

No. 645,006.

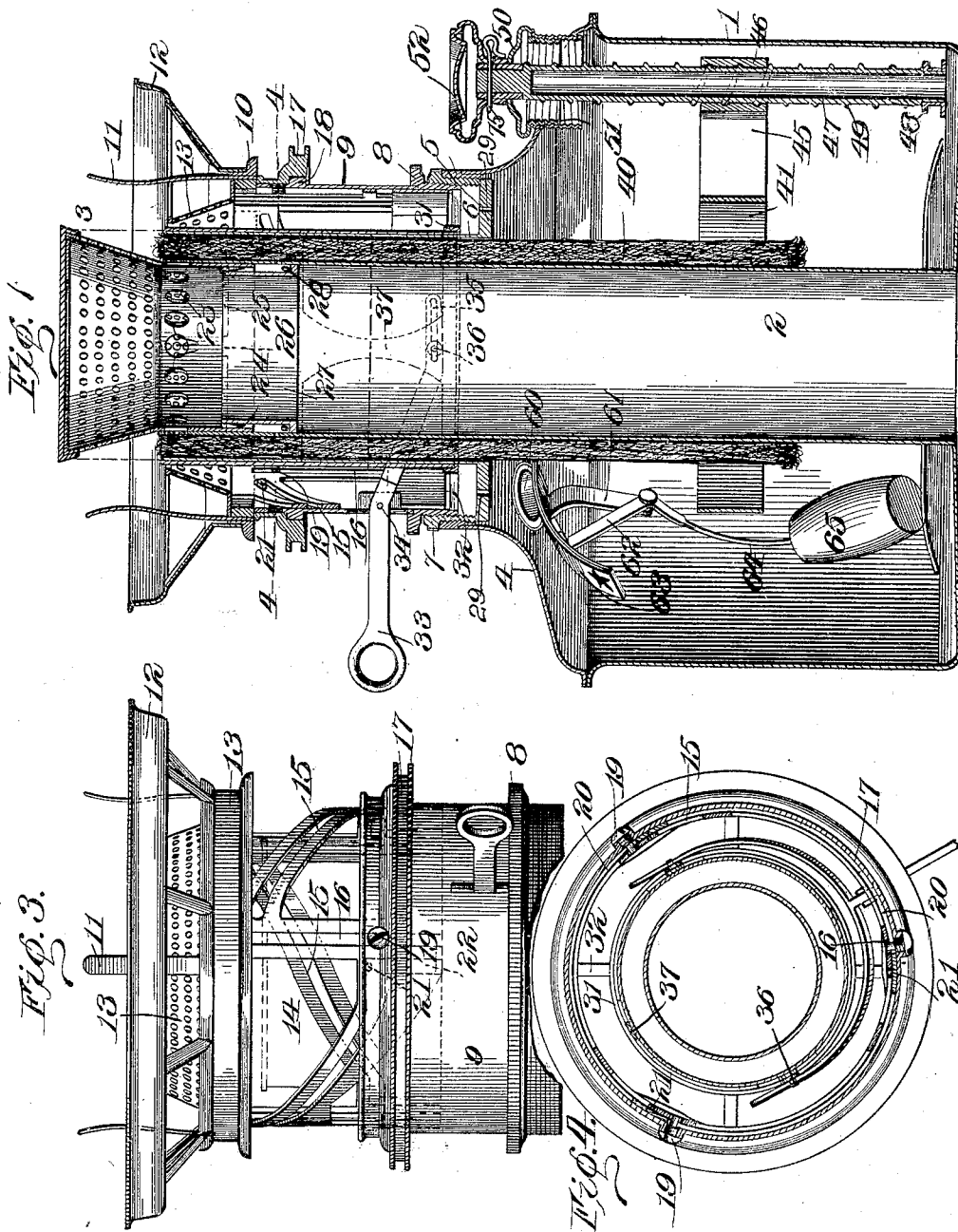
Patented Mar. 6, 1900.

J. M. PFAUDLER.
LAMP.

(No Model.)

(Application filed Aug. 3, 1899.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 5.

