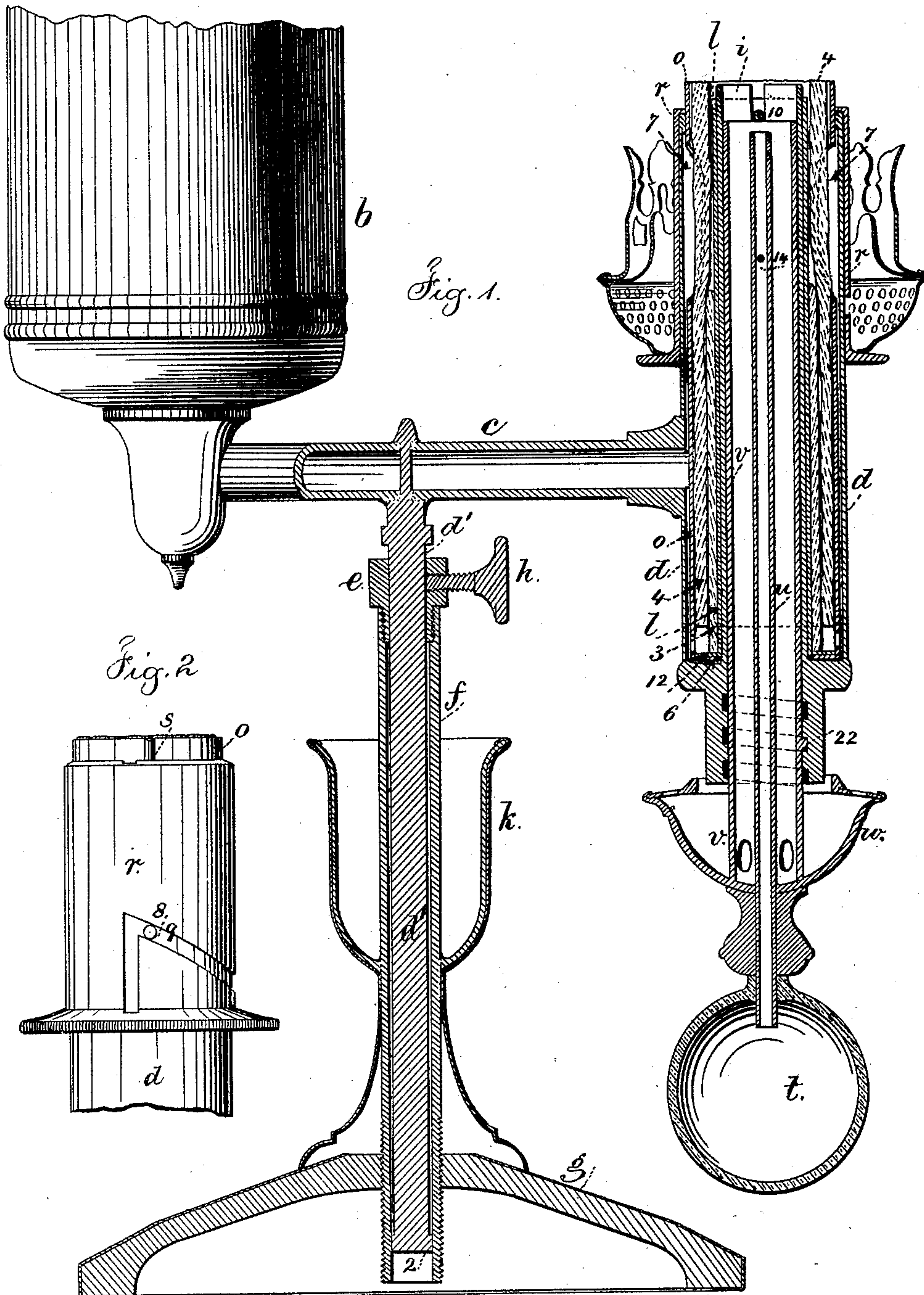


S. C. CATLIN.  
Student-Lamp.

No. 223,216.

