

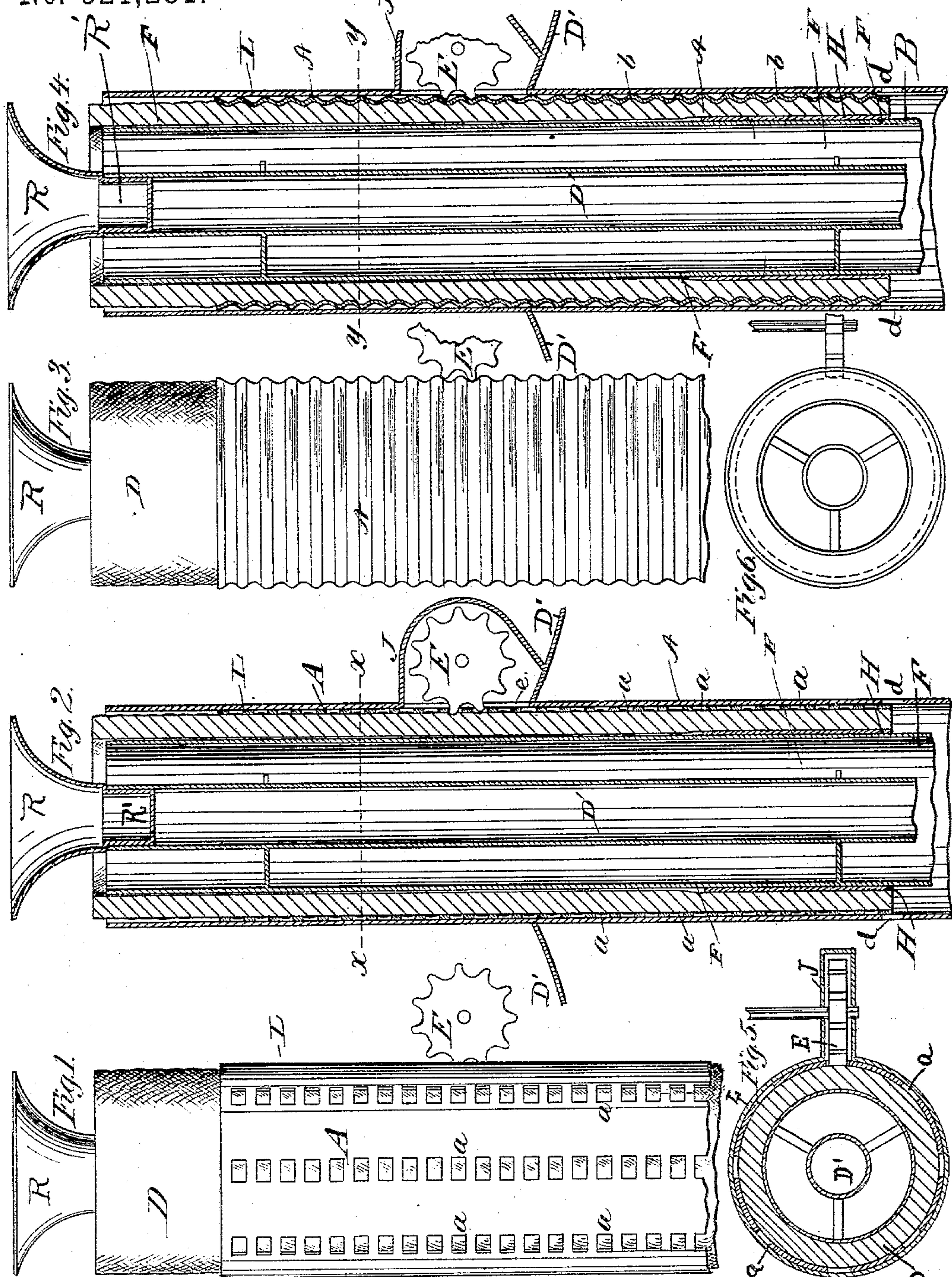
(No Model.)

J. A. COWLES.

ARGAND LAMP BURNER.

No. 321,281.

Patented June 30, 1885.



Witnesses
J. P. M. Eber
Fred S. Comstock

Inventor
J. A. Cowles,
By Frank A. Lamb
Attorney

UNITED STATES PATENT OFFICE.

JAMES A. COWLES, OF CHICAGO, ILLINOIS.

ARGAND LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 321,281, dated June 30, 1885.

Application filed October 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. COWLES, a citizen of the United States, residing at the city of Chicago, in the State of Illinois, have
5 invented certain new and useful Improvements in Argand Lamp-Burners, of which the following is the specification.

