

C. I. GORHAM.
Nursery Lamp.

No. 166,767.

Patented Aug. 17, 1875.

Fig. 1.

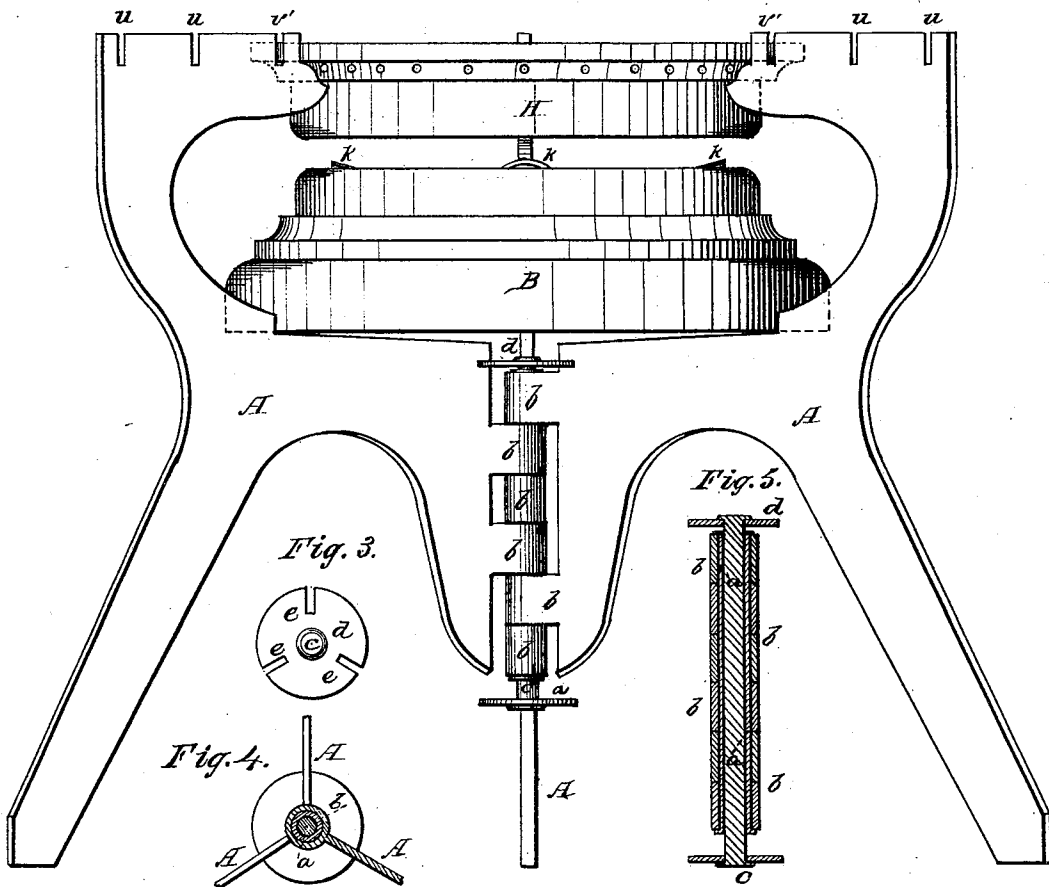


Fig. 3.



Fig. 4.

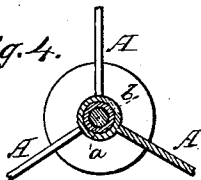


Fig. 5.

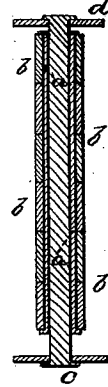
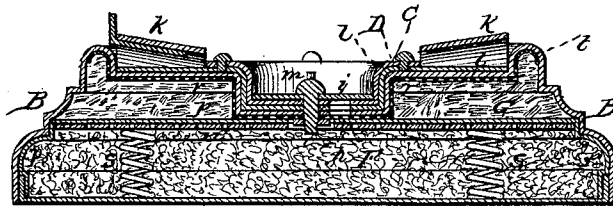


Fig. 2.



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Fig. 6.

Fig. 7.

