

G. W. McGILL.

LAMP.

No. 348,405.

Patented Aug. 31, 1886.

Fig. 1.

Fig. 5.

Fig. 2.

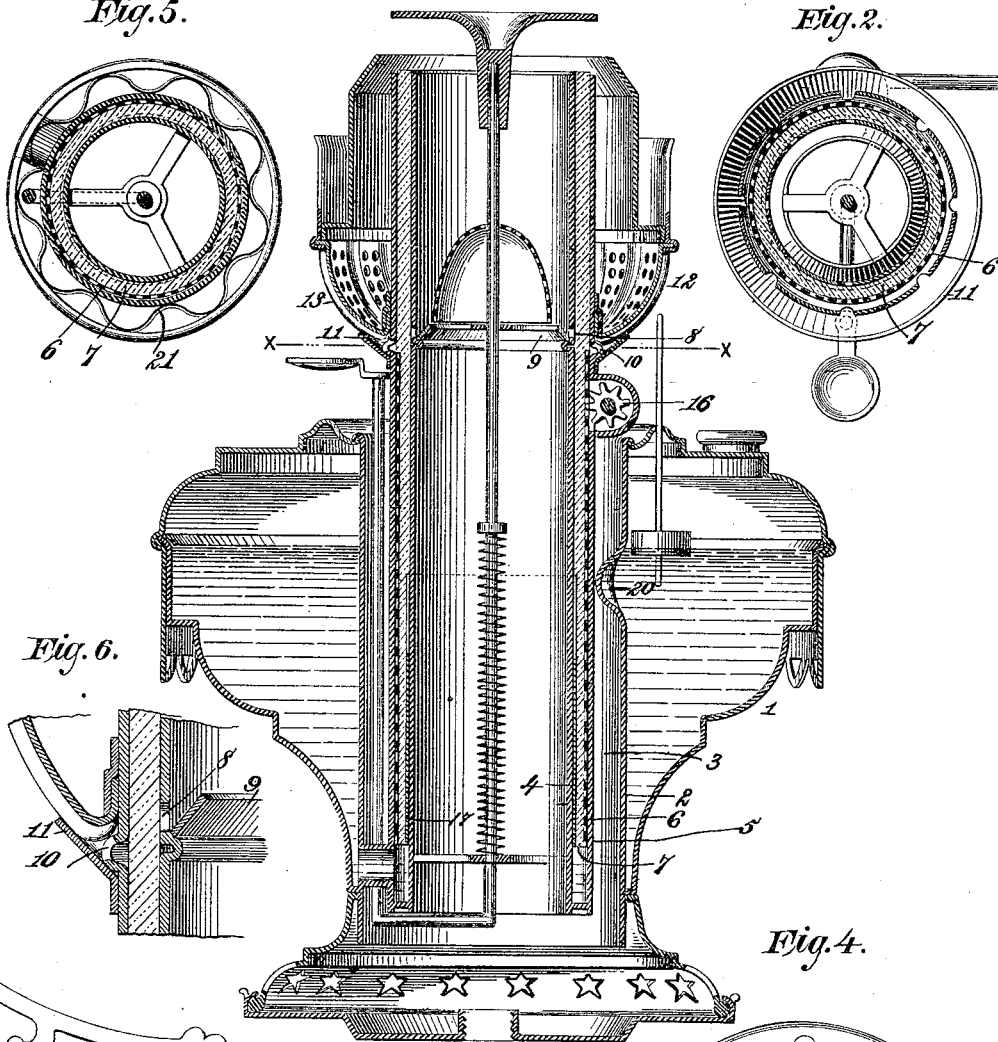
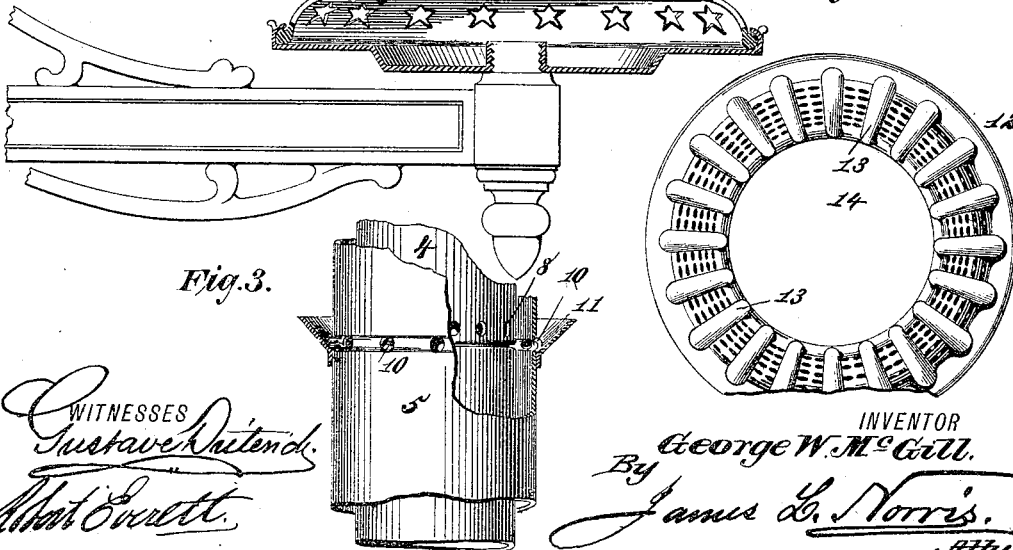