This improvement relates to the raising and lowering the wick and the means for holding
10 the wick in position, as will be hereinafter described, and particularly pointed out in the claims.

Figure 1 is a plan view of one wick-raising tube with wick therein. Fig. 2 is a vertical
15 section of wick-tube, wick, and such other tubes as are used in an Argand burner. Fig. 3 is a plan view of a modified form of wick-raising tube with wick therein. Fig. 4 is a vertical section of wick-tube, wick, and other
20 tubes as are used in an Argand burner. Fig. 5 is a cross-section of Fig. 2 through line *x x*. Fig. 6 is a cross-section through line *y y*, Fig. 4.

Similar letters of reference refer to similar parts in the different drawings.

25 Such parts of the lamp are shown only as will illustrate my invention.

The fount is indicated at *D'*. *L* is the outer tube, extending around and down to the bottom of the fount. *d d* are holes near lower
30 end of this tube, through which oil passes to the wick. The ratchet-wheel *E* works through hole *e* in tube *L*.

J is the housing for the ratchet-wheel.

A is the wick-raising tube, made of suitable
35 metal. This tube has perforations around its entire circumference, and they are arranged in rows. These perforations serve a double purpose. They serve as a ratchet to engage with the ratchet-wheel to raise and lower the
40 wick-tube. They also serve as a means for holding the wick *D* in position for raising and lowering it. The ratchet-wheel *E* is made in the usual form, having a button on the end of the shaft to turn it with.

45 *D'* represents a tube within the air-tube *F*, for the purpose of holding the flame-spreader *R*. Said spreader is provided with a cup-shaped socket, *R'*, that fits snugly within the top of tube *D'*. This spreader has a flaring
50 top to spread the flame and to divert the air coming up through the tube *F* onto the inner

surface of the flame. Said spreader is vertically adjustable within the tube *D'*, whereby the angle of the flame or the deflection thereof may be regulated.

55 As the ratchet-wheel *E* is turned the wick-tube *A* is raised or lowered, and the function of this wick-tube is to raise or lower the wick, and in order to do this it must be attached to or fastened to this wick-tube
60 *A*. The wick is placed within the tube, and within the lower end of the wick is placed the band *H*, which fits over the air-tube *F*, and facilitates the placing the wick on the air-tube *F*. The wick when in position is more or less
65 compressed between the raising-tube *A* and the air-tube *F*, which forces the wick into the apertures or perforations *a a*. This holds the wick *D* and wick-raising tube *A* together, so that when the raising-tube *A* is raised or low-
70 ered by the ratchet-wheel the wick is invariably raised or lowered also. The band *H* at the base of wick also assists in forcing the wick out into the apertures or perforations *a a*. The leading duty of this band *H* is to fa-
75 cilitate the placing of the wick in position on air-tube *F*. In Fig. 3 is shown the wick-raising tube *A* made in corrugated form. In Fig. 4 it is shown placed in fountain *D'*, and actuated by ratchet-wheel *E*, inclosed in housing
80 *J*. In lieu of perforations it is provided with a surface of rings or corrugations made in shape, size, and form to mesh with the teeth on ratchet-wheel. It is made of thin metal, and is corrugated on both inside and outside.
85 It is located in the burner the same as perforated wick-raising tube *A*, as shown in Fig. 4. The wick is placed within this corrugated tube, and at its lower end is placed the ring *H*, which facilitates placing the wick in posi-
90 tion on air-tube *F*. The wick enters into the interior corrugations *b b*, which prevents the sliding of the wick-raising tube on the wick when raised or lowered, and when the wick-raising tube is raised or lowered by the ratch-
95 et-wheel the wick is raised or lowered at the same time.

In this improvement no additional means are necessary to fasten the wick to the wick-raising tube than those shown either in the
100 perforated or the corrugated tube.

By using the perforated wick-raising tube

A but little special attention is necessary to place it in position when once removed, as there are several series of holes into which the ratchet-wheel can work; and, also, the wear in
5 this tube is greatly reduced, as one series of holes is not obliged to be used continuously. In the corrugated form no attention or effort is required to replace it in position, as the corrugations being annular they will mesh with
10 the ratchet-wheel at any point of its circumference.

I claim—

1. In combination with an Argand lamp-burner, a wick-raising tube, and means for

raising and lowering the same, and a pressure- 15 ring, substantially as and for the purpose shown.

2. In an Argand lamp-burner, the combination of a wick-raising tube and means for raising and lowering the same, a pressure-ring located within said wick-raising tube, an inner
20 air-tube and an outer tube, and a flame-spreader located above the air-tube, substantially as and for the purpose shown.

JAMES A. COWLES.

Witnesses:

J. FOSTER RHODES,
FRED S. COMSTOCK.