(No Model.)

J. GREGORY.

LAMP BURNER.

No. 564,991. Patented Aug. 4, 1896.

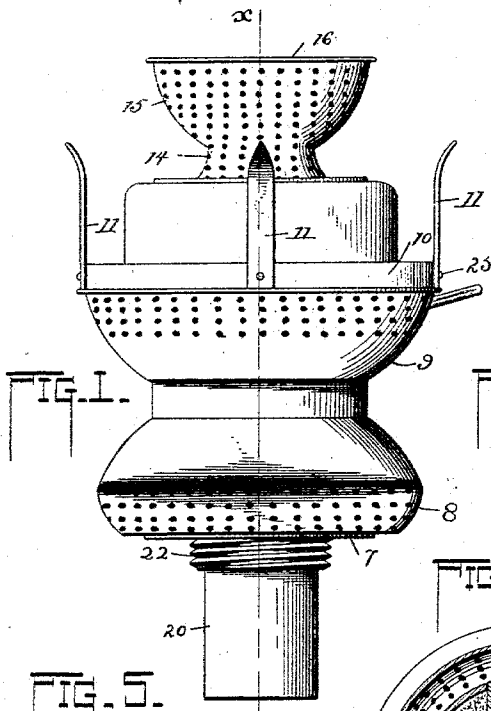

FIG. 1.

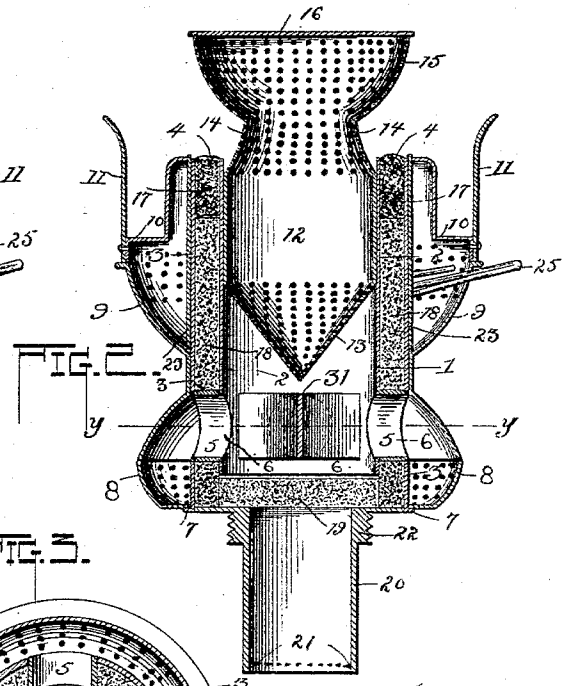

FIG. 2.

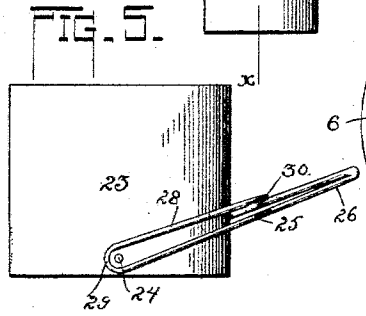

FIG. 5.

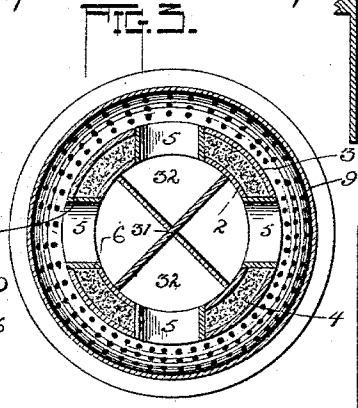

FIG. 3.

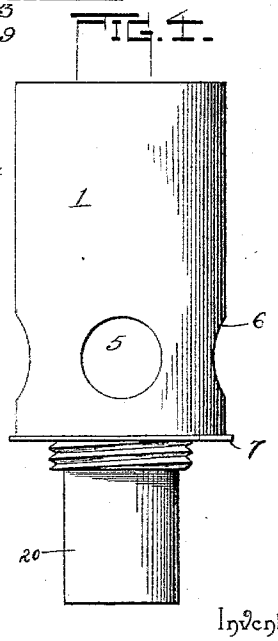

FIG. 4.