Fig. 6.

Fig. 4.



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(No Model.)

2 Sheets—Sheet 2.

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Fig. 7.

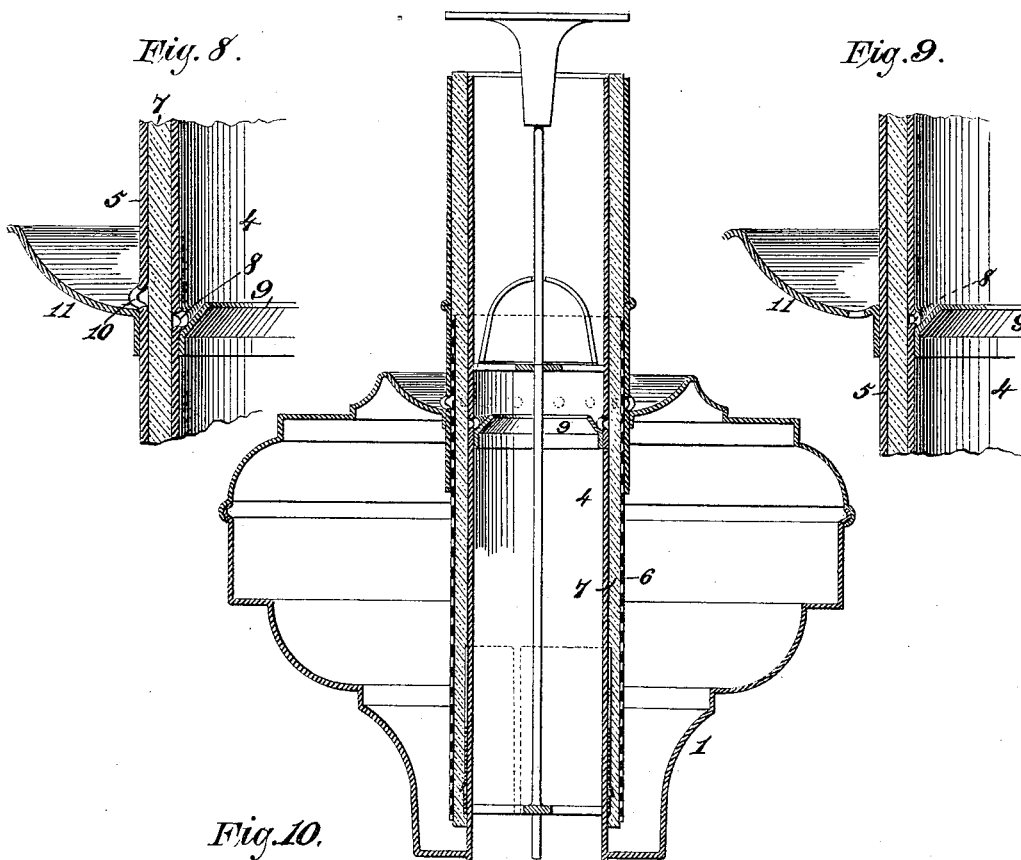


Fig. 8.

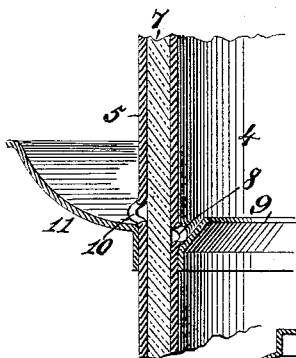


Fig. 9.