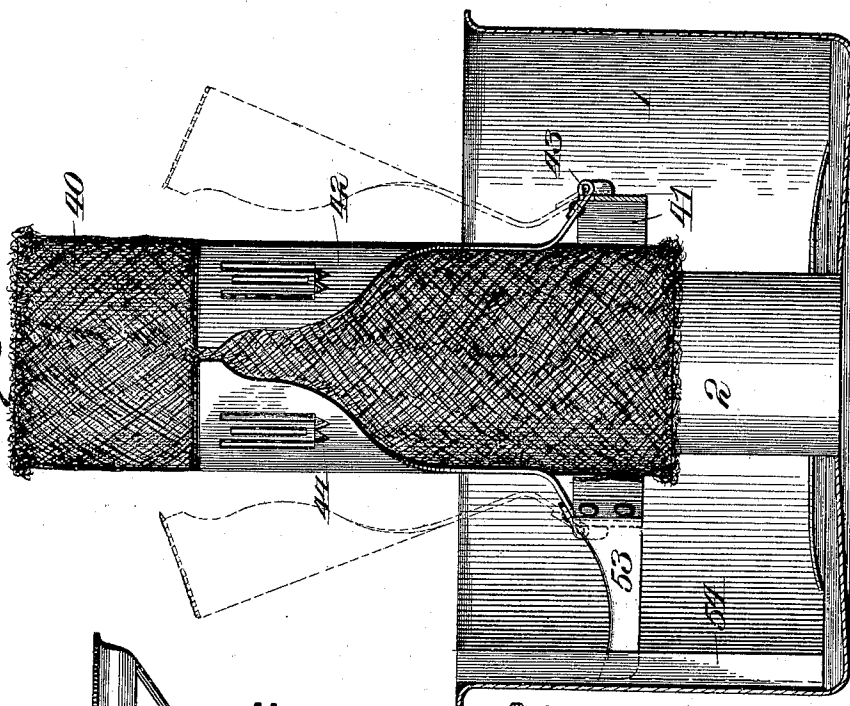


Fig. 6.

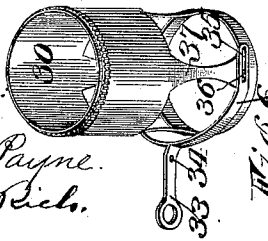
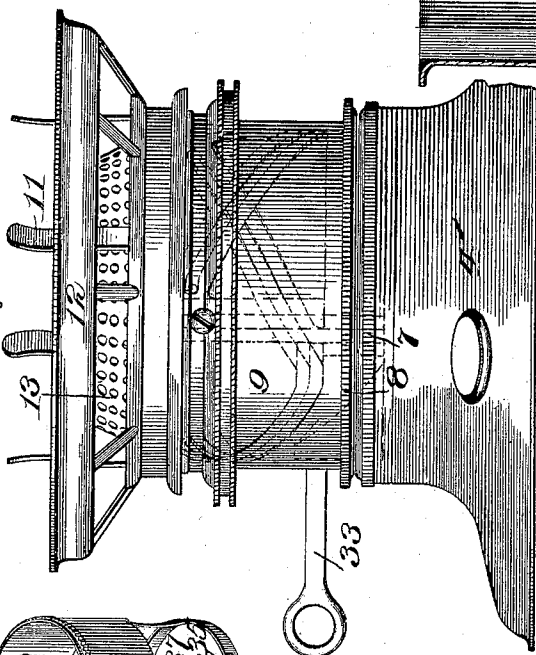


Fig. 7.

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UNITED STATES PATENT OFFICE.

JOHN M. PFAUDLER, OF ROCHESTER, NEW YORK, ASSIGNOR OF PART TO
WILLIAM M. MALLETT, THOMAS P. HILL, AUGUSTUS H. DANIELS, AND
BERNARD FEIOCK, OF SAME PLACE.

LAMP.

SPECIFICATION forming part of Letters Patent No. 645,006, dated March 6, 1900.

