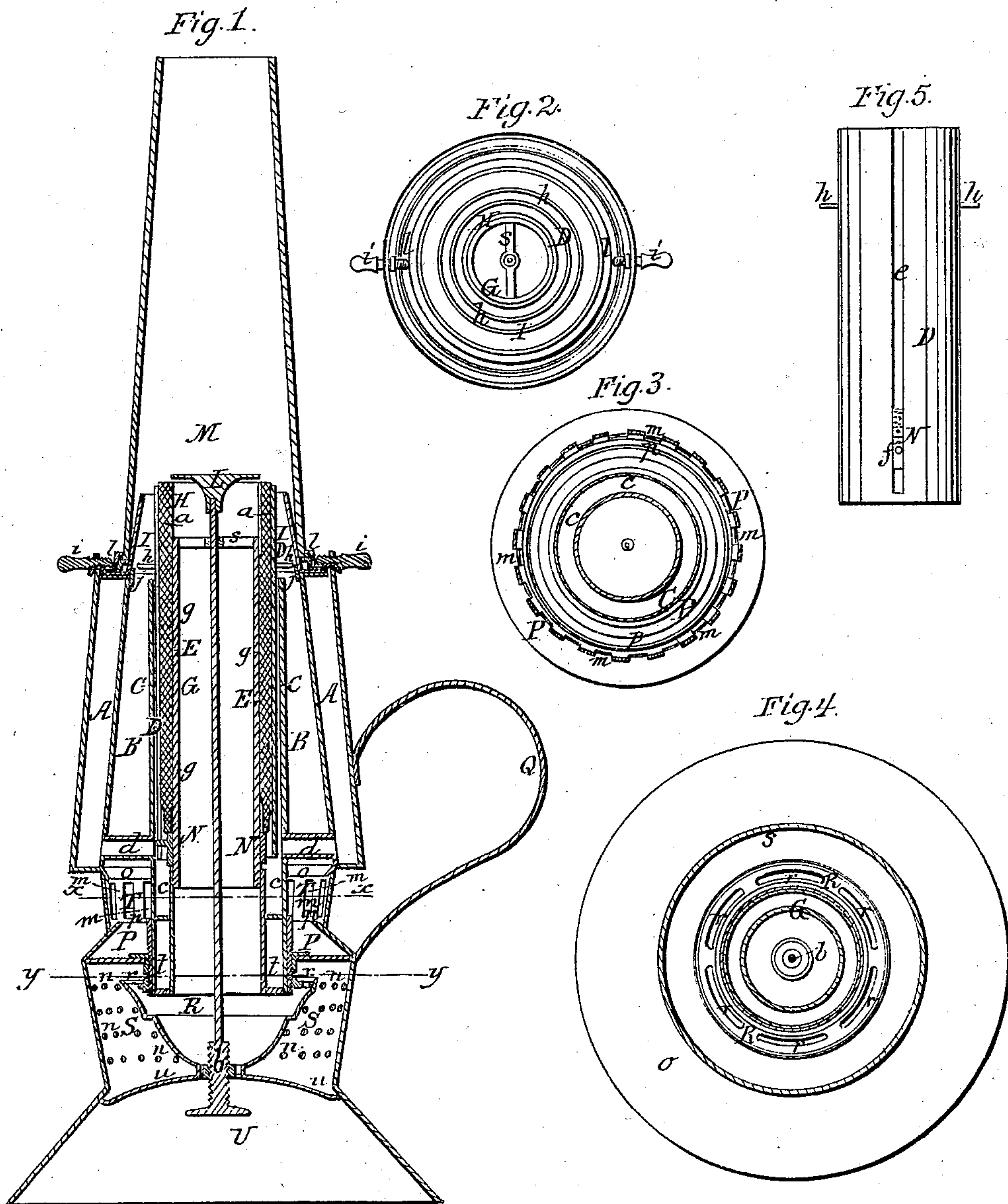


P. SARGENT.

Lamp.

No. 14,369.

Patented March 4, 1856.



UNITED STATES PATENT OFFICE.

PRENTICE SARGENT, OF NEWBURYPORT, MASSACHUSETTS.

IMPROVEMENT IN LAMPS FOR BURNING ROSIN-OIL.

Specification forming part of Letters Patent No. 14,369, dated March 4, 1856.

To all whom it may concern:

Be it known that I, PRENTICE SARGENT, of Newburyport, in the county of Essex and State of Massachusetts, have invented a new and useful Portable Lamp for Burning Rosin-Oil; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a vertical central section of the lamp; Fig. 2, view of the top thereof, the chimney being removed; Fig. 3, a horizontal section in the line *x x*, Fig. 1; Fig. 4, a horizontal section in the line *y y*, Fig. 1; Fig. 5, view of a part detached.

