

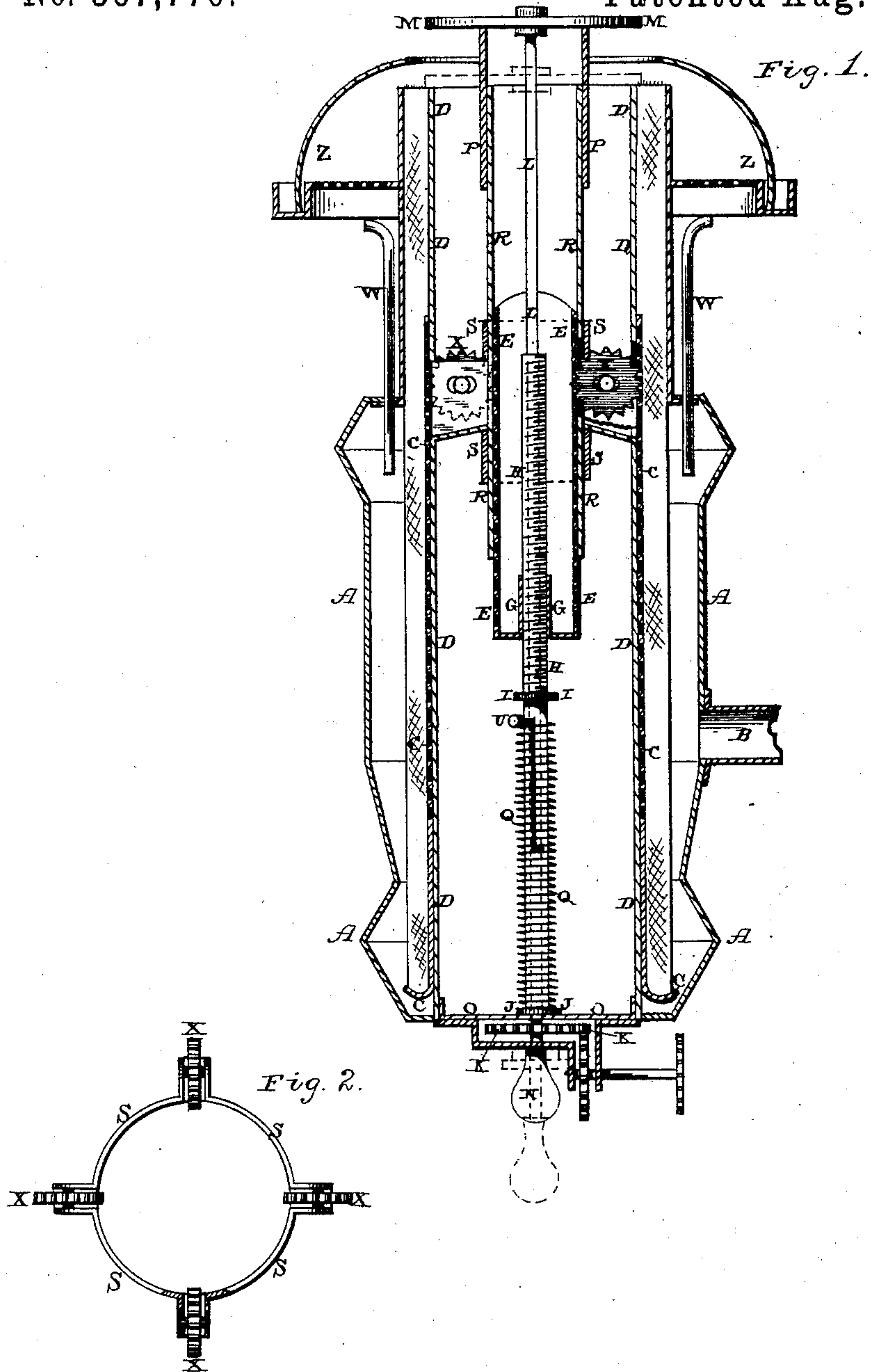
(No Model.)

W. B. VANSANT.

ARGAND LAMP.

No. 367,770.

Patented Aug. 2, 1887.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## ARGAND LAMP.

SPECIFICATION forming part of Letters Patent No. 367,770, dated August 2, 1887.

Application filed November 8, 1886. Serial No. 218,313. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER B. VANSANT, of Belle Plaine, in the county of Benton and State of Iowa, have invented certain new and useful Improvements in Argand 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 Argand burners; and it consists in, first, the combination of the spreader and a separate and independent operating mechanism therefor, whereby the spreader can be forced downward after the flame has been extinguished upon a level with the top of the wick-tube; second, the combination of the inside wick-tube, the ratchet-wheels, which have their points to extend through openings in the tube, so as to engage the perforated cylinder upon which the wick is placed, a vertically-moving tube, which is placed inside of the inner-wick-tube, and which is provided with a screw-thread at its lower end, and a screw-rod by means of which this inner screw-threaded tube is moved vertically for the purpose of turning the ratchet-wheels and thus operating the wick; third, in the arrangement and combination of parts, which will be more fully described hereinafter.

The objects of my invention are to place the spreader upon a rod which can be moved vertically independently of the other parts, and thus enable the spreader to be closed down upon the top of the wick-tube after the flame has been extinguished, and to operate the wick by means of a screw-threaded rod which has its lower end to project through the lower end of the inner wick-tube.

Figure 1 represents a vertical section of a lamp to which my invention is applied. Fig. 2 is a detail view.