Patented Jan. 6, 1880.



— WITNESSES —

Chas. H. Smith  
Geo. J. Pinckney

— INVENTOR —

Seth C. Catlin.  
per Lemuel W. Terrell  
att'y.



# UNITED STATES PATENT OFFICE.

SETH C. CATLIN, OF BROOKLYN, NEW YORK, ASSIGNOR TO EMMA F. CATLIN,  
OF SAME PLACE.

## STUDENT-LAMP.

SPECIFICATION forming part of Letters Patent No. 223,216, dated January 6, 1880.

Application filed April 28, 1879.

*To all whom it may concern :*

Be it known that I, SETH C. CATLIN, of Brooklyn, in the State of New York, have invented an Improvement in Student-Lamps, of which the following is a specification.

Lamps have been made with a stationary wick and a movable wick, so that the wick that is consumed may receive its supply of oil from the stationary wick. Student-lamps have also been supported by a standard running down into a tube in the base.

In my lamp the tubular standard is peculiarly constructed to obtain rigidity with the greatest extent of vertical movement, the wick is adjustable from the drip-cup or from the chimney-holder, so as to regulate the flame with facility, and the movable wick is outside of a stationary capillary wick, so that the wick for the flame will be more uniformly supplied with oil.

In the drawings, Figure 1 is a vertical section of the lamp-burner and its stand, and Fig. 2 is a detached elevation of the upper part of the wick-raising sleeve.

The fountain and reservoir *b* are to be of the usual character in student-lamps, and the pipe *c* extends from the bottom of the reservoir to the burner-tube *d*. Beneath this tube *c* is the supporting-rod *d'*, that has a head, 2, at the lower end. It passes through the collar *e*, that is screwed into the upper end of the tubular standard *f*. This tube *f* extends through the weighted base or foot *g*, and nearly touches the table or surface upon which the lamp stands. The length of the rod *d'* is such that its head 2 cannot descend below the lower end of the tube *f*; hence it cannot be caught against that end, but it always slides freely within the tube and steadies the lower end of the rod *d'*, and this rod *d'* cannot be accidentally drawn out of the standard *f* because of the collar *e*. A clamping-screw, *h*, supports the lamp, in whatever position it may be placed, by raising the rod *d'*.

The cup *k* is rigidly attached to the standard *f*, and serves for holding matches, and at the same time its separate base becomes a resistance or collar, against which the weighted foot is screwed in connecting the standard to the foot.

Within the burner-tube *d* is the air-tube *i*, the parts being connected at the bottom to form an annular oil-space, as usual.

*l* is a tube sliding outside the air-tube *i*, and having a bottom outward flange, 12. It also receives around it the stationary or capillary wick 3, which fits it tightly.

The ordinary tubular wick 4 fits over this capillary wick 3, and can be slipped up from time to time as it is consumed, and the upper end can be cut off or the carbonaceous matter removed. To facilitate this operation I provide the tubular wick-case *o*, that is inside the burner-tube *d*, but outside the wicks. This case *o* is shown with inward flange 6 below the flange 12, so that the wick-tube *l* and wicks will be lifted by lifting the tubular case *o*, and when this has been done the wick 4 can be raised by grasping it with the fingers acting through the openings at 7 in the sides of the case *o*, and the tube *l* can be pushed downwardly within the wick to whatever extent is necessary, and then the wick is trimmed off level with the upper end of the case *o*.

At the outer side of the case *o* there is a rib, *s*, and the thickened portion of the upper end of the burner-tube *d* is slotted to allow this rib to slide vertically in it.

