

(No Model.)

R. T. BARTON.
LAMP BURNER.

No. 499,499.

Patented June 13, 1893.

Fig. 1

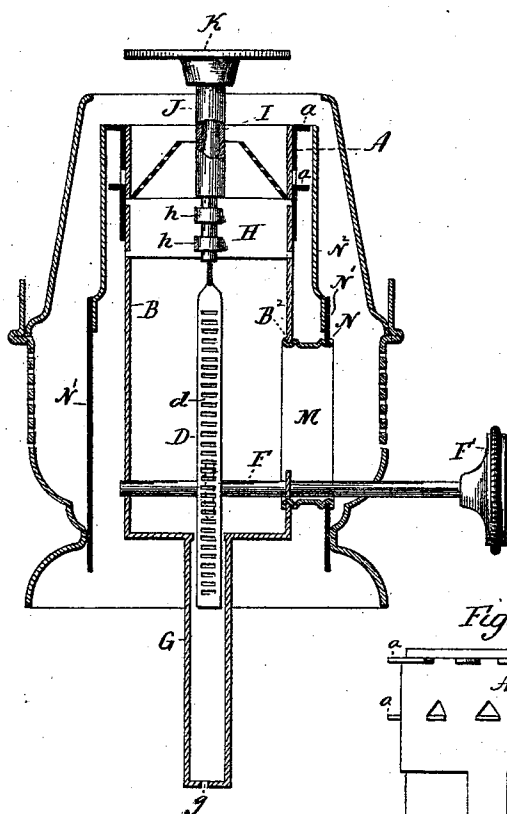


Fig. 2

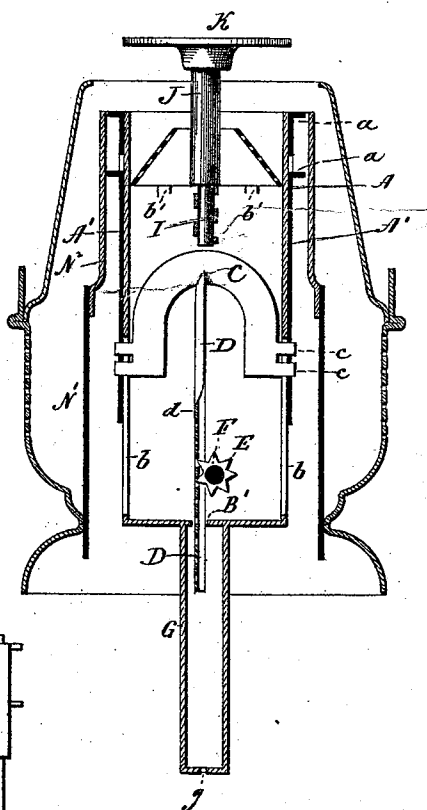


Fig. 3

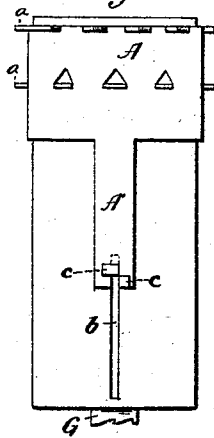
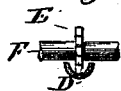


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

RICHARD T. BARTON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
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LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 499,499, dated June 13, 1893.

Application filed April 4, 1892. Serial No. 427,669. (No model.)

To all whom it may concern:

Be it known that I, RICHARD T. BARTON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Lamp-Burners; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same,
10 and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in vertical central section of a lamp-burner constructed in accordance with my invention; Fig. 2, a similar view
15 taken at a right angle to the plane in which Fig. 1 is taken; Fig. 3, a detached view in side elevation of the wick-band and inner wick-tube; Fig. 4, a broken view in transverse section showing the rack, the pinion and a section
20 of the spindle of the wick-adjusting mechanism.

My invention relates to an improvement in that class of Argand lamp-burners which take the air in through the side of the inner wick
25 or draft-tube instead of through the lower end thereof, the object being to produce at a comparatively low cost for manufacture, a simple, convenient and safe lamp-burner, not liable to derangement, and constructed with particular
30 reference to the avoidance of the ignition of any oil which may accumulate in the inner wick-tube.

With these ends in view, my invention consists in a lamp-burner having certain details
35 of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

The wick-band A of my improved lamp-burner is adapted to encircle the inner wick-
40 tube B, and is furnished with two horizontal series of outwardly projecting teeth *a*, which take into the wick, and with two long depending arms A' A' located opposite each other, and perforated at their lower ends to receive
45 fingers *c c* formed upon the projecting ends of a flat, sheet-metal yoke-shaped coupling-plate C, located in a vertical plane within the inner wick-tube B, and having its bowed edge
50 uppermost. To permit the described connection between the said wick-band and coupling-plate, the inner wick-tube is constructed with