Application filed August 3, 1899. Serial No. 726,048. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. PFAUDLER, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Lamps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to improvements in lamps, particularly that class employing round wicks, though some of the features are applicable to other forms, and has for its objects to improve the construction and operation of the various parts, all as will be hereinafter described, and the novel features pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a sectional view of a lamp fount and burner constructed in accordance with my invention. Fig. 2 is a side elevation of the burner. Fig. 3 is a similar view showing the chimney gallery or support in the elevated position. Fig. 4 is a sectional view on the line 4 4 of Fig. 1; and Fig. 5 is a view, partly in section, showing the construction of the wick-raiser. Fig. 6 is a perspective view of the extinguisher-ring and its operating-lever.

Similar reference-numerals indicate similar parts.

The lamp-body consists of the oil font or reservoir, having the hollow cylindrical draft-tube 2 arranged centrally therein, and, extending upwardly, supports the perforated spreader 3 and is surrounded by the burner, supported on the top portion 4 of the fount.

The burner embodies the circular ring or base 5, secured to the internal tube or sleeve 6, adapted to surround the wick, and extend upward to the upper extremity of the draft-tube 2 and having the rim 7 threaded upon its outer edge and adapted to be secured into the top 4 of the fount.

8 indicates a ring secured upon the interior of the rim 7, having mounted upon it the shell or casing 9, forming the exterior of the burner. The chimney-gallery rests upon the

top of the casing 9 and in the present construction embodies the ring 10, the spring-fingers 11, the globe or shade support 12, the skeleton plate 14, connected thereto, and the perforated cone-shaped plate 13. Extending downwardly from the ring 10 is a collar or skeleton plate 14, fitting the interior of the burner-shell 9 and provided with the spiral car-tracks 15 and the vertical ways or guides 16. Revolvably mounted upon the flange 18 of the shell 9 is a collar 17, having screws or pins 19 operating through horizontal slots 20 in the shell 9 and engaging with the vertical ways or guides 16. Inwardly-projecting pins or studs 21, secured to the interior of the shell 9, engage each of the spiral car-tracks 15 in the plate 14 and are adapted as they are revolved to cause the upward or downward movement of the skeleton frame carrying the chimney-gallery. The lower ends of the spiral ways 15 extend horizontally, as shown in dotted lines, to allow the framework to rest upon the pins 21 when in the elevated position, and at their extremities are slots 22, extending from their lower sides and arranged parallel to the ways 16, which facilitate the removal of this mechanism from the burner-body when desired. As the ring or collar 17 is revolved the pins 19 operate against the sides of the ways 16, revolving the skeleton frame 14 upon the burner, causing the inclined or spiral ways 15 to be moved against the stationary pins or studs 21 and to be thus elevated. By this construction the operator is only required to rotate the collar 17, and the necessity of following the chimney-gallery in its ascent with the hand is entirely obviated.

The upper end of the draft-tube 2 is provided with a series of perforations adapted to register with apertures 23 in the distributor 3 to allow air to pass into the upper end of the wick to facilitate combustion. The spreader 3 is fitted loosely into the upper end of the draft-tube 2 and secured in position by means of pins or lugs 24, projecting inwardly and adapted to be engaged beneath the annular rim 25, cut away at 26 upon opposite sides, as shown in dotted lines, Fig. 1, and mounted upon the ring 27, secured upon

the interior of the draft-tube. 28 indicates a series of apertures to permit the escape of any oil that may have worked over the top of the tube 2 or through the apertures 23 while the wick has not been lighted, and for the same purpose I provide apertures 29 in the burner-base 5.

The upper end of the distributor 3 flares outwardly over the annular wick-recess between the draft-tube and the inner portion 6 of the burner. The extinguisher is constructed of a sleeve or tube 30, capable of vertical movement on the tube 6, its top normally resting in line with the top thereof, and supported upon the lower end by an annular flange 31, secured to the burner by arms 32. The vertical movement of the extinguisher is accomplished by means of a lever 33, pivoted at 34 to the burner-shell 9, having the bifurcated ends slotted at 35 and engaging pins 36, located upon the opposite sides of the extinguisher sleeve or tube 30. The latter is guided in its movement by the tube 6 and held in its elevated position in engagement with the overhanging edge of the deflector by frictional engagement between the parts, a portion of the lower part of the extinguisher sleeve or tube being cut away, leaving the ribs 37, which may be bent inwardly before the tube is positioned to create the desired friction between the parts.