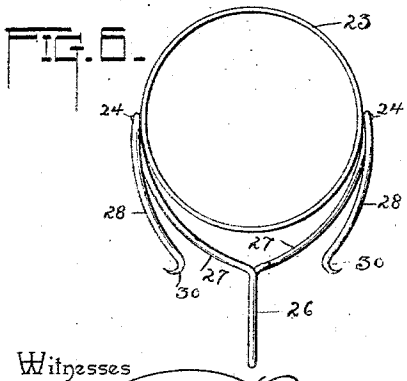

FIG. 6.

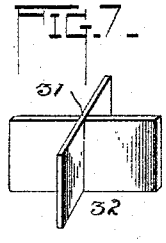

FIG. 7.

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UNITED STATES PATENT OFFICE.

JOSEPH GREGORY, OF NEW YORK, N. Y., ASSIGNOR OF TWO-THIRDS TO THOMAS APPLETON, OF SAME PLACE, AND BESSIE HARDING MORRILL, OF SEATTLE, WASHINGTON.

LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 564,991, dated August 4, 1896.

Application filed January 27, 1896. Serial No. 577,016. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH GREGORY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Lamp-Burner, of which the following is a specification.

This invention relates to lamp-burners having a central air-draft; and has for its object to dispense with wick-elevating mechanism of any kind and to prevent the breaking of lamp-chimneys, which frequently happens by the flaring of the flame, and to secure a maximum light and draft to support combustion.

Other objects and advantages are contemplated and will appear as the nature of the invention is disclosed, and to this and such other ends as pertain to the spirit of the invention the latter consists in certain details of construction and combinations of the parts which hereinafter will be more fully described, illustrated, and claimed.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a lamp-burner having the invention applied. Fig. 2 is a vertical section thereof on the line X X of Fig. 1. Fig. 3 is a plan section on the line Y Y of Fig. 2. Fig. 4 is a side elevation of the wick-tube. Fig. 5 is a side elevation of the extinguisher, having its operating-lever attached. Fig. 6 is a top plan view of the extinguisher and its lever. Fig. 7 is a detail view of the deflector.

Corresponding and similar parts are designated in the following description and all the figures of the appended drawings by the same reference-characters.

The wick-tube 1 comprises an inner shell 2 and an outer shell 3 of larger diameter and concentrically disposed, so as to provide an annular wick-space 4 between them. Corresponding openings 5 are formed in the sides of the shells 2 and 3, near their lower ends, and rings 6, extending across the wick-space 4, have connection at their edges with the said shells adjacent to the openings 5 in such a manner as to prevent the escape of any oil from the wick-space 4 into the openings 5. The lower end of the shell 3 is formed with an outer flange 7, which supports a base 8, perforated in its outer side for the entrance of air to support combustion. A jacket 9 is supported upon the base 8, and its upper part is perforated for the admission of air exterior to the wick-tube. The gallery 10 is placed upon the jacket 9 and is provided with holders 11 to retain the lamp-chimney in place.

The separator 12 is fitted within the upper portion of the wick-tube and has its lower end 13 made conical and perforated, and its upper portion is contracted to form a neck 14 and is flared or expanded above the neck 14, as shown at 15, so as to properly spread the flame, and is closed at its upper end by a plate 16. The upper part 14 and 15 is perforated to admit of the air escaping in finely-divided jets, so as to supply the air to the flame in a uniform manner and to the best possible advantage.

A ring 17 of asbestos or mineral wool is fitted in the upper portion of the annular wick-space 4 and is practically indestructible, and can for this reason be made thinner than a wick of cotton or other absorbent material. In order to supply the ring 17 with oil from the fount or reservoir, a wicking or other absorbent material 18 is placed in the lower portion of the wick-tube and its lower end engages intimately with a disk or wad 19 of some suitable absorbent material placed in the lower portion of the wick-tube and extending over a feeder 20, by means of which the oil is supplied by capillary attraction to the absorbent disk 19, thence to the wicking 18, and to the ring 17, where the oil is burned. The feeder 20 is a tube, which extends into the fount or reservoir, and is provided on its inner side with a series of spurs or points 21, and wicking or other absorbent is forced into the tube 20 and retained in place therein by the said spurs or projections 21. A threaded

collar 22 is provided at the upper end of the tube 20 and is adapted to make connection with the ring or neck of a reservoir or fount in the usual way.

