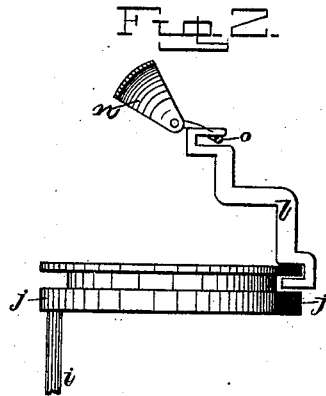
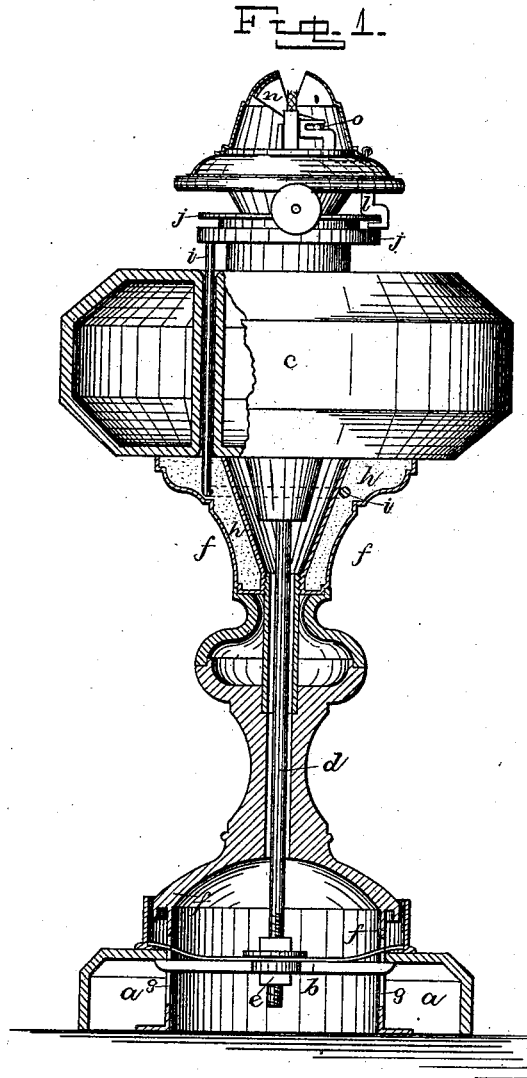


F. RHIND.
Self-Extinguishing Lamp.

No. 209,078.

Patented Oct. 15, 1878.



Witnesses:

J. W. Garner
Edward Dove

Inventor:

Frank Rhind,
per
F. A. Lehmann,
att'y.

UNITED STATES PATENT OFFICE.

FRANK RHIND, OF BROOKLYN, NEW YORK, ASSIGNOR TO EDWARD GOVE.

IMPROVEMENT IN SELF-EXTINGUISHING LAMPS.

Specification forming part of Letters Patent No. **209,078**, dated October 15, 1878; application filed October 2, 1878.

To all whom it may concern:

Be it known that I, FRANK RHIND, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Self-Extinguishing Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in self-extinguishing lamps; and it consists, first, in a sleeve having an extinguisher-rod fastened to its upper end, and having its lower end made to pass down through the base, so that the end will rest upon the table, and thus cause the weight of the sleeve to operate the extinguisher when the lamp is dropped or upset; second, in forming a recess in the top of the movable sleeve, and securing the lower end of the extinguishing-rod therein; third, in a grooved ring secured to the upper end of the extinguisher-rod, for the purpose of actuating a hook that moves the extinguisher; fourth, the pivoted extinguisher, placed in the cone, and provided with an arm or lever for engaging with the actuating-hook; fifth, in the arrangement and combination of parts that will be more fully described hereinafter.