two long vertical slots *b b* located opposite each other. By providing the wick band with long arms, and by using a yoke-shaped coupling-plate with its bowed edge uppermost, as
55 set forth, I am enabled to locate the slots in the inner wick-tube through which the said wick-band and coupling-plate are connected, so far below the upper end of the tube that any oil and fuzz which may work through them
60 from the wick will not be in danger of ignition. A sheet-metal rack D, of U-shaped cross-section, is connected at its upper end with the said coupling-plate and constructed with a vertical series of transverse openings
65 *d*, which adapt it to be taken into by a pinion E, mounted on a horizontal spindle F, the outer end of which is furnished with a knurled button F', which is turned to raise and lower the wick. The pinion is entered into the concave
70 face of the rack, the sides of which prevent it, and hence the spindle, from endwise displacement. The lower end of the rack passes downward through an opening B' formed in the lower end of the inner wick-tube B, which is
75 closed except for the said opening. A rack-tube G, covering the said opening B', depends from the said inner wick-tube, and receives the lower end of the rack, its extreme lower end being furnished with a vent-opening *g*.
80 It will be observed that the coupling-plate by reason of its form and arrangement, clears the said pinion, the plate being movable down over the same, whereby the range within which the rack, and hence the band, may be moved,
85 is increased enabling a longer wick to be used than could otherwise be employed.

Within the upper end of the inner wick-tube I locate a transverse bridge H, which is arranged in a vertical plane at a right angle
90 to the plane of the coupling-plate C. The said plate is horizontally slit at its center, and struck up on opposite sides as at *h*, to form a central vertical socket to receive the lower end of a post I, over which is passed
95 the sleeve J, of a disk-shaped deflector K, the lower end of the said sleeve resting upon the upper edge of the bridge H. The upper end of the inner tube is struck inward to form shoulders *b' b'* situated in the same horizontal
100 plane, to afford supports for a small perforated air-distributer L, located entirely within

the upper end of the inner wick-tube, and having the form of a truncated cone, the upper end of the said distributor being enough larger in diameter than the diameter of the sleeve J, before mentioned, to permit a strong draft to pass upward and impinge against the lower face of the distributor K. It will be observed that the said deflector and distributor are entirely independent of the mechanism for raising and lowering the wick, and are therefore not disturbed by the operation of the same. Air is admitted to the inner wick-tube through a port B², formed in its side, and receiving the inner end of a short horizontal draft-tube M, the outer end of which is entered into a corresponding port N formed in the side of the lower section N' of the outer wick-tube, the upper section N² whereof rises to the top of the inner wick tube before mentioned.

I am aware that it is old to furnish an Argand lamp-burner with a wick-band encircling its inner wick-tube and connect the said band with a plate located within the said tube through long vertical openings formed therein, that it is old to use a rack-tube to receive the projecting lower end of the rack of the wick-adjusting mechanism of such a burner, and also that it is old to support a deflector over the upper end of the inner wick-tube by means of a spindle rising from a bridge therein. I do not therefore claim any of those constructions broadly, but only my particular construction and combination. I would have it understood, however, that I do not limit myself to the exact construction and arrangement of parts herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In an Argand lamp-burner, the combination with an inner wick-tube constructed with two narrow vertical slots located opposite each other, of a wick-band encircling the said tube and having two long arms located opposite each other, a yoke-shaped coupling-plate located in a vertical plane within the tube, with its bowed edge uppermost, and having its ends projected through the said slots and connected with the lower ends of the arms of the wick-band, and means for raising and lowering the said plate, substantially as set forth, and whereby oil and fuzz are pre-

vented from entering the upper end of the said tube from the wick.

2. In an Argand lamp-burner, the combination with an inner wick-tube constructed with two narrow vertical slots located opposite each other, of a wick-band encircling the said tube and having two long arms located opposite each other, and closed at its lower end except for a small opening, a rack located within the said tube, a pinion taking into the said rack, a yoke-shaped coupling-plate located in a vertical plane within the tube with its bowed edge uppermost, and having its ends projected through the said slots, and connected with the lower ends of the arms of the wick-band, a sheet-metal rack of U-shaped cross-section, connected at its upper end with the said plate, and passing at its lower end through the opening in the lower end of the tube, a pinion taking into the said rack and entering the concave side thereof, and a spindle on which the said pinion is mounted, substantially as set forth.

3. In a lamp-burner, the combination with an inner wick-tube closed at its lower end but for a small central perforation and constructed with a port in its side, and with two narrow vertical slots located opposite each other, of an outer wick-tube constructed with a corresponding port, a draft-tube joining the said ports to form a closed passage between the two tubes, a wick-band encircling the inner wick-tube, and having two long depending arms located opposite each other, a yoke-shaped coupling-plate located within the inner wick-tube, with its bowed edge uppermost, and having its ends projected through the said slots, and connected with the lower ends of the arms of the said band, a sheet-metal rack of U-shaped transverse section, connected at its upper end with the said plate, and extending at its lower end through the small opening formed in the lower end of the inner wick-tube, a pinion taking into the said rack from the concave side thereof, a spindle on which the said pinion is mounted, and a rack-tube depending from the lower end of the inner wick-tube and receiving the lower end of the rack, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

RICHARD T. BARTON.

Witnesses:

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LILLIAN D. KELSEY.