Like letters designate corresponding parts in all the figures.

The nature of my invention has reference to improvements in regulating and controlling the inner and outer drafts, substantially as hereinafter set forth.

The tube I, which forms a continuation of the inner tube B of the oil-reservoir, is made detachable therefrom, and is provided with a projecting rim at the bottom, which rests upon the upper end of the oil-reservoir A, being kept in place by projections *j j*. Screws *i i* secure in place the ring *l*, which holds the chimney M firmly upon the lamp.

Within the tube I and connected therewith by arms *h h* is the outer wick-tube D. The tubes I and D, which compose the top of the lamp, are removable and turn round freely upon the top of the oil-reservoir. This arrangement enables me to readily trim and renew the wick E and to raise and lower it by simply turning the top around. The wick is raised and lowered by means of a slot *e*, Figs. 1 and 5, reaching from near the bottom of the tube D to the top, in which a pin *f*, projecting from the wick-holder N, slides, so that on turning the removable top of the lamp said wick-holder will be turned, and raised or lowered by moving in the screw-thread *g* on the periphery of the inner wick or draft tube G. Said tube G reaches to within a short distance of the top of the wick, and thence is extended to the usual height of the inner wick-tube by a tube H of somewhat larger diameter than itself, being screwed or otherwise secured thereon, so that it may be removed when desired, substantially as shown in Fig. 1. This tube H, being larger than the tube G, compresses the upper part *a* of the wick E into a narrower

compass than the portion below and causes the lamp to burn better and to be more readily trimmed, while the uncompressed state of the lower part of the wick enables it to convey the oil upward by its capillary action as fast as ordinary wicks. The bar *s*, which guides the supporting-rod of the button L, is attached to the stationary draft-tube G, so that the tube H may be removed to permit the insertion and withdrawal of the wick. Tubes *d d*, Fig. 1, conduct the oil from the reservoir A into the wick-space *c*.

The outer draft is conducted and controlled by the following contrivances: It is first admitted through slotted openings *m m* or their equivalents just below the oil-reservoir A into an annular space T, substantially as shown in Fig. 1. Said space opens directly into the draft-tube B, the communication being partially closed, however, by a conical lip or ledge *o*, extending inward and downward into the space. The lower end of the annular draft-tube B should be as wide as practicable and gradually narrow to the top.

Below the entry-space T is formed an annular inclosed air reservoir or chamber P, opening upward into said space T, the communication being also partially closed by a conical lip *p*, extending inward and upward into said space. The effect of this air-reservoir, in connection with the arrangement of the entry-space T, draft-tube B, and projecting lips *o p*, is to render the draft nearly constant and unaffected by a sudden gust of air or movement of the lamp, the air within it being a sort of fountain which supplies a constant flow upward and being replenished by the more variable rush of air into it from without.

The inner draft is controlled and rendered constant in the following manner: A chamber S near the bottom of the lamp is entirely inclosed, and only communicates with the outer air through small apertures *n n* or their equivalents, such as narrow slots or the meshes of wire-gauze. This tends very much to break the force of gusts of air coming against the lamp. Within the chamber S is located another chamber R, communicating with said outer chamber S only through narrow slots *r r*, Figs. 1 and 4, by small holes, wire-gauze, or their equivalents. This inner chamber opens directly into the bottom of the inner draft-tube G, or may, in fact, be only the lower end thereof. The air will thus have to pass through

a second set of small apertures, which, together with the regulating effect of the outer apertures and the air chamber or reservoir S, render the draft in the tube G so constant that the burning of the lamp will not be disturbed, however much the pressure of air against the outer surface may vary in any situation where the lamp will ordinarily be carried.

Instead of attaching the handle Q both to the base and body of the lamp, it may be secured to the body A alone, and the base may be made removable, being screwed to the upper part, as shown at *t t*, Fig. 1. The button L may be regulated by a thumb-screw *b* at the bottom or by any other convenient arrangement.

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

1. The annular air-reservoir P, in combination with the entry-space T and inwardly-projecting lips *o p*, substantially as described, for the purpose of rendering the outer draft sufficiently constant to prevent the smoking of the lamp by any gusts of air or sudden movement to which the lamp may ordinarily be subjected.

2. The fine apertures or meshes *n n*, opening into an outer chamber S, in combination with said chamber and with an inner perforated or reticular partition separating said chamber from the inner draft-tube, substantially in the manner and for the purposes herein described.

PRENTICE SARGENT.

Witnesses:

J. S. BROWN,
CLEMT. S. STULL.