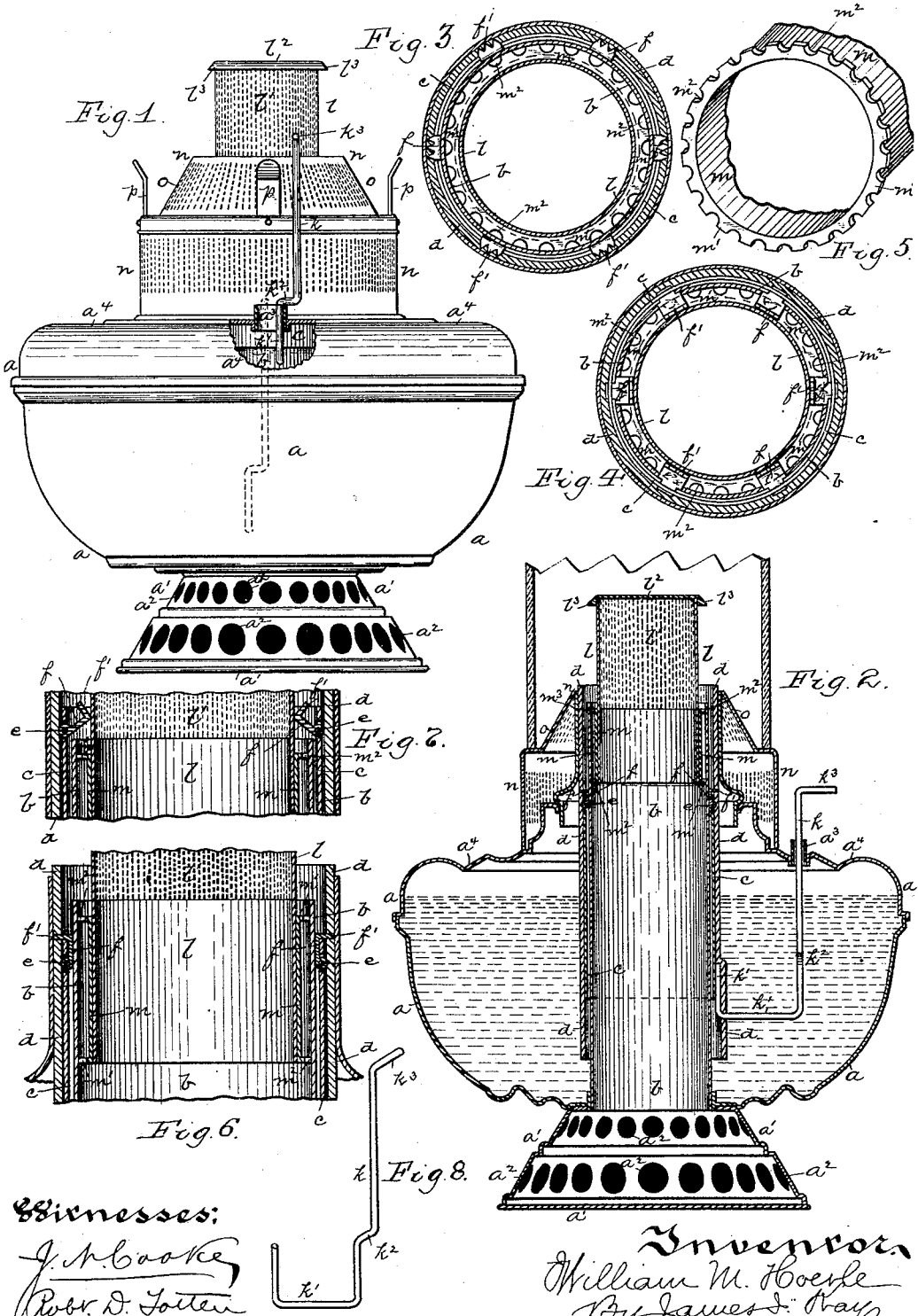


(No Model.)

W. M. HOERLE.
CENTRAL DRAFT LAMP.

No. 432,311.

Patented July 15, 1890.



Witnesses:

J. N. Cooke
Robt. D. Jatten

Inventor
William M. Hoerle
By James S. May
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM M. HOERLE, OF ALLEGHENY, ASSIGNOR TO THE PITTSBURG BRASS COMPANY, OF PITTSBURG, PENNSYLVANIA.

