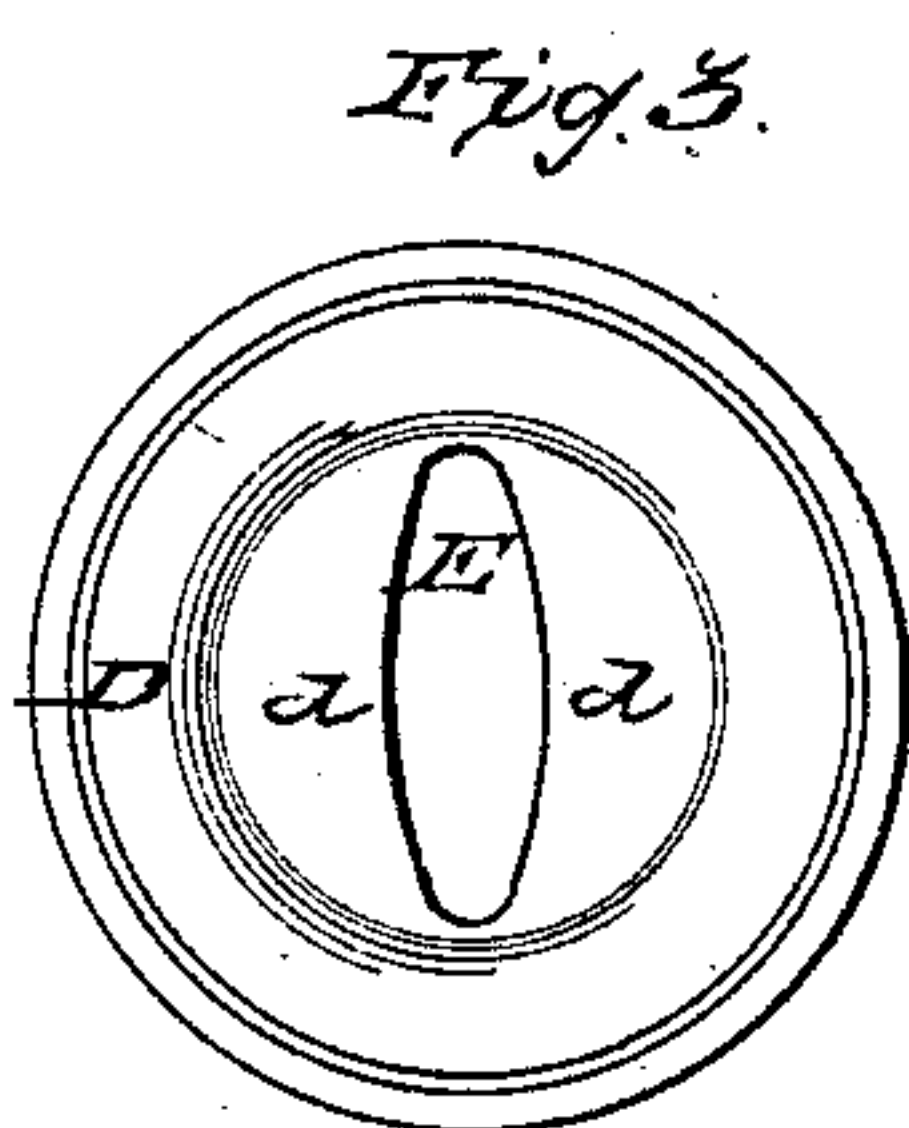
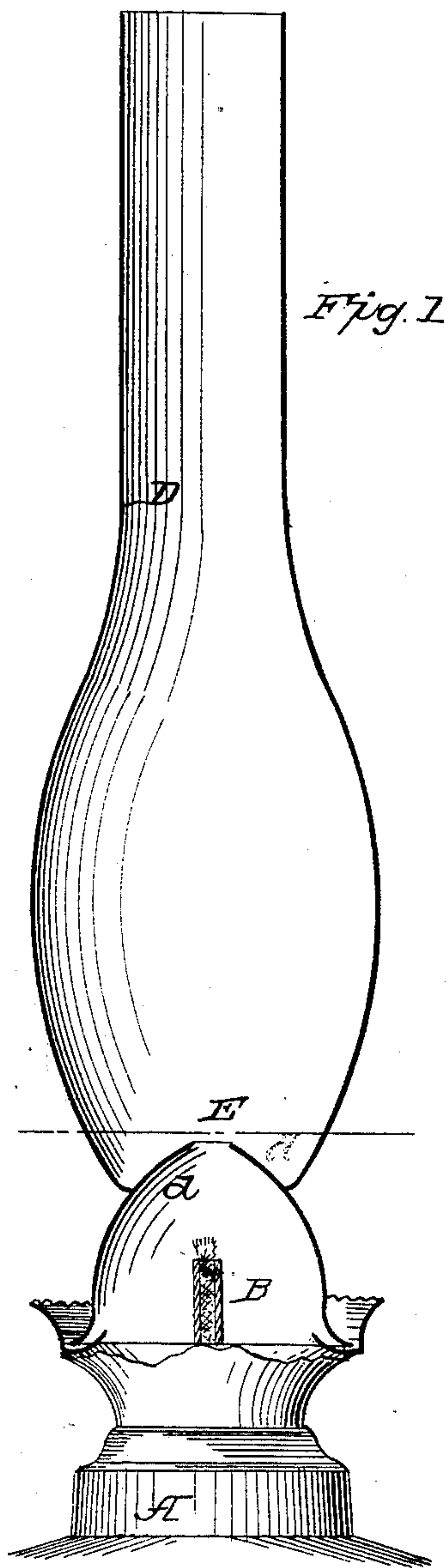
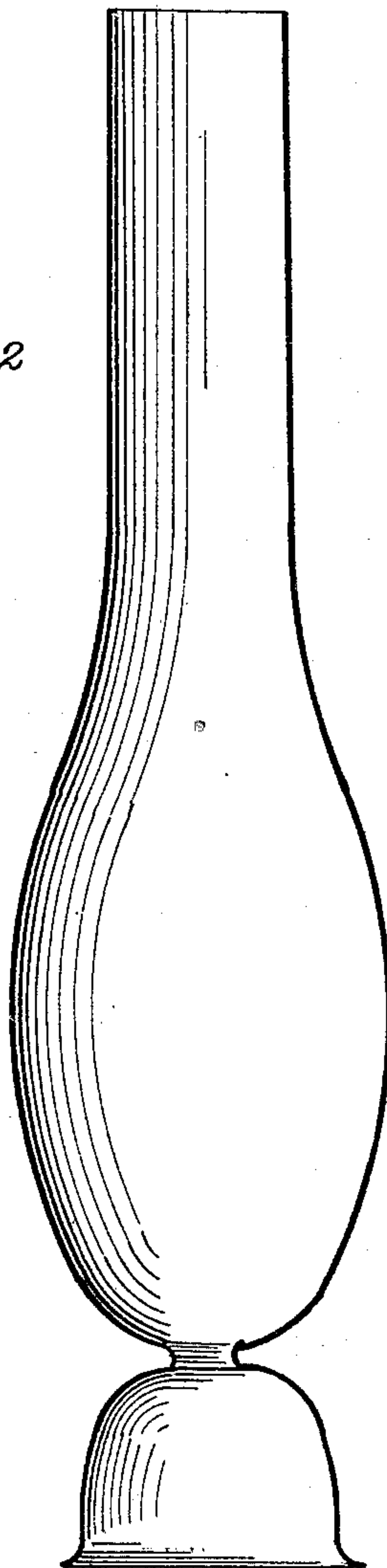