The accompanying drawings represent my invention, in which Figure 1 is a vertical section. Fig. 2 is a detail view.

a represents the base, having a suitably-sized opening through its center, and provided with the perforated cross-bar *b* across its center. Secured to the center of the under side of the bowl *c* is a screw-rod, *d*, the lower end of which passes down through the cross-bar *b*, and receives a nut, *e*, on its lower end. By means of this rod the bowl and the base are secured rigidly together, and the length the movable sleeve shall play up and down is nicely regulated at will. Placed over and around this rod *d* is the movable sleeve *f*, formed in one or more pieces, and which has its lower end made to project down through the opening in the base, so as to rest on the table when the lamp is resting upon it, and to project some distance below the bottom of the base when the sleeve

is allowed to move downward to its full extent. Through opposite sides of the lower end of this sleeve, below the top of the base, are made the two slots *g*, through which pass the ends of the cross-piece *b*. By thus having the lower end of the sleeve rest upon the table it is operated by the weight of the lamp alone, without the aid of a spring or other device. The upper end of this sleeve has a recess formed in it, which is to be filled with plaster-of-paris, or any other suitable cement, and buried in this plaster or cement is the lower bent end of the extinguisher-rod *i*. As this recess *h* is of considerable depth, this rod *i* can be adjusted up and down in the plastic cement until the distance its upper end shall extend upward above the top of the bowl is regulated to a nicety. As this rod and sleeve are thus secured together, it is evident that when the sleeve is moved either up or down the extinguisher-rod moves with it. To the upper end of this rod is secured the grooved ring *j*, which surrounds the lamp-collar and moves up and down with the extinguisher-rod. This ring may be constructed as here shown, or in any other way that may be preferred. For instance, openings may be made through the upper part of the ring, so that the lower end of the rod *l* can be made to catch in it more easily. This rod, of the form shown, has a hook made on each end, and plays vertically through one side of the perforated part of the burner, the play being proportioned to the distance the pivoted extinguisher *n* is to move. This extinguisher is pivoted to the inside of the cone, and has the arm or rod *o* connecting the two ends, the rod serving both for the pivot and as a means for connecting with the rod *l*. The upper end of the rod catches over the arm *o*, and as the extinguisher is connected eccentrically thereto, the slightest downward movement of the rod *l* draws the extinguisher upward, so as to cover, or partially cover, the flame-hole in the cone.

When the lamp accidentally falls from the hand, or is upset, or is raised from the table, so as to let the weight of the sleeve draw the extinguisher-rods *i* and *l* downward, the extinguisher instantly rises upward over the top of the wick and extinguishes the flame.

It will be seen that the cone can be raised upward in the usual manner, and that the arm *o* automatically connects and disconnects with the rod *l*.

The lower end of the rod is preferably made to catch in a groove in the ring; but if so preferred it may be made to catch over the edge of a ring that has no groove.

Having thus described my invention, I claim—

1. In a self-extinguishing lamp, a movable sleeve or standard having its lower end made to rest upon the table or other support for the lamp, substantially as shown.

2. A lamp provided with a movable sleeve, a base, and a supporting-standard, the lower end of the sleeve being made to project down through the top of the base and rest upon the table, substantially as described.

3. A lamp provided with a movable sleeve and a rod for actuating the extinguishing device, the rod being connected to the upper end of the sleeve by means of the cement in the upper end thereof, whereby the rod can be adjusted to its proper height, substantially as set forth.

4. An extinguisher-rod, *i*, having a grooved collar attached to its upper end, substantially as specified.

5. A vertically-moving rod, *l*, having a hook or catch at each end passing up through and supported entirely in the burner, substantially as shown.

6. The extinguisher *n*, pivoted eccentrically to the inside of the cone upon the rod or arm *o*, which acts both as a pivot and operating-lever, in combination with an actuating-rod for moving the extinguisher up over the top of the wick, substantially as described.

7. The combination of an extinguisher, a vertically-moving rod, *l*, a grooved collar, and a rod, *i*, that is actuated by the movable sleeve, substantially as set forth.

8. A slide or rod connected to the extinguisher at its upper end, and catching in or under a ring that is secured to the upper end of the rod connected to the sleeve, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of October, 1878.

FRANK RHIND.

Witnesses:

R. M. BARR,
J. W. GARNER.