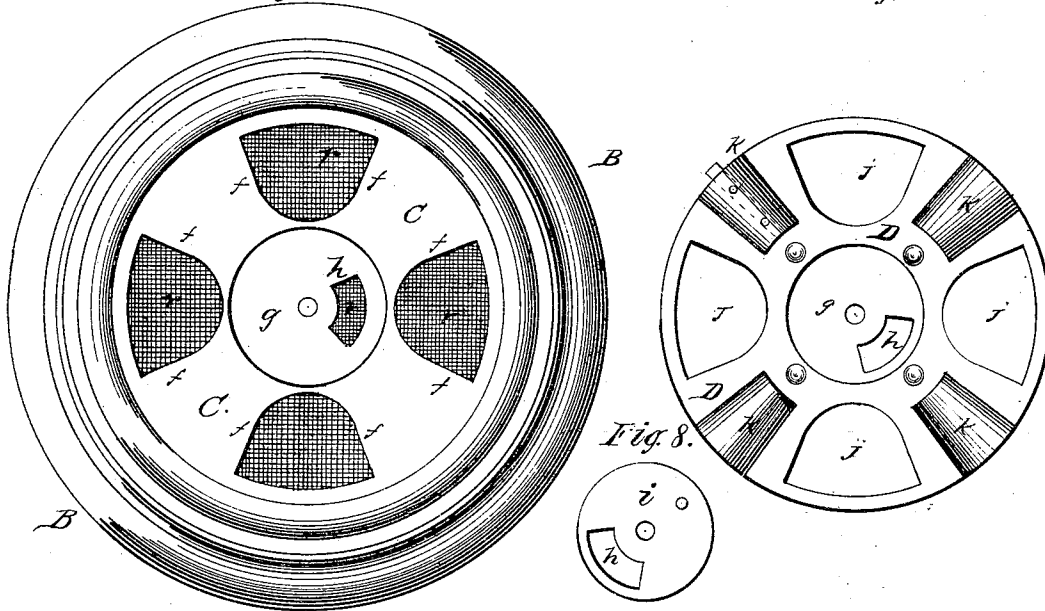


Fig. 9.

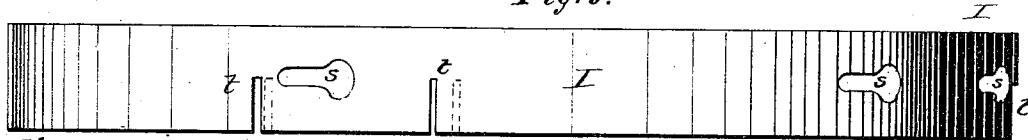


Fig. 10.

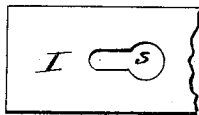


Fig. 11.

Fig. 12.

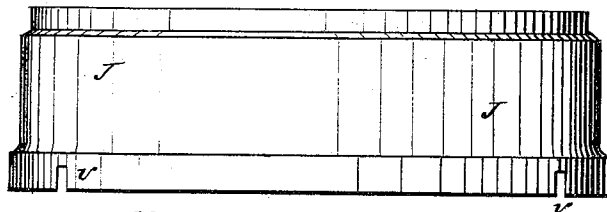
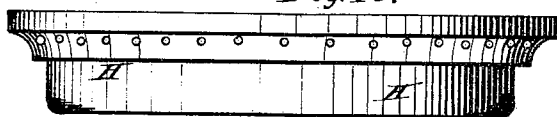


Fig. 13.



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CLARK I. GORHAM, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN NURSERY-LAMPS.

Specification forming part of Letters Patent No. **166,767**, dated August 17, 1875; application filed July 14, 1875.

To all whom it may concern:

Be it known that I, CLARK I. GORHAM, of the city of Chicago, Cook county, State of Illinois, have invented new and useful Improvements in Nursery and Laboratory Lamps, of which the following is a full description, reference being had to the accompanying drawings, consisting of two sheets, in which—

Figure 1 is an elevation of the parts shown; Fig. 2, a vertical section of the lamp; Figs. 3, 4, and 5, details; Fig. 6, a top view of the lamp proper, the adjusting-plate being removed; Fig. 7, a top view of the adjusting-plate; Fig. 8, a detail; Fig. 9, an elevation of the band used as a secondary support for the standards; Figs. 10 and 11, details of the same; Fig. 12, an elevation of a secondary ring; Fig. 13, an elevation of the band H in Fig. 1.

This invention is an improvement on the nursery-lamp for which Letters Patent were recently granted to myself and Edwin J. Cubley; and it consists in an improvement in the devices for holding the leaves of the lamp-support in position, in the devices used for adjusting the flame, in the devices used for conveying air to the inside of the flame, and in the other devices and combinations herein-after claimed.

In the drawings, A represents the leaves, which form the standard to support the lamp and vessel to be heated. They are made in the usual form, except as described. *a* is a tube, around which pass the ears *b* of the joint. *c* is a pintle, which passes through this tube *a*. Upon its top is a disk, *d*, provided with slots *e* to engage with the leaves A, to hold them in place when in use. The ears *b* may revolve freely around the tube *a*, which is to be headed at the top and bottom, so as not to be displaced. The pin *c* is designed to slide up and down freely within the tube *a*, and when the device is in use the slots *e* engage with the leaves A, and hold them in place.

