

W. W. BATCHELDER.

Improvement in Self-Lighting Lamps.

No. 114,389.

Patented May 2, 1871.

Figure 1.

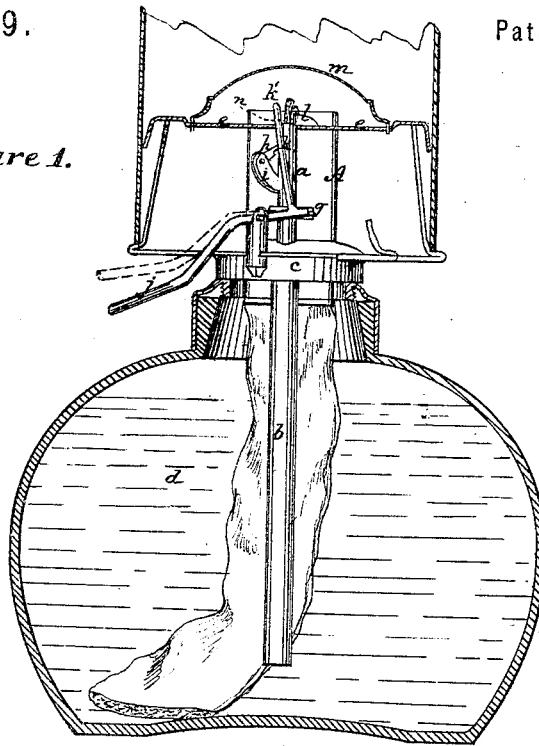


Fig. 2.

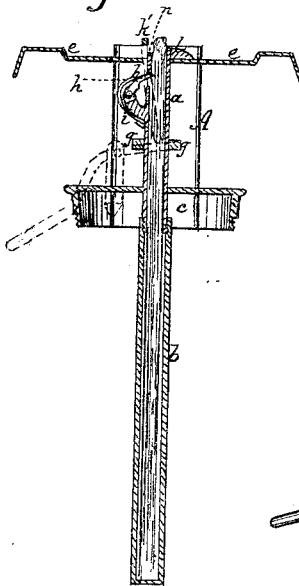


Fig. 3.

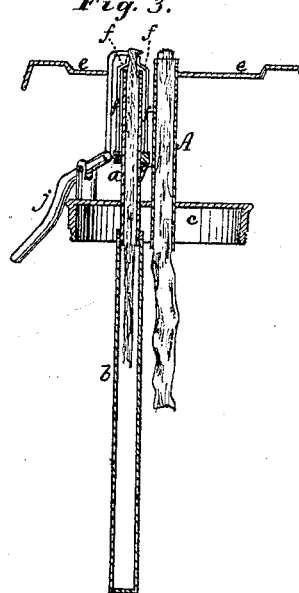
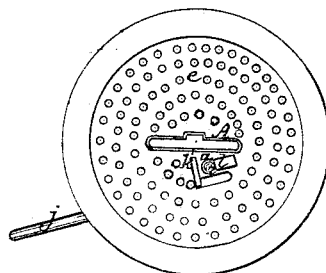


Fig. 4.



Witnesses:

J. West Wagner.  
R. E. Coats

William W. Batchelder, Inventor.  
by Johnson, Klaueke & Co.  
his attorneys

# United States Patent Office.

WILLIAM W. BATCHELDER, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 114,389, dated May 2, 1871.

## IMPROVEMENT IN SELF-LIGHTING LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

I, WILLIAM W. BATCHELDER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Self-lighting Lamps, of which the following is a specification.

My invention relates to devices for lighting lamps automatically by the ignition of fuse connected therewith.

In the accompanying drawing—

Figure 1 represents an elevation of a lamp-burner embracing my improvements.

Figure 2 represents a sectional view of the fuse-tube and the device which supports the fuse while being severed to produce the ignition.

Figure 3 represents a section, showing the spring arms which feed the fuse.

Figure 4 represents a top view of the perforated draught-plate with the flame-cap removed.

My improvements are applicable to almost any ordinary lamp in use; a description, therefore, of the lamp is deemed unnecessary further than to state the construction and arrangement of my lighting devices in connection with the burner of a lamp.

The fuse-holder consists of a tube made in two sections, *a b*, one fixed and the other movable.

The fixed section *a* passes through the screw-cap *c* of the burner, to which it is secured.

Its lower end projects within the fluid-chamber *d* of the lamp, and its upper end, in the instance shown, extends parallel with the wick-tube *A* through an opening in the perforated draught-plate *e* of the shade.

The movable section *b* is screwed or otherwise attached to the lower end of the section *a*, and is, therefore, directly within the chamber of the lamp and thus incloses the fuse entirely independent of the wick, although within the same chamber, and the tube secures the fuse from contact with the fluid, while allowing of its ready insertion from time to time.

The means for feeding the fuse consists of two spring arms, *f f*, attached to a collar, *g*, which slides over the upper section *a* of the fuse-tube, the upper ends of said arms *f* passing into grooves in the tube so as to bite upon the fuse and thus feed it when the arms are raised, as shown in fig. 3.

Upon the descent of the arms *f* the fuse is held in its fed position by a spring dog, *h*, pivoted to an arm, *i*, of the tube *a*, so that its end projects through an opening in said tube and allows the fuse to be raised but not to descend in said tube.

The spring arms *f* are raised and lowered by means of a lever, *j*, pivoted to the screw-cap *c* and to the collar *g* of said arms.

The device for automatically severing the fuse consists of an arm, *k*, secured to the end of the lever *j* parallel with the fuse-tube, and bent over at its upper end so as to form a severing-branch, *k*, which occupies a position in front of the fuse when the lever *j* is depressed to feed the fuse, as shown in figs. 1 and 2 of the drawing.

On the opposite side of the fuse-tube *a* I arrange a support, *l*, for the fuse, which rises for that purpose a little above the open side of the fuse-tube *a*, so that the severing of the fuse will be effected between the severing-arm *k* and the elevated back *l*, over which the arm *k* moves, by raising the hand-lever.

The severing-arm *k* moves parallel with the side of the burner-tube *A*, but does not interfere with it or the wick.

The fuse is made of any suitable material for the purpose, and is conveniently inserted into the tube *a b*, which for the purpose is in two sections, as represented in the drawing.

The feed end of the fuse-tube is cut away at one side, at *n*, leaving the other higher to perform the function of the support *l*, thus leaving sufficient of the fuse exposed to burn after it is severed. The fuse-tube may extend to the bottom of the fluid-chamber.

Having thus described my invention,

I claim—

1. The combination of the sliding collar *g*, feeding-fuse-arms *f f*, spring stop *h*, and operating-lever *j*, arranged substantially as described.
2. The fuse-tube *a b*, made in sections, screwed or otherwise connected together for the convenient insertion of the fuse from time to time, as described.
3. In an automatic device for lighting lamps, the combination of the sectional fuse-receptacle *a b*, the severing-arm *k*, the notched tube *a*, the fuse-support *l*, the flame-cap *m*, the sliding collar *g*, feeding spring arms *f f*, and the hand-lever *j*, the several parts being constructed, arranged, and operating as described.

WILLIAM W. BATCHELDER.

Witnesses:

A. E. H. JOHNSON,  
J. W. HAMILTON JOHNSON.