C. KIENLE.

CANDLE-LAMP.

No. 186,139. Patented Jan. 9, 1877.

Fig: 1.

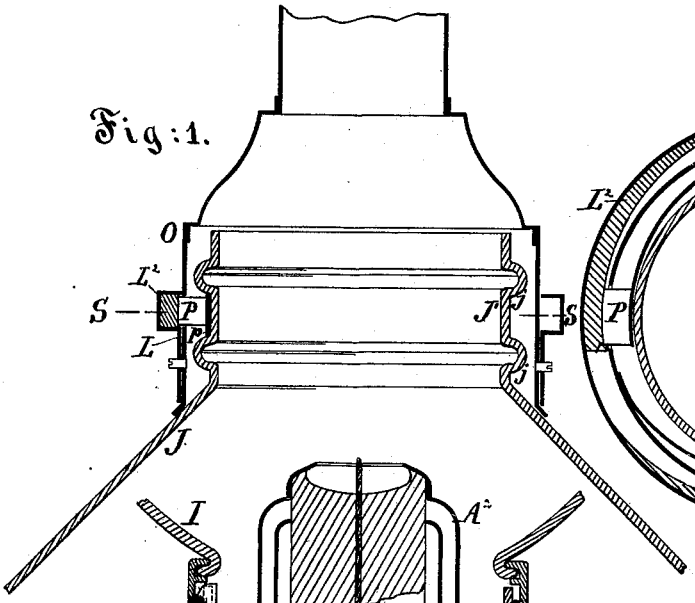


Fig: 2.

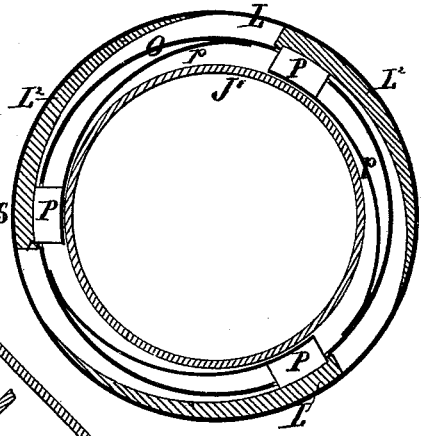
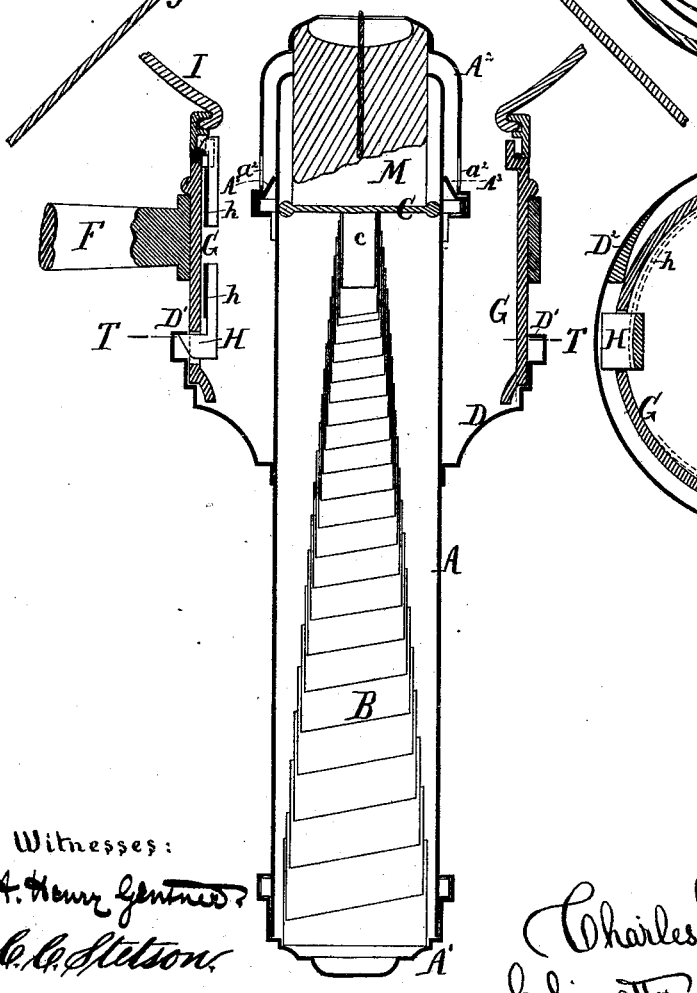
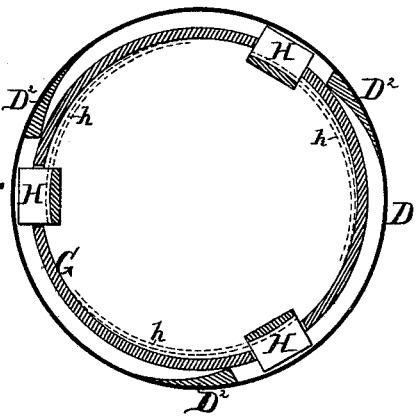


Fig: 3.





Witnesses:

A. Henry Gentner Jr.

C. C. Stetson.

Inventor:

Charles Kienle.

by his attorney

Thomas D. Stetson.

UNITED STATES PATENT OFFICE.

CHARLES KIENLE, OF NEW YORK, N. Y.

IMPROVEMENT IN CANDLE-LAMPS.

Specification forming part of Letters Patent No. **186,139**, dated January 9, 1877; application filed October 18, 1876.

To all whom it may concern:

Be it known that I, CHARLES KIENLE, of New York city, in the State of New York, have invented certain new and useful Improvements relating to Lamps, of which the following is a specification:

The illuminating agent in my device is a candle of cylindrical exterior, made of proper materials, and with a properly-proportioned wick, to allow of being held in a suitable candle-holding lamp, and being forced up by a spring from below as the upper portion is consumed away by use. Lamps adapted to thus inclose and force up candles have been long known and are highly appreciated.