As before mentioned, the deflector 3 is loosely mounted upon the upper end of the draft-tube and prevented from excessive vertical movement by means of the pins 24, which are normally slightly below the rim 25 of the ring 27. By this arrangement the deflector is allowed to yield when engaged by the extinguisher and to completely close the top of the latter, preventing the escape of smoke or other obnoxious gases when the flame is extinguished.

The lamp-wick 40 is of course adapted to be raised or lowered to give the desired height of flame, and for this purpose I provide a wick-raising device arranged within the fount and consisting of a vertically-movable ring 41, surrounding the wick and carrying two oppositely-arranged wings or engaging members 42, hinged thereto at 43 and adapted to extend upward, surrounding and engaging the wick at a point within the burner-tube 6. The wings are formed from thin sheet metal and are adapted to lie against the wick and to be held in engagement therewith by the burner-tube 6, and to insure the even movement of the wick the upper edges of the wings are provided with inwardly-projecting teeth or prongs, (not shown,) and other projections upon the sides of the wings bent inwardly from the V-shaped apertures 44 engage the wick securely. The hinged connection between the ring 41 and the wings permits the latter to be separated, as shown in dotted lines, when the burner has been re-

moved, allowing the wick to be withdrawn and a new one substituted when desired. Arranged upon one side of the ring 41 is an arm 45, provided upon its extremity with a nut 46, engaging a revoluble post 47, journaled upon its lower end in a bearing 48 and having the quick thread 49. The upper extremity of the post projects through the screw-cap 50, normally closing an aperture 51, and is provided with the thumb-nut 52, by means of which the post may be revolved, causing the nut 46 to travel longitudinally thereon, raising or lowering the wick, as desired. The thumb-nut 52 is detachably connected to the post by a pin 75, as in Fig. 1. 53 indicates a finger projecting from the side of the ring 41 and operating in a slot formed by the flanges 54, located at the side of the fount, which arrangement centers and guides the wick-raising mechanism and also prevents the nut 46 from being moved out of alignment with the aperture 51 either in removing or inserting the post.

In order that the amount of oil contained in the lamp can be readily ascertained at any time or during the filling operation, I provide an automatic indicating device arranged within the fount and visible through a window or aperture 60, provided with a transparent covering. Pivottally mounted upon a support 61 is an upwardly-extending arm 62, carrying a curved indicating-plate 63, provided with suitable markings to indicate the level of the oil. Rigidly attached at an angle to the said arm is an extension 64, provided at its extremity with a float 65, adapted to rest upon the surface of the oil, and as the height of the latter is changed to move the indicator 63 correspondingly.

The improvements described are capable of being fitted to lamps already in use. The extinguishing device can be applied to any lamp of the class described having an external wick-tube and the spreader provided with the broad top with which to cooperate.

I claim as my invention—

1. In a lamp the combination with a stationary burner-casing, of a vertically-movable and rotatable chimney-gallery supported thereon having an annular plate projecting within the casing and provided with a series of spirally-arranged cam-slots and stationary pins located upon the interior of the casing in the said slots and means mounted upon the exterior of the casing for revolving the gallery.

2. In a lamp the combination with a stationary burner-casing, of a vertically-movable chimney gallery or support mounted thereon having an annular ring or plate provided with spiral cam-slots and having vertical ways or guides, pins upon the casing engaging in the spiral slots and a revoluble ring mounted upon the casing and provided with pins or projections engaging the vertical ways.

3. In a lamp the combination with a burner-

casing having the revoluble external ring mounted thereon, of a vertically-movable chimney-gallery provided with a series of vertical ways and a series of spiral cam-slots, the latter engaging with stationary pins arranged within the casing and the former cooperating with pins or projections arranged upon the revoluble ring and operating through slots or apertures in the casing.

4. In a lamp-burner the combination with the burner-casing having the stationary inwardly-projecting pins and the revoluble ring mounted thereon and provided with the pins, of a chimney-gallery arranged upon the casing and capable of vertical movement having an annular plate provided with the series of vertical and spiral ways or cam-slots cooperating with the pins arranged on the casing and ring, the latter slots having the horizontal portions at their lower ends adapted to rest upon the stationary pins in the casing and to sustain the chimney-gallery when the latter is in the elevated position.