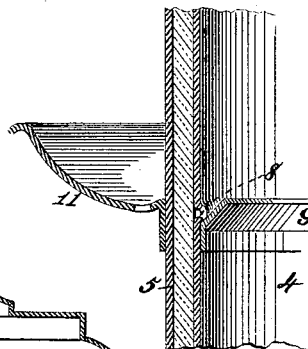


Fig. 10.

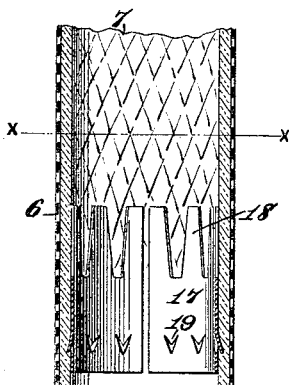


Fig. 11.

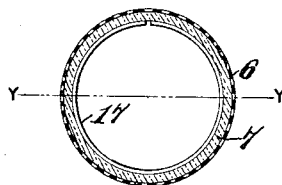
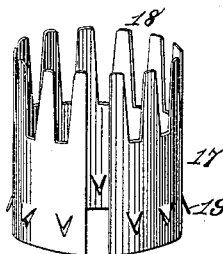


Fig. 12.



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UNITED STATES PATENT OFFICE.

GEORGE W. MCGILL, OF NEW YORK, N. Y., ASSIGNOR TO HOLMES, BOOTH & HAYDENS, OF WATERBURY, CONNECTICUT.

LAMP.

SPECIFICATION forming part of Letters Patent No. 348,405, dated August 31, 1886.

Application filed March 23, 1886. Serial No. 196,361. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MCGILL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Lamps, of which the following is a specification.

This invention relates to Argand lamps; and it consists in the novel construction of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a vertical central sectional view of an Argand oil-lamp embodying my invention; Fig. 2, a detail sectional view taken on the line *x x* of Fig. 1; Fig. 3, a broken elevation of a part of the wick-tube; Fig. 4, a bottom plan view of the chimney-supporting air-distributor; Fig. 5, a detail transverse sectional view of the wick-tube and surrounding jacket, showing a modification of the means for supporting the upper part of the wick-tube therein; Fig. 6, a detail sectional view showing a part of the wick-tube and chimney-supporting air-distributor; Fig. 7, a vertical central sectional view of a modified construction of lamp embodying my invention; Fig. 8, a detail sectional view of portions of the wick-tube and oil-reservoir shown in Fig. 7; Fig. 9, a view similar to Fig. 8, showing a modification; Fig. 10, a vertical sectional view on the line *y y* of Fig. 11; Fig. 11, a transverse sectional view on the line *x x* of Fig. 10, and Fig. 12 a perspective view of the thimble or sleeve for securing the wick to the wick-carrier.

The lamp shown in Fig. 1 comprises features common to Argand oil-lamps as heretofore constructed, and as illustrated, for example, in my English Patent No. 6,945 of the year 1885. The oil-reservoir 1 may be of sheet metal or of any other suitable material, and is provided with an inner cylindrical wall, 2, constituting a jacket around the wick to create the air-cooling space 3. The wick-tube is composed of two concentric cylinders or tubes, 4 and 5, the outer one being larger in diameter than the inner one to provide a space for receiving the wick-carrier 6 and wick 7. The two tubes are joined together at their lower ends, to admit of receiving and holding oil to

feed the wick, and are otherwise disconnected to permit the insertion and adjustment of the wick.

The inner tube, 4, preferably at a point above the oil-reservoir, is furnished with one or more transverse orifices, 8, directly under which is secured the edge of an inwardly-projecting inclined flange, 9, which constitutes an oil-receiver for the purpose of collecting such oil as may flow from the wick down the interior of the inner tube and conducting it through the orifice or orifices 8 back to the wick.

The outer tube, 5, preferably at a point adjacent to the orifices of the inner tube, is also furnished with one or more transverse orifices, 10, directly under which is secured the edge of an outwardly-projecting inclined flange, 11, which serves as a receiver to collect such oil as may flow from the wick down the exterior surface of the outer tube and conduct it through the orifices back to the wick. Where the invention is applied to a lamp not possessing the jacket 2, to form the air-cooling space 3, the conducting-orifices 10 for the receiver 11 of the outer tube, 5, may be formed in the bottom of such receiver, and the latter may be formed by depressing the top wall of the oil-reservoir around the wick-tube, as shown in Fig. 9, whereby the oil-drip in this receiver will flow back into the oil-reservoir.