CENTRAL-DRAFT LAMP.

SPECIFICATION forming part of Letters Patent No. 432,311, dated July 15, 1890.

Application filed May 13, 1889. Serial No. 310,508. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. HOERLE, a resident of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Central-Draft Lamps; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to central-draft lamps, its principal object being to provide a wick-raising device which will hold the wick securely on the wick-tube and release the said wick when the upper end of the wick-tube passes the upper end of the central draft-tube, so that the wick may be properly adjusted.

Its further object is to provide a means of consuming the ill-smelling and disagreeable vapors which arise from the central draft-tube and are diffused into the room or apartment, due to the oil which collects upon the interior surface of the central draft-tube.

Its further objects are also to simplify and cheapen the manufacture of the lamps by constructing the burner and chimney-gallery all in one piece and adapted to rest upon the fount of the lamp, and to improve the construction of the lamp in other particulars.

To these ends my invention comprises certain improvements in the wick-raising device and in the flame-spreader, as will be hereinafter particularly set forth and claimed.

My invention also consists in certain improvements and combination of parts, all of which will be more fully hereinafter set forth.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side view, partly broken away, of a lamp embodying my invention. Fig. 2 is a vertical cross-section of same. Fig. 3 is an enlarged plan view, partly in section, of the wick-raising device, showing the wick secured by the clutches. Fig. 4 is a like view showing wick released. Fig. 5 is an enlarged perspective view of the band surrounding the flame-spreader, showing the indentations on one end thereof. Fig. 6 is an enlarged vertical section showing the wick secured by

the clutches; Fig. 7, a like view showing the wick released, and Fig. 8 a view of the wick-raising bar.

Like letters of reference indicate like parts in each.

I will describe my invention with reference to a common form of lamp, in which *a* is the fount or bowl of the lamp, having in its base *a'* the series of openings *a''*, through which the air can pass to a central draft-tube *b*, secured within the fount *a* in a suitable manner. Encircling the central draft-tube *b* is the wick-raising tube *c*, which is adapted to move freely on said central draft-tube *b*, and around which the wick *d* fits snugly. Around the upper end of the wick-raising tube *c* are formed a series of journals *e*, upon which are journaled a corresponding number of clutches *f*, provided with the teeth *f'*. The clutches *f* are so journaled on the journals *e* that when the wick-raising tube *c* is raised so that its upper end is above the top of the tube *b*, as shown in Fig. 7, the clutches *f* will fall back within the tube *c* and over the top edge of the tube *b*, as shown in Figs. 4 and 7, and so release the wick; but when the wick-raising tube *c* is lowered the upper end of the central draft-tube *b* will raise the clutches *f* on their journals and force the teeth *f'* beyond the outer face of the wick-raising tube, so that they extend out at an angle to the tube and so grasp the wick, as shown in Figs. 2, 3, and 7.

To raise and lower the wick-raising tube *c*, I employ a bar *k*, made of wire or other suitable material, having the bent arm *k'* at the lower end thereof, which is securely attached to the tube *c*, while a shoulder *k''* is formed on the bar *k* just beyond the bent arm *k'*. This bar *k* passes up through a suitable opening *a'''* in the top piece *a'''* of the fount, and is provided with a suitable handle *k'''*, by means of which the bar *k* is drawn up or pushed down through the opening *a'''* to raise or lower the tube *c* and wick thereon, and when it is desired to hold the wick-raising tube in its raised position the shoulder *k''* is raised through the opening *a'''* above the top of the fount, and the bar *k* is then drawn over until the shoulder *k''* rests on the edge of the opening *a'''*, and so holds the tube *c* in its

raised position. Any suitable means, however, of raising said tube may be employed.

The flame-spreader l is composed of the perforated tube l' , upon the top of which rests the cap l^2 , without perforations, whose edges extend out beyond the perforated tube l' , and so assist in spreading the flame. As fully shown in Fig. 2, this cap l^2 has an annular lip l^3 extending down from it, within which the perforated tube l' is secured by expanding the body of the tube against the inner surface of the lip, and consequently the flame-spreader and its top plate can be formed at low cost, and the lip l^3 can extend out beyond the body of the flame-spreader to form a bead and assist in spreading the flame. A band or ring m , constructed of brass or other suitable material, encircles the spreader l at its lower end, said band m having the flanges m' m^3 extending out from its ends, the flange m' being at the base of the tube and the flange m^3 at the upper end thereof, said flanges having indentations or perforations m^2 thereon, in order that part of the air coming from the central draft-tube b may pass through the indentations m^2 between the outer surface of the band m and the inner surface of the central draft-tube b when the spreader l rests within the central draft-tube. In case any unconsumed oil passes over the edge of the central draft-tube and descends on the inner face thereof and becomes heated by the flame, a very disagreeable and ill-smelling vapor will arise from this unconsumed oil; but the air coming up through the indentations m^2 and through the flame-spreader l will drive this ill-smelling vapor into the flame, where it will be consumed.

