

(No Model.)

J. M. PFAUDLER.
LAMP.

No. 478,815.

Patented July 12, 1892.

Fig. 1.

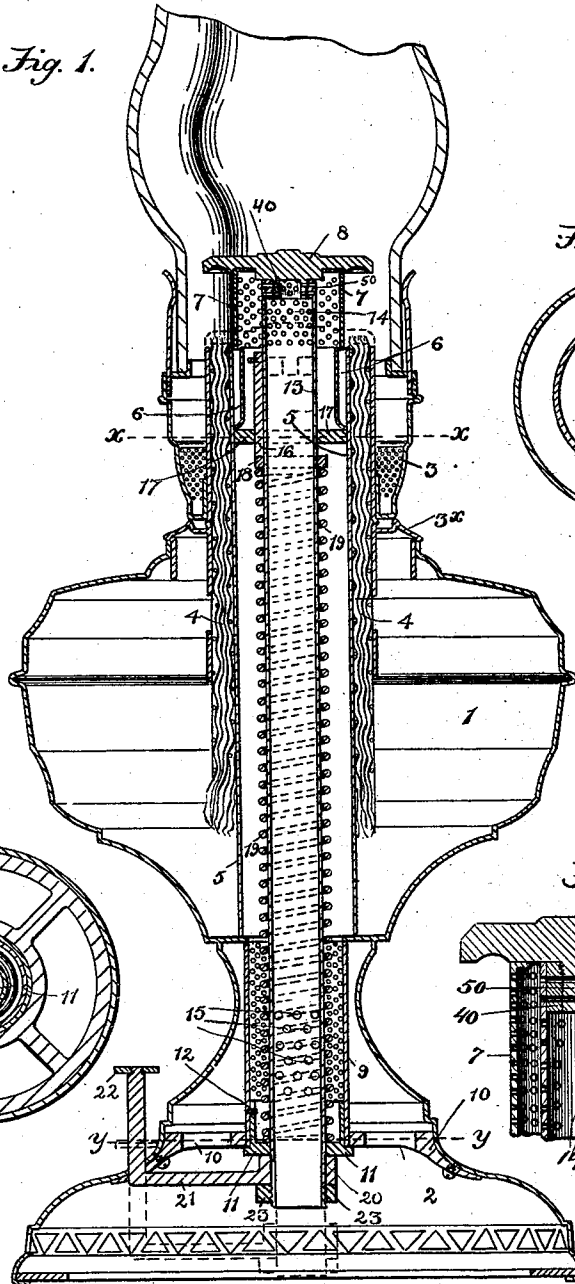


Fig. 3.

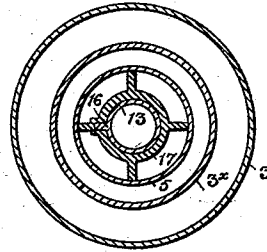


Fig. 2.

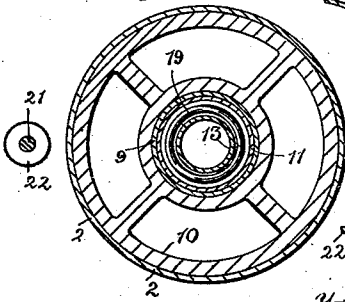
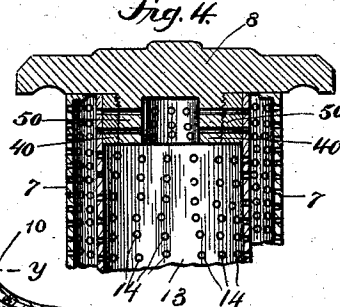


Fig. 4.



WITNESSES:

Alex. Stewart.
Walter Hancock.

INVENTOR

John M. Pfaudler
BY
Church & Church
his ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN M. PFAUDLER, OF ROCHESTER, NEW YORK.

LAMP.

SPECIFICATION forming part of Letters Patent No. 478,815, dated July 12, 1892.

Application filed February 18, 1892. Serial No. 422,033. (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 a certain new and useful Improvement 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 has for its object to provide an improved lamp that will give a large and brilliant light by reason of the arrangement of the air-supply and one which can be readily and quickly extinguished without the necessity of blowing it out or leaving the wick in condition to smoke; and to these ends it consists in certain improvements in construction and combinations of parts, all as will be hereinafter fully 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 constructed in accordance with my invention; Fig. 2, a sectional view on the line *yy* of Fig. 1; Fig. 3, a sectional view on the line *xx* of Fig. 1. Fig. 4 is a detail sectional view showing the manner of attaching the button to the air-tube.

Similar reference-numerals in the several figures indicate similar parts.

The main body of the lamp, (indicated by 1,) the attached base 2, the removable cap 3, carrying the tube for the wick 4, the gallery 3^x, and the wick-adjusting mechanism are of the ordinary or any preferred construction and do not need further description.