B is the lamp. The top and side may be stamped from a single piece of metal, and the bottom can be inserted as usual. In the top C are four openings, *f*, for the escape of the vapor to be burned. The central portion *g* is countersunk, and has in it a small opening, *h*, through which the lamp may be filled, which opening can be opened and closed by the slid-

ing plate *i*, which has an opening in it corresponding to the opening *h*.

D is a movable plate, in form corresponding with the top C of the lamp, and having openings *j*, corresponding with the openings *f*, and also a small opening in the countersunk portion corresponding with the opening *h*. *k* are covered passages between the openings *j*, for the admission of air to the interior of the flame. These openings *k* must be closed upon the under side, which can conveniently be done by means of another plate, *l*, D *l* being riveted together. This plate D is pivoted upon a pin, *m*. Within the body of the lamp B is a perforated plate, *n*, and beneath it is a space, F, which may be filled with cotton or other fibrous material. Upon this plate *n* is a piece of asbestos cloth or paper, *p*, which extends over the edges of *n*, and down nearly to the bottom of the lamp. I prefer to use two or three layers of such cloth or paper. Above this plate *n* and asbestos cloth or paper is a space, G, which should be filled with asbestos, spun glass, molten slag spun by steam, or other well-known non-conducting material. S are springs beneath the plate *n*, which serve the purpose of holding the plate and material above it in place. *r* is a piece of wire-gauze, located beneath the upper plate C of the lamp, and entirely covering the same and all the openings therein.

H is a metal band, somewhat flaring at its upper end, and adapted to be supported by the upper portion of the standards or levers A. It is so located as to leave a space between it and the top of the lamp for the admission of air, and a small space above it and between the vessel to be heated, also for the admission of air to the flame. This band H serves the purpose of protecting the flame from currents of air and directing the heat to the bottom of the vessel.

I is a metal band. The two ends are connected together by means of a bayonet-catch, *s'*, and it is provided with slots *s*, so that it can be adjusted to different sizes. It is also provided with vertical slots *t*, to engage with corresponding slots *u* in the upper portion of the standards A, thereby strengthening and supporting the standards at the top.

J is a metal band, the lower edge being pro-

vided with slots *v*, adapted to engage with corresponding slots *v'* in the upper portion of the standards. Its object is to furnish a resting-place for vessels used by chemists, the lower portion of which extends down into the band *J*.

In the patent, above mentioned, to myself and Cubley, the ears *b* surrounded the pintle *c*. In manufacturing I have found that the parts were liable to bind, and the object of the tube *a* is to prevent this, and to permit a free movement of the pintle *c*. In use the leaves *A* are held in position by means of the slotted head *d*, which engages with the leaves, as shown in Fig. 1. An additional support for the standard is provided by means of the band *I*, if desired, as described. The asbestos cloth or paper *p* is not only a good non-conductor, preventing the heating of the fibrous material below, but, as it extends nearly or quite to the bottom of the lamp, it will serve the purpose of absorbing and carrying up the fluid to be burned in case the fibrous material in the space *F* becomes charred, or if it should be wholly omitted. The vapor to be burned escapes through the openings *f*, and by means of the secondary plate *D* *l* these openings can be partially or wholly closed, reducing the flame as may be desired. When wholly closed, *h* may be opened, through which the vapor will escape, which can be lighted, producing only a small flame, which also can be adjusted, if desired, by means of the movable plate *i*, which also rotates in the pin *m*. The passages *k*, as shown, are formed by stamping up the plate *D* at those points, and by means of the second plate *l*, which is riveted thereto. These passages might consist of tubes riveted to the

plate *D*, in which case the plate *l* might be dispensed with. Air also might be brought to the flame by means of tubes located in the sides or bottom of the lamp.

What I claim as new is as follows:

1. The combination of the leaves *A*, tube *a*, rod or pintle *c*, and slotted head *d*, all constructed and operating substantially as and for the purpose specified.

2. The combination of the support, consisting of the frame *A*, the lamp *B*, and protecting-ring *H*, all constructed and operating substantially as and for the purpose specified.

3. In combination with the body of the lamp *B*, the upper plate *C*, having openings *f*, and a central depression *g*, provided with an opening *h*, and the slide *i*, all constructed and operating substantially as and for the purposes specified.

4. In a lamp, in combination with the plate *C*, having openings *f*, the air-passages *k*, substantially as and for the purpose specified.

5. In combination with the body of the lamp *B* and perforated plate *n*, the asbestos cloth or paper *p*, the springs *S*, and wire-gauze *r*, all constructed, arranged, and operating substantially as and for the purposes specified.

6. In combination with the standard, consisting of the leaves *A*, an adjustable ring, *I*, adapted to engage with the upper portion of the leaves *A*, substantially as and for the purposes specified.

CLARK I. GORHAM.

Witnesses:

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O. W. BOND.