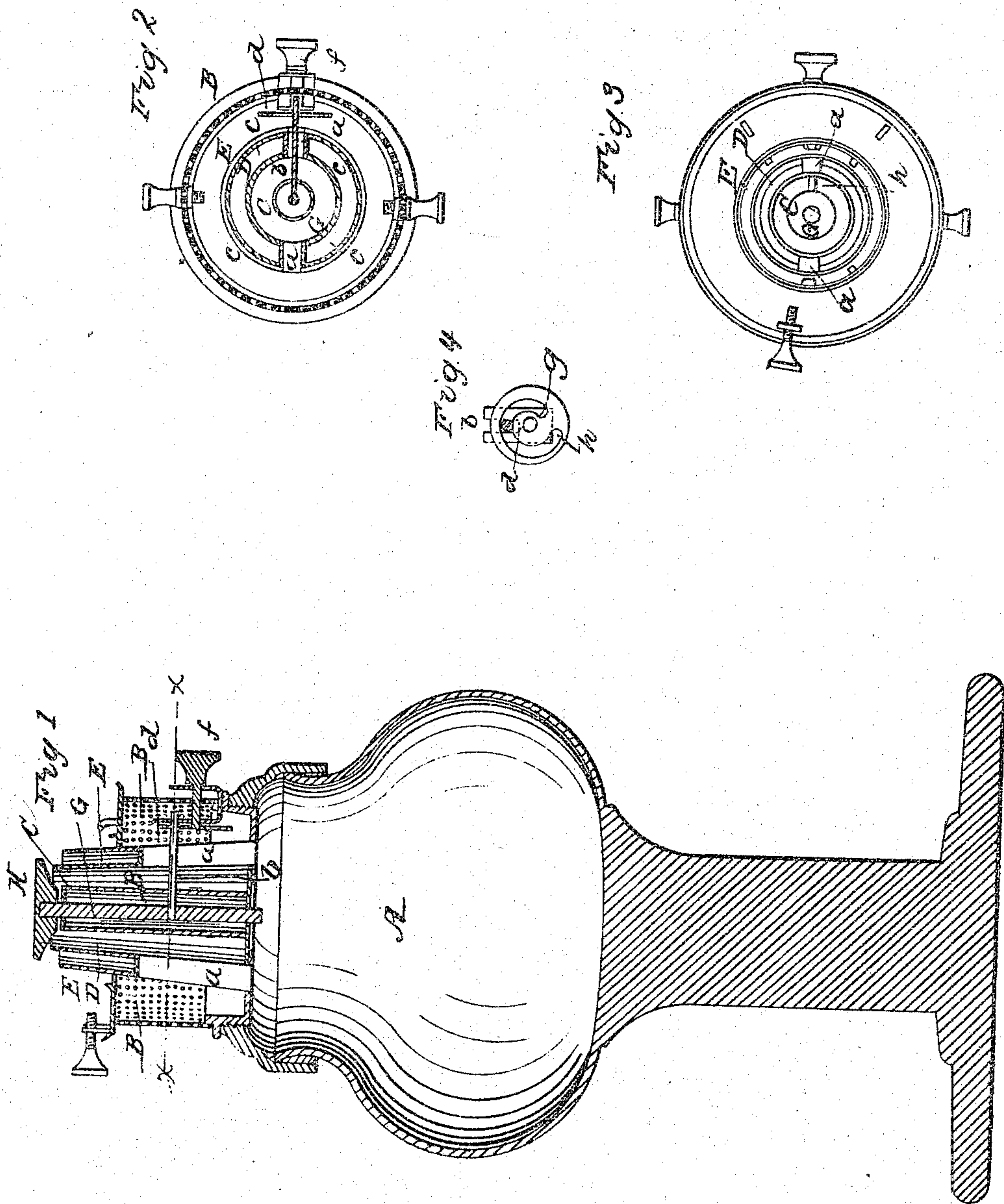


A. H. KNAPP.
Lamp Burner.

No. 16,981.

Patented April 7, 1857.



UNITED STATES PATENT OFFICE.

A. H. KNAPP, OF MEDFORD, MASSACHUSETTS.

LAMP-BURNER.

Specification of Letters Patent No. 16,981, dated April 7, 1857.

To all whom it may concern:

Be it known that I, A. H. KNAPP, of Medford, in the county of Middlesex and State of Massachusetts, have invented a new and
5 Improved Burner to be Applied to Lamps 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
10 of this specification, Figure 1, being a vertical central section of a lamp provided with my improved burner; Fig. 2, a horizontal section in the line $x\ x$, Fig. 1; Fig. 3, a view of the top thereof with the chimney
15 and button removed.

Like letters designate corresponding parts in all the figures.

The body of the lamp A, being of the usual form and having no draft through it,
20 may be made of any desirable material and the burner attached to it by a screw or any other convenient device. The air for the outer and inner drafts passes through the perforated screen B, which is covered by
25 the cap or top for the support of the chimney, said perforations regulating the draft of air in such a manner as to make the flame burn higher and more evenly, without
30 smoking, than if the air were admitted through an open space. A part of the air thus admitted through the said perforations supplies the outer draft through the aper-
35 ture in the cap or top immediately around the outer tube, while the other portion being carried through the apertures a, a , in the
sides of the tubes passes up the inner tube D, and out beneath the button H. The said
40 button, by which the height of the flame is regulated, rests upon the rod G, which is raised or drawn down by the arm b , play-
ing the eccentric slot of the cam d which cam is a circular disk, made fast in the cen-
45 ter to a horizontal pin for operating it. In said disk is cut a slot, commencing near the center at g , and gradually receding from
it to the other end at h . When the cam is turned by its knob f , the button is raised
or lowered at pleasure.

The small column c , is closed around the
50 rod at the top and fastened firmly to the

bottom of the inner tube. By substituting this column for the ordinary bar across the inner tube to support the button in place, I am enabled to produce an equal draft
55 through the tube, the effects of which are to save the wick from incrusting as it does when the draft is rendered unequal by the bar across the tube. With this arrangement the lamp burns more evenly and much longer
60 than if the bar were used.

E, represents the space between the tubes, for the wicks, which are separated at the bottom by the draft apertures a, a , but coming together at the top form a circular
65 wick not unlike that of the ordinary solar or astral lamp.

One objection to the lamps now in use for burning rosin oil, is, that a sudden blast of air often enters one draft with more
70 force than the other, causing the lamp to smoke. In this invention this objection is obviated by supplying both drafts at the same point, through the small perforations.

As no part of the fixtures which compose my invention are combined with the body
75 of the lamp, another advantage derived from this invention is that the burner, made in the simple form herein described, is not necessarily connected with the lamp at the
80 time of its manufacture but may be conveniently transported any distance and applied at pleasure to many lamps now used for burning other materials.

I do not claim any one of the features herein described separately considered; but
85 What I do claim as my invention and desire to secure by Letters Patent is,

The arrangement in a removable burner so that it may be applied to a common glass
90 lamp as above described, of the perforated screen B, apertures a, a , small column c , and cam d , provided with an eccentric slot, all arranged, combined and operating substan-
95 tially as above set forth; whereby I am enabled to produce a steady and even flame.

A. H. KNAPP.

Witnesses:

J. S. BROWN,
RUFUS Y. OSGOOD.