Fig. 2



Witnesses:
Wm. H. Collier
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Inventor:
E. P. Dickie

UNITED STATES PATENT OFFICE.

EDWARD P. DICKIE, OF FISHKILL LANDING, NEW YORK.

IMPROVED CHIMNEY FOR LAMPS.

Specification forming part of Letters Patent No. 34,293, dated February 4, 1862.

To all whom it may concern:

Be it known that I, EDWARD P. DICKIE, of Fishkill Landing, in the county of Dutchess and State of New York, have invented a certain new and Improved Chimney for Lamps; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of the chimney and a side elevation of a portion of an ordinary lamp on which it is mounted. Fig. 2 is a corresponding section of my chimney partially formed, illustrating one of the modes in which my invention may be successfully made; and Fig. 3 is a horizontal section on line S S in Fig. 1.

Similar letters refer to like parts in all the figures.

My chimney is intended for use on those lamps in which kerosene or analogous material is burned, which requires the air to be directed upon the flame in a peculiar manner.

My improvement allows the cone heretofore believed to be necessary to be entirely dispensed with, and provides for the presentation of the air in a proper manner by the form of the chimney alone.

In the drawings, A represents the upper portion of an ordinary lamp; B, the ordinary flat wick-tube used in connection with my invention, and D *d* my improved chimney. It must be observed that *d* is a partial partition or platform somewhat swelled or rounded upward, and partially closes what is ordinarily a very large space in the chimney. Its presence leaves only a narrow opening E for the upward passage of the flame and air at that point. The height of *d* above the base of the chimney, or rather above the top of the flat wick-tube B, is about equal to the height of the ordinary cone.

My improved chimney must be made with a view to guard as much as possible against fracture from sudden changes of temperature. With this view all the ordinary means used by glass-workers must be employed, such as the use of very soft glass, or that in which a large proportion of lead is introduced and long annealing. With these precautions

my chimney has been found by experiment to endure very well, and it is believed will be no more liable to break than ordinary chimneys.

The means I have found successful in producing the proper form are to first shape an ordinary chimney of about the proper size, next to contract it greatly at the point where *d* is to be produced; thirdly, to flatten the contracted part by compression between suitable pinchers, so as to leave a passage within of the proper size and form for the aperture E, and, lastly, to press the contracted parts together and upward by applying it upon a suitable metallic former introduced from below. By this mode of manufacture, one stage of which is shown in Fig. 3, the part *d* is made of what was originally two thicknesses of glass. I do not confine myself to this precise mode of construction, because any means which will produce the suitable final form may probably be successful.

The advantage due to the use of my invention as compared with ordinary chimneys and opaque cones is a very marked increase in the quantity of light, especially when the flame is either intentionally or otherwise small. With small flames there is a large proportion thereof close to the wick-tube. Under such circumstances the ordinary opaque cones allow the utilization of only that portion of the light which is thrown upward through the top of the cone and the glass cones sometimes used, although they allow light to pass through them, necessarily obstruct, destroy, reflect back, and weaken the light. In the use of glass cones the light passing through the cone has evidently to pass also through the chimney, which is exterior thereto, and thus the useful effect of the light is weakened by its double transmission through glass, as also by all the smoke, dust, or other foreign matter adhering to the duplicated surfaces. In my invention the light from that portion of the flame beneath *d* is allowed to impinge directly against the side of the chimney and pass out without any additional obstruction.

The partial partition *d* may be perfectly plane instead of swelled, or may be swelled more or less than represented, and joined to the sides of the chimney at a higher or lower

level than is represented, according as circumstances shall render desirable.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

In glass chimneys for illuminating purposes, the transparent partition or partial par-

tition *d* when made part of and of the same piece as the chimney, substantially as and so as to realize the advantage herein set forth.

ED. P. DICKIE.

Witnesses:

H. M. COLLYER,

D. W. STETSON.