My invention is intended more particularly for that class of lamps, though some portions may be applied on lamps of a different character.

I have devised an improved form of spring, which cleans itself when it has, by any chance, accumulated melted fat, and gives reliable action within a long range of motion, and with less depth of casing than is required with the ordinary spring.

I have devised a form of the candle-holding parts which involves little chance of melting down the fat, and have provided means for discharging it through the sides in case melted fat does flow down. I have also provided an improved means for engaging and disengaging the parts in opening and closing the lamp, and in applying or removing the globe or shade.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a vertical section through the entire lamp, with a portion of the globe broken away. Fig. 2 is a horizontal section through the upper portion on the line S S. Fig. 3 is a corresponding section through the lower portion on the line T T.

Similar letters of reference indicate corresponding parts in all the figures.

A is the main casing, inclosing the candle and a spring. A^1 is a removable foot-piece, connected by a bayonet-joint, and B is a long volute spring of sheet-steel, coiled upon itself in the position represented, with just sufficient tightness to enable it to clean itself completely from all fat when the springs is presed home upon itself. Its smaller end encircles a pin, *c*, extending downward from the center of the candle-seat C, which supports the candle M, forcing it constantly upward into the contracted portion represented in the removable cap A^2.

Candles accurately formed without taper are ordinary articles of merchandise. The candle M is of that character. The upper end of the main casing A is contracted to fit closely to the candle, while the main body of the casing A and the candle-seat C are of considerably larger diameter. The cap A^2 has an aperture in its contracted top smaller than the diameter of the candle. The cap is enlarged below, so as to leave a considerable annular space between its inner surface and the exterior of the main casing A. This cap is fitted with a bayonet-joint for ready removal, and has liberal perforations a^2. A^3 is an internal rim, which projects inward near the bottom of the cap A^2, and fits tightly against the exterior of the casing A.

The candle is held with a clear air-space around it, except at the extreme upper end. If the candle commences to drip or run, the melted fat is likely to flow down the space between the casing A and the cap A^2, and out through the apertures a^2; but in case any fat should, by any chance, tend to clog the spring B, the spring is self-clearing. The simple act of compressing it causes each fold or convolution to rub against its mate, and detach any fat which may have adhered. It is desirable to retain as highly-glazed surface as practicable on the spring to compel the hardened fat to thus peel off more cleanly.

To the exterior of the casing A is soldered or otherwise firmly attached a large drip-cup, D, formed with an internal flange, D^1, under which are beveled cams D^2, the functions of which will presently appear. A stout ring or casing, G, is firmly supported by means of a bracket, F, adapted to be screwed or otherwise secured to the wall of a car, or other structure in which the lamp is to be used, Except for the catches or beveled spurs H. the flange and cams D^1 D^2 of the drip-cup D

may slide freely upon the exterior of the case G. Beveled spurs H protrude through apertures in the casing G, and are forced outward by springs *h*, riveted or otherwise attached to the interior of the casing G, as plainly shown in Fig. 3. To connect the candle-holder and its attachments, it is simply necessary to thrust it directly upward from below. The beveled surfaces of the spurs H, on being struck by the internal rim D^1, move inward by the yielding of the springs *h*, and allow the rim to rise past, when the spurs H snap out and engage and hold it for an unlimited period.

To disengage these parts the casing A and its attachments are turned partially around in their seat. This motion brings the beveled pieces D^2, which I have denominated "cams," into contact with the spurs H, and presses them inward. This done, the candle-holder and its connections may be drawn down and removed.

The same means are employed for connecting and disconnecting the glass globe I, its base being provided with a metal ring with the proper internal lip or flange, adapted to act against correspondingly-beveled spurs, the bevel of these spurs being on the upper instead of on the lower faces.

A modification of the same device is employed for engaging and releasing the shade J. The shade is formed above the flaring body, with a generally-cylindrical neck, J′, having two beads, *j*. The fixed casing O, supported by a bracket to the wall, carries a ring, L, capable of being turned partly around upon the casing O. The ring carries beveled cams L^2, mounted in an annular internal recess, and which act against projections P, which are supported by springs *p*, and play through openings in the fixed casing O. The springs *p* press outward. When the ring L is in the position shown in Figs. 1 and 2, the projections P are pressed inward, and engage between the beads *j* of the shade and support it. When it is desired to remove it, the ring L is turned into such different position that the cams L^2 are moved out of contact with the stops P, and the latter being pressed out by the springs *p*, the shade is liberated. A reverse movement engages the same or a substituted shade again.

I claim as my invention—

1. The self-clearing spring B, formed of sheet metal, close coiled, as represented, in combination with a candle-seat and inclosing-case, adapted to serve as herein specified.

2. The casing A, having a contracted top adapted to lead away any melted grease, and keep an air-space between it and the candle, in combination with a cap, A^2, having a properly-contracted top and an enlarged bottom, with provisions, a^2, for discharging the grease, as herein specified.

3. In a lamp having detachable parts, as specified, the engaging spurs H and springs *h* on the one part, in combination with the flange or rim D^1 and cams D^2 on the other part, adapted to engage by a direct thrust, and to separate by a turning motion, as herein specified.

4. The turning ring L, having internal cams L^2, and turning upon the fixed part O of the lamp, in combination with the beveled catches or spurs P, acting springs *p*, with the beaded neck J′ *j* of the lamp-shade, as herein specified.

In testimony whereof I have hereunto set my hand this 17th day of October, 1876, in the presence of two subscribing witnesses.

CHARLES KIENLE.

Witnesses:

A. HENRY GENTNER,

CHAS. C. STETSON.