5. In a lamp the combination with the burner-casing having the inwardly-extending pins and the revoluble ring mounted thereon and provided with the pins, of a vertically-movable chimney-gallery having an annular plate provided with the series of alternate vertical and spiral ways or cam-slots cooperating with the pins arranged on the casing and ring, the latter slots having the vertical portions at their lower extremities, and having openings at the lower sides thereof of extending parallel to the vertical ways to permit their withdrawal from the pins and the removal of the gallery from the burner when desired.

6. In a lamp the combination with a support surrounding the wick having a finger or guide operating in vertical ways located in the fount and also provided with an extension or arm carrying a threaded nut, of a removable threaded post adapted when rotated to cause the vertical movement of the support and members arranged upon opposite sides of the support and extending parallel with and engaging the wick above the support.

7. In a wick-raising mechanism the combination with a lamp-fount having the draft-tube, the wick surrounding the latter and the burner-tube surrounding the upper end of the wick, of a vertically-movable support, having the finger operating in the guide on the side of the fount the threaded portion cooperating with the threaded post accessible from the exterior of the fount, and the wings arranged upon the support extending parallel with the wick and adapted to be held in engagement therewith by the burner-tube.

8. In a wick-raising mechanism the combination with the lamp-fount having the wick-tube, the wick mounted thereon and the burner-tube surrounding the latter and holding the wings or members in engagement

therewith, of the vertically-movable support carrying said engaging members the finger thereon sliding in the guide on the fount, the threaded nut on the support and the threaded post cooperating therewith capable of removal from the nut through an aperture in the fount, said aperture being normally closed by a cap mounted upon the post.

9. In a lamp the combination with the inner wick-tube, the burner having the outer wick-tube, and the spreader extending over the former and latter, of a vertically-movable extinguisher mounted upon the outer wick-tube having the broad ring at the top cooperating with the spreader and the narrow band upon its lower extremity and the spring-arms extending between them.

10. In a lamp the combination with the inner wick-tube, the burner having the outer casing and the outer tube surrounding the wick, and the spreader located above and extending over the latter, of a vertically-movable extinguisher-tube mounted upon the outer wick-tube, said extinguisher-tube having portions cut away from the sides thereof forming a broad band at one end, and a narrow ring upon the other, and the spring-arms extending between the two and adapted to engage the wick-tube to sustain the extinguisher in engagement with the spreader when in the operative position, the pins arranged upon opposite sides at the bottom of the extinguisher and the lever pivoted upon the burner-casing and having the inner bifurcated arms engaging the pins.

11. In a lamp the combination with a fount, the burner having the wick-tube mounted upon the base provided with the flanged edge threaded upon its exterior for engagement with the fount, and having the screw-thread upon its interior, the exterior perforated ring or burner-casing provided with stationary pins upon its inner surface and a revoluble ring surrounding the casing near its top and secured thereto by means of inwardly-projecting pins carried upon the ring and operating through slots or apertures in the casing, of a vertically-movable chimney-gallery mounted upon the casing, having the downwardly-extending spiral camways engaging the stationary pins and the vertical ways cooperating with the pins upon the revoluble ring.

12. In a lamp the combination with the fount, the burner having the wick-tube mounted upon the base secured to the fount and said base having the upwardly-extending flanged edge threaded upon its inner surface, the threaded ring provided upon the bottom of the exterior ring or burner-casing and adapted to secure the latter to the base, the stationary projections upon the interior of the casing and pins carried upon the revoluble ring, the vertically-movable chimney-gallery having the downwardly-extending spiral

camways and engaging the stationary projections and the vertical ways cooperating with the pins upon the revoluble ring, of the extinguisher-ring vertically movable upon the
5 wick-tube having the spring-arms engaging the latter, and an operating-lever pivoted to the burner and provided with the bifurcated

ends, the pins or projections arranged upon the opposite sides of the extinguisher-ring and adapted to be engaged by the lever.

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