5 indicates a central tube extending up through the body of the lamp, having at its upper end the annular chamber 6, forming an oil-catcher for the top of the wick-supporting tube, and also a chamber into which the foraminous depending collar 7, secured to the deflecting-plate 8 at the top, may enter. The lower end of the tube 5 is open, and with it communicates another tube 9, extending to the base of the lamp, which latter tube may, if desired, be a continuation of the tube 5. This tube 9 is perforated, as shown, and its lower end is secured to a spider 10, embodying a central ring and outwardly-extending arms, which may be bolted or otherwise se-

cured to the shoulder formed on the base of the lamp. Within the lower end of the tube is arranged to slip a thimble 11, secured in position by a pin 12 on the tube entering an angular slot formed in the side of the thimble and constituting a bayonet-fastening.

Arranged within the tube 5 and extending from the top to the bottom of the lamp is an interior tube 13, having a series of perforations 14 at its upper end and perforations 15 at its lower end, and to the upper end of this tube is secured, preferably by a hollow stud 40, screwing into a collar 50 in the tube, the deflecting plate or cap 8, with the attached foraminous collar or air-distributor 7. Upon one side of the said tube is arranged a rib or spline 16, entering a corresponding groove in a spider 17, secured in the tube 5 and serving to embrace and support the movable tube 13. Arranged below the spider and preferably sliding loosely on the tube 13 is a collar 18, engaging the lower end of the spline, and between said collar and the thimble 12 at the bottom of the lamp is arranged a spiral spring 19, whose function is to keep the tube pressed upwardly in the position shown in full lines, Fig. 1, the upward movement being arrested by a collar 20 on the arm 21, extending outwardly and then up through the base of the lamp and having on its upper end a thumb-piece 22. This arm 21 is secured in position by a nut 23, screwing on the lower end of the tube 13.

The deflecting-plate 8, arranged above the burner, is slightly recessed near its periphery, as shown, which recess is about the width of the wick, so that when the plate is brought down on the top of the wick-tube it will not touch the top of the wick if it is substantially even with the top of the tube.

In operation not only is air supplied to the outside of the wick in the usual way through the perforations in the gallery-piece 3^x, but as well to the inside through the ring 7, the air for this purpose passing up the tube 5, being admitted freely through the base of the lamp and through the perforations in the tube 9; but also a further supply is provided for through the tube 13, which receives air in its lower end, which is open, and through the perforations 15, slightly above its end, and discharges it through the perforations 14 inside of the ring 7. I have found in prac-

tice that by the employment of the two concentric tubes, arranged as shown, a more perfect combustion is obtained and the flame is larger and brighter than where no interior tube is used. When it is desired to extinguish the lamp, it is only necessary to press on the thumb-piece 22, depressing the tube 13 against the pressure of the spring 19 and bringing the plate 8 down on the top of the wick-tube, covering its end and extinguishing the flame at once by shutting off the air without touching the wick, thereby preventing its smoldering and the consequent objectionable smoking, as shown in dotted lines, Fig. 1.

The construction and arrangement of the parts is such that they can readily be manufactured by machinery in quantity, and also the parts can be readily separated for cleaning the lamp when desired.

Numerous slight modifications in the construction of the parts can readily be made without departing from the spirit of my invention, and I do not, therefore, desire to be confined to precisely the construction shown.

I claim as my invention—

1. In a lamp of the kind described, the combination, with the central air-tube open at the bottom, of the interior tube extending from the bottom of the lamp, open at the lower end, and having the perforations at the top, and the plate arranged at the burner, having the depending foraminous ring, through which the air from the central tube and interior tube is discharged, substantially as described.

2. In a lamp of the kind described, the combination, with the central air-tube, the vertically-movable interior tube extending to the lower portion of the lamp, open at the bottom, and having the perforations at the upper end, the deflecting-plate on said tube extending over the wick, and the depending foraminous ring, of the spring for supporting the interior tube and operating means for moving it downward, substantially as described.

3. In a lamp of the kind described, the combination, with the central air-tube and the interior air-tube movable therein, extending to the lower portion of the lamp, open at its lower

end, and having the perforations near its upper end, of the deflecting-plate on said interior tube arranged over the wick and adapted to serve as an extinguisher when depressed, a spring for supporting said tube, and an operating device for depressing it, substantially as described.

4. In a lamp of the kind described, the combination, with the central air-tube and the interior tube extending to the lower portion of the lamp, having the threaded upper end and the apertures therein, of the deflecting-plate screwing on said tube and extending over the wick, the foraminous ring secured thereto, and devices for operating the interior tube vertically to extinguish the lamp, substantially as described.

5. In a lamp of the kind described, the combination, with the circular wick, of the deflecting-plate extending over the wick, having the foraminous ring secured thereto for securing an even supply of air, and a movable support for said plate, whereby it may be depressed to serve as an extinguisher when desired, substantially as described.

6. In a lamp of the kind described, the combination, with the central tube, the interior tube, and the deflecting-plate at its upper end and a projection below it, of the spring encircling said tube, the spider at the lower end of the lamp, and the removable thimble therein, between which and the projection on the tube the spring is confined, substantially as described.

7. In a lamp of the kind described, the combination, with the central tube, the interior tube, and the deflecting-plate at its upper end and a projection below it, of the spring encircling the tube, the spider at the lower end of the lamp, the removable thimble therein, between which and the projection on the tube the spring is confined, and the arm on the tube for actuating it against the spring and serving as a stop for limiting its upward movement, substantially as described.

JOHN M. PFAUDLER.

Witnesses:

FRED F. CHURCH,
A. A. DAVIS.