The upper end of the wick-tube *l* does not extend as high as the top of the air-tube *i*; hence if the wick-case and wick are raised the flame will be increased by exposure of the inner surface of the wick at the upper end. To do this I provide a sleeve, *r*, that surrounds the upper part of the burner-tube *d*. It has an inward flange at the top end, resting upon the upper end of the burner-tube. This flange is notched to pass down over the rib *s*, and this rib *s* is notched above the upper end of *d*, to allow the sleeve to be revolved after it has been slipped down to place.

There is a stud, 8, on *d*, and the sleeve *r* is slotted vertically, so as to allow it to slip down past this stud, and there is an incline, 9, running downwardly, or an inclined slot in this sleeve *r*, so that when it is turned around : will be lifted by running upon this stud, and in so doing the flanged upper end will act in the notch of the wick-case rib *s* and lift the



case and wick to increase the flame, or the reverse movement lessens the flame.

It is often important, especially with burners that are used in chandeliers, to be able to adjust the flame or to extinguish the same from below. To provide for this I add to the wick-tube a cross-bar, 10, and use a tube, *v*, that slides within the air-tube, so that its upper end can act beneath this cross-bar 10 and raise the wick-tube and wicks to expose more of the inner surface of the wick above the upper end of the air-tube.

A pin, 22, at the side of the tube *v*, passing into the screw-thread at the lower end of the air-tube, serves to hold the tube *v* in its place, and also to raise and lower the same, and also to hold the drip-cup *w* in place, such cup *w* being at the lower end of the tube *v*.

To provide for extinguishing the light, I introduce the small tube *u* within the tube *v*, such tube *u* being open at the bottom end and extending below the drip-cup to receive the rubber ball *t*, that injects air when squeezed to blow the light out. This tube *u* also can be used as a match-carrier for lighting the lamp from below, there being a cross-bar at 14 to prevent the match slipping down the tube when introduced at the upper end thereof.

The upper end of the air-tube *i* is slotted for the cross-bar 10, and the lower end of the tube *v*, within the drip-cup, is perforated for the air to pass into the air-tube.

I claim as my invention—

1. The wick-tube *l*, stationary wick 3, wick-case *o*, and the flanges 12 and 6, in combination with the wick 4, burner-tube *d*, and air-tube *i*, substantially as set forth.

2. The combination, with the wick 4 and wick-case *o*, of the rib *s* upon the wick-case, the wick-raising sleeve *r*, incline 9, and the pin 8 on the burner-tube, substantially as set forth.

3. The wick-tube *l* and wick 4, in combina-

tion with the cross-bar 10, tube *v*, screw, and drip-cup, substantially as set forth.

4. The tube *v*, extending up within the air-tube, and the drip-cup attached at the lower end of the same, in combination with the Argand burner having a screw-thread within the air-tube, and the stud 22 on the tube *v*, to enter such screw-thread, substantially as set forth.

5. The combination, with the tube *v* and drip-cup, removable from the air-tube of the Argand burner, of the tube *u* and elastic bulb *t*, substantially as and for the purposes set forth.

6. The combination, in a student-lamp, of the burner-tube *d*, supply-tube *c* between the burner-tube *d* and the fountain, the rod *d'*, attached to the tube *c*, the tubular standard *f*, into which the rod *d* passes, the weighted base, through which the standard *f* passes and into which it is secured, the collar *e*, surrounding the rod *d'* and screwed into the top of the standard *f*, and the head 2 upon the lower end of the rod *d'*, to steady said rod *d'*, and also prevent its being drawn out of the standard *f*, as set forth.

7. The combination, with the wick and its tube, of a wick-case surrounding the wick and having openings to give access to the wick, substantially as specified.

8. The combination, with the wick-case and its rib, of a wick-raising sleeve having an inward flange at the upper end passing beneath the rib, substantially as specified.

9. The combination, with the standard *f* and the weighted base *g*, of the match-cup *k*, surrounding said standard, and against the base of which cup the said weighted base is screwed, substantially as set forth.

SETH C. CATLIN.

Witnesses:

J. H. McMURRAY,  
C. H. JONES.