In Figs. 7 and 8 the oil-conducting orifices for the outside receiver, 11, are in the tube 5, as in Figs. 1, 3, and 6; but the receiver 11 is formed by a depression in the top wall of the reservoir.

The foraminous air-distributor 12, Fig. 1, for supporting the lamp-chimney, is provided on its outside with a series of radial ribs, 13, extending to the edge of the central opening, 14, through which the wick-tube passes, so that when the distributor is in place the ribs rest upon the upper edge of the flange, comprising the outer receiver, 11, whereby the distributor is supported by the receiver, while the ribs elevate the body of the distributor, so that its lower edge does not rest upon the bottom of the receiver, as such would interfere with the conduct of the oil-drip through the orifices 10. The wick-carrier 15 may be of ordinary construction—such as a perforated sheet-metal tube, with which engages the

ratchet-wheel 16 for adjusting the carrier vertically. To secure the wick to the lower end of the wick-carrier, I provide a cylindrical spring thimble or sleeve, 17, split or divided 5 longitudinally throughout its length, so that it can be contracted and expanded. This thimble is furnished at its upper end with spring-fingers 18, and adjacent to its lower end it is provided with outward and downward 10 projecting spurs 19, preferably formed by punching out the metal of the thimble. The thimble being inserted into the end of the tubular wick, the spurs engage the same, and the tendency of the thimble to expand clamps 15 the wicks between the wick-carrier and the thimble. It is often found that wicks for a given diameter of burner vary in thickness, and if the thimble were not adapted to contract it would be a difficult matter to introduce the 20 wick and thimble into the carrier; but by constructing the thimble in the manner shown and described it can be contracted or expanded, according to the conditions required for thick or thin wicks.

25 I am aware that in the patent hereinbefore alluded to a wick-securing tube is shown, having spurs or teeth and spring fingers like those herein shown and described; but the tube is not expansible and contractible, and 30 consequently it is very difficult to attach wicks which vary in thickness.

The upper part of the wick-tube is supported and steadied by depressing the jacket 2 inwardly, as at 20, at several points around 35 its circumference, so that such depressed portions of the metal bear directly against the outer tube, 5; but while this serves the purpose it is not desirable, and instead thereof I support and steady the wick-tube by securing 40 between the jacket 2 and outer tube, 5, a corrugated annulus or band, 21, the corrugations bearing alternately against the jacket and the outer tube, 5, as in Fig. 5. This provides a very desirable support around the wick-tube, 45 and does not interfere with the passage of air through the air-cooling space.

I am aware that foraminous air-distributers for supporting a chimney have been made to

engage a rest upon a lamp-collar; but my invention differs therefrom in providing the 50 chimney-supporting air-distributer with a series of radial ribs resting on an oil-drip receiving-flange on the wick-tube, in conjunction with an oil-conduit from such flange to the wick. I am also aware that the lower end of 55 a wick has been secured to a wick-raiser by an unsplit tube; but such, as before stated, I do not claim.

Having thus described my invention, what I claim is— 60

1. The combination, with the outer tube of an Argand lamp-burner, having an orifice, 10, and an attached outwardly-inclined annular flange, 11, forming an oil-drip receiver, of the chimney-supporting air-distributer having a 55 series of external ribs, 13, resting on the upper edge of the annular flange for elevating the lower edge of the distributer from the bottom of the oil-receiver, substantially as described. 70

2. The combination, with the wick-tube and the oil-reservoir having the jacket surrounding the wick-tube and separated therefrom to provide the air-cooling space, of a corrugated annulus or band secured between the 75 jacket and wick-tube, substantially as and for the purpose described.

3. The combination, with the wick-tube and the cylindrical wick-carrier of an Argand lamp-burner, of the longitudinally-divided ex- 80 pansible and contractible wick-securing thimble, substantially as described.

4. The combination, with the wick-tube and the cylindrical wick-carrier of an Argand lamp-burner, of a longitudinally-divided ex- 85 pansible and contractible wick-securing thimble having outwardly-projecting spurs adjacent to its lower edge, substantially as described.

In testimony whereof I affix my signature in 90 presence of two witnesses.

GEORGE W. MCGILL.

Witnesses:

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JOS. L. COOMBS.