A represents the outside wick-tube; D, the inside wick-tube, and B the tube through which the oil is fed from the reservoir to the wick. The wick is fastened at its lower end to the perforated tube or cylinder C, which is turned outward at its lower end, so as to prevent the wick from slipping off. Placed inside of the inner wick-tube, D, at any suitable

point, is a stationary tube, R, which forms at its upper end a guide for the tube P, which is secured to the under side of spreader M, and which tube R at its lower end has secured to it the supports S, between which the ratchet-wheels X are journaled. These supports may be formed as shown in Fig. 2, or in any other way that may be preferred, and serve not only as journals for the ratchet-wheels X, but to hold the tube R rigidly in position. Placed inside of the lower portion of this stationary tube R is the vertically-moving tube E, which is made of perforated metal, and which is closed at its bottom, and provided with a screw-threaded portion, G, so as to engage with the screw-rod H, which is supported at its lower end by the cross-bar O, which extends across the lower end of the inside wick-tube, D. The lower end of this rod H is provided with the wheel K, by which the rod can be freely turned for the purpose of causing the tube or cup E to move vertically and to operate the ratchet-wheels X. This tube E, being formed of perforated metal, in which the points of the ratchet-wheels X catch when the tube is moved vertically by means of the screw-rod H, the ratchet-wheels X, which pass through the slots in the metal portion of the stationary tube R, are caused to revolve and thus operate the wick. Both the tube E and cylinder C are formed of perforated metal, and when the ratchet-wheels are operated these tubes move in opposite directions. The tube E can be moved downward until its lower end strikes the shoulder I on the rod H, and no farther. In the sides of this cylinder R are slots, into which the teeth of the ratchet-wheels X pass when the tube has reached its lowest position, and then the ratchet-wheels X are automatically forced inward by the movement of the wick toward the tube, leaving the cylinder C perfectly free to be inserted in position upon the inside wick-tube, D. If these ratchet-wheels X were not made movable inward in this manner, it would be a difficult matter to insert the perforated cylinder C into the desired position upon the tube D. The points of the ratchet-wheels being forced inward do not extend through the slots made in the tube D, and hence the wick and the part C can be moved up and down at pleasure without encountering any resistance on the part of the ratchets.



For the purpose of making these ratchet-wheels movable horizontally the openings through the supports S are made slightly elongated.

The screw rod or tube H is made hollow, and passing up through this screw-rod is the rod L, which is connected to the spreader M at its upper end, and which is provided with the handle N at its lower end, and which end projects downward below the wheel K, as shown. The rod L is provided with a stud or projection, U, which passes through the slot made in the screw H, and placed between this projection U and the washer J is a spiral spring, O, which serves to force the rod L and extinguisher N upward as soon as possible, when these parts are left free to move. When it is desired to regulate the flame by shutting off the inside draft, it is only necessary to pull down upon the handle N, when the spreader M will descend to the level with the wick-tubes, and thus shut off all passage of air through the inside of the wick-tube D to the flame.

In order to allow the gas to escape from the oil-chamber, small tubes W are passed through the shoulder upon the outside of the wick-tube A, as shown, and these tubes allow a free escape of the gas, which may be ignited by the heat of the flame. The upper end of these tubes extend outward just below the perforated support for the cone Z.

The stationary cylinder R is fastened to the ring formed by the supports S, and will work either on the inside or the outside of the ring, as may be desired. The lower portion of the supports for the ratchet-wheels are closed at their lower ends and slightly inclined, so that they will form drip-cups for the oil that passes out of the wick-tube through the slots, and the oil is thus carried back into the lamp.

Should it be desired to operate the screw H by means of a handle, instead of by the two gear-wheels, as shown, a handle will be attached to this screw at its lower end, as shown by dotted lines. I do not limit myself to any particular construction in this respect, as the screw may be turned either by means of the thumb-piece or by wheels, as may be preferred.

Having thus described my invention, I claim—

1. The combination of the outside wick-tube, the inside wick-tube, which is open at its lower end, and provided with slots for the teeth of the ratchet-wheels to pass through, the wick-cylinder C, provided with perforations for the teeth of the ratchet-wheels to catch in, the stationary cylinder R, the supports for the ratchet-wheels having slots or elongated openings for the journals of the ratchet-wheels to pass through, and a mechanism, substantially as shown, placed inside of the cylinder R, for operating the ratchet-wheels, whereby the ratchet-wheels have a horizontal movement, substantially as shown.

2. The combination of the outside wick-tube, A, the inside wick-tube, D, provided with slots for the points of the ratchet-wheels to pass through, the perforated tube, the cylinder C, to which the wick is applied, the stationary tube R, the supports for the ratchet-wheels, the ratchet-wheels, the tube E, provided with openings for the teeth of the ratchet-wheels to catch in, and the screw-rod for causing the tube or cylinder E to move vertically, substantially as described.

3. The combination of the wick-tubes, the stationary cylinder R, placed inside of the upper ends of the wick-tubes, the spreader M, provided with a tube, P, on its under side to catch over the top of the cylinder, the rod L, secured to the spreader, the screw or tube through which the rod passes, and which is provided with a slot for the stud on the rod to pass through, and the spring Q, for catching against the stud to return the spreader to position after having been depressed, substantially as set forth.

4. The combination of the cylinder R, the slotted bearings S, having inclined bottoms, the wheels X, movable laterally in their bearings, the tube E, engaging with the wheels, the screw H, for moving the tube, the stationary slotted tube D, and the cylinder C, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER B. VANSANT.

Witnesses:

HARLOWE E. McCUNE,  
FRANK L. McCUNE.