The burner n is perforated to allow the air to circulate freely around the flame, and has formed integral therewith the chimney-gallery o , which it has heretofore been customary to form separate from the burner, the two being secured together by flanging or depressing the metal, or being soldered together, thus increasing the cost, and in the latter case the heat of the lamp rendering the connection insecure.

I am enabled to stamp the burner and gallery from a single piece of metal, and subsequently to perforate both parts at the same time, and so greatly reduce the cost thereof. Clips p support the chimney within the gallery o . The combined burner and gallery rests within a suitable seat in the top piece a^1 of the fount.

When my improved lamp is in use, and it is desired to insert the wick d on the wick-raising tube, the tube c is first raised by the bar k until the shoulder k^2 rests upon the edge of the opening a^1 on the top piece a^3 . When the tube c is in this raised position, with its upper end above the upper end of the central draft-tube b , the clutches f will fall back of their own accord into the interior of the wick-raising tube, and the wick d may then be readily adjusted on the tube c . When the wick

has been adjusted on the wick-raising tube, the bar k is lowered, and the tube c , secured thereto, is drawn down thereby, so that as the said tube descends on the central draft-tube b the upper end of said central draft-tube will come in contact with the clutches f and force up said clutches until the teeth thereof are pressed into and grasp the wick on all sides and hold it securely, so that when the wick is lowered it is held evenly on all sides and is prevented from canting. The lamp is now ready for lighting, and when lighted the air entering the openings a^2 in the base a' of the lamp passes up through the central draft-tube b and into the flame-spreader l , while a part of said air also passes up through the indentations m^2 into the annular space between the outer surface of the band m and the inner surface of the central draft-tube b , which tends to drive the ill-smelling vapor arising from any oil on the inner surface of the central draft-tube into the flame, as above set forth, when it will be consumed. The wick is thus raised and lowered, as found necessary in adjusting it, being held even by the clutches on the wick-raising tube, and being therefore fed evenly as it is burned. When it has been consumed to a point where it is necessary to raise it on the wick-raising tube, the bar k is raised, and with it the wick-raising tube, until the shoulder k^2 rests upon the edge of the opening a^2 . As the tube c is raised the clutches, grasping the wick on all sides, will raise said wick evenly, and when the upper end of the tube c has passed beyond the upper end of the central draft-tube the teeth of the clutches f will fall out of the wick, so releasing it, the clutches falling back into the position shown in Fig. 7, when the wick may be raised and adjusted on the wick-raising tube without catching on or engaging with the clutches, and as soon as the wick-raising tube is lowered the clutches again engage with the wick and carry it down.

The lamp is simple in construction and provides an even adjustment of the wick, as well as overcomes disagreeable odors from the lamp, and it can be constructed at low cost.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a lamp, the combination of the wick-raising device and a bar k connected thereto and extending upwardly through the fount-body and having the shoulder k^2 , adapted to engage with and rest upon the body of the fount, substantially as and for the purposes set forth.

2. In a lamp, the combination, with the central draft-tube, of the wick-raising tube surrounding the same, and the bar k connected to the wick-raising tube and extending upwardly through the fount-body and having the shoulder k^2 , adapted to engage with and rest upon the fount-body, substantially as and for the purposes set forth.

3. In a lamp, the combination, with the central draft-tube, of the flame-spreader fitting therein, formed of the band or tube *m*, having a flange *m'* at the base, the tube *l'* above
5 said band, and a flange *m²* between the tube and band, substantially as and for the purposes set forth.

In testimony whereof I, the said WILLIAM M. HOERLE, have hereunto set my hand.

WILLIAM M. HOERLE.

Witnesses:

ROBT. D. TOTTEN,
J. N. COOKE.