The extinguisher 23 is in the form of a sleeve and snugly fits the upper portion of the wick-tube, and is slidably mounted thereon, and is provided at diametrically opposite points with lugs 24, which are engaged by the operating-lever 25, so that when depressing the outer end of the said lever the extinguisher will be moved upward to regulate the flame or extinguish it. The operating-lever 25 is formed of a length of wire, which is doubled upon itself, so as to provide the handle 26, and the end portions are oppositely curved, as shown at 27, to extend upon each side of the extinguisher, and are recurved, forming spring-arms 28 and folds 29, which latter receive the lugs 24, and having the terminal portions 30 bent outwardly to provide journals, which engage with two openings of the perforated part of the jacket and which form the fulcra for the said lever to tilt upon when operating the extinguisher. By having the lever 25 constructed in the manner set forth the curved members 27 will by reason of their elasticity press against the sides of the extinguisher 23 and retain the folded ends 29 in engagement with the lugs 24, and the spring-arms 28 will likewise maintain the journals or fulcra 30 in positive engagement with the openings in the said jacket.

In constructing and assembling the parts of the burner the ring 17 is adjusted so as to secure a maximum flame when the extinguisher is at its lowest position, and the parts are proportioned so that the flame will not smoke or cause cracking or breaking of the chimney. Hence a saving in this item results from the use of a burner constructed in accordance with this invention. To lower the flame, the projecting end or handle 26 of the lever 25 is depressed, thereby elevating the extinguisher until the flame or light is sufficiently reduced, and for extinguishing the light the outer end of the lever is depressed until the upper end of the extinguisher comes in contact with the plate 16 or the perforated part 15 of the separator.

In order to prevent interference of the draft entering the several openings 5 and direct the same upward through the wick-tube, a deflector 31 is placed in the lower portion of the wick-tube and in the plane of the said openings 5, and is constructed to provide chambers 32 opposite each opening. For all practical purposes four openings 5 are sufficient, and the deflector is formed of two plates intersecting midway of their length and is placed so that the ends of the plates come between the openings 5, as shown most clearly in Fig. 3.

Having thus described the invention, what is claimed as new is—

1. In a central-draft lamp-burner, the combination with an annular wick-tube, of a separator fitted within the wick-tube and having its lower end pointed or conical, and having its upper portion contracted to form a neck and flared or expanded above the neck, the conical, neck and flared parts being perforated, and a plate closing the upper end of the separator, substantially as described.

2. In a central-draft lamp-burner, the combination with an annular wick-tube having a series of draft-openings in its sides near the lower end, and a deflector located in the plane of the said draft-openings and formed with inwardly-converging compartments or chambers opposite the said draft-openings, of a separator located in the upper portion of the wick-tube and having its lower end pointed or made conical and perforated, the apex coming above the line of convergence of the compartments of the deflector, and having a perforate neck and a flaring portion at its upper end, substantially as shown for the purpose described.

3. In a central-draft lamp-burner, the combination of an annular wick-tube having the lower end of the inner shell terminating above the lower end of the outer shell, a threaded collar having connection with the lower end of the outer shell, a ring of indestructible absorbent material fitted in the upper portion of the wick-space, an absorbent material located in the lower portion of the wick-space and in contact with the said absorbent ring, a disk or wad of absorbent material at the base portion of the wick-tube and extending over and closing the upper end of the aforesaid collar and touching the absorbent material immediately thereabove at a point below the inner shell, and a feeder having communication with the said absorbent disk or wad and fitted within the said threaded collar, substantially as and for the purpose set forth.

4. In a central-draft lamp-burner, the combination with the wick-tube, the jacket, and a tubular extinguisher slidably mounted upon the wick-tube and having lateral extensions, of a lever for operating the extinguisher comprising a handle adapted to operate through the jacket, oppositely-curved members engaging with the extensions of the tubular extinguisher, and arms having their terminal portions engaging with the jacket upon opposite sides of the handle and forming fulcra for the said lever, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH GREGORY.

Witnesses:
JOHN H. SIGGERS,
THEODORE DALTON.