C. M. LUNGREN.

Argand Lamp Burner.

No. 201,805. Patented March 26, 1878.

FIG. I.

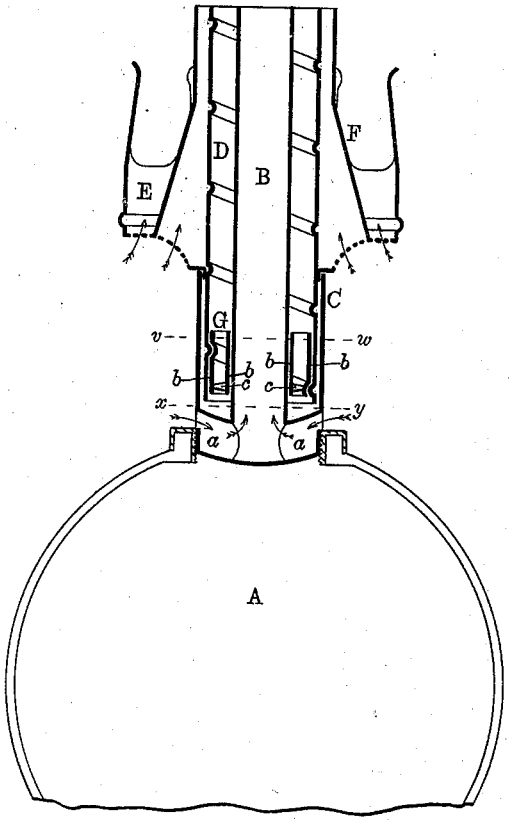


FIG. II.

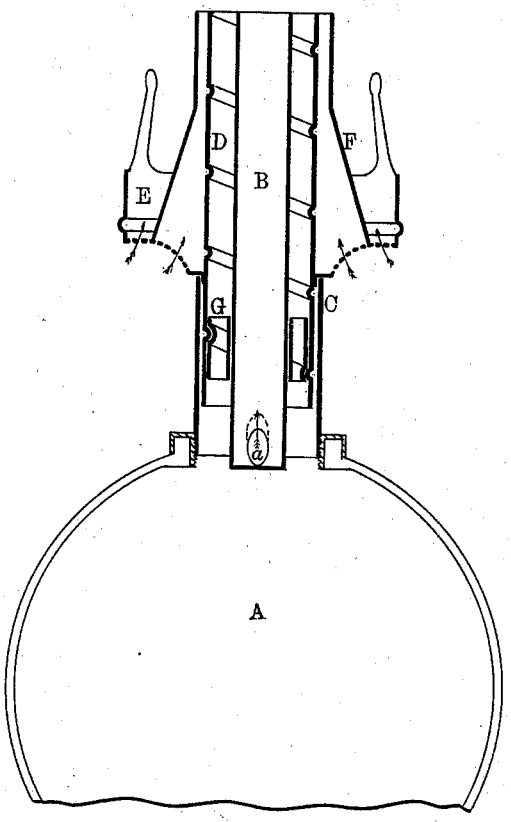


FIG. III.

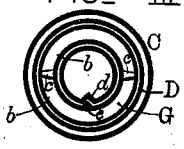
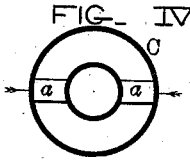


FIG. IV.



WITNESSES.

D. Buckingham

D. P. Core

INVENTOR.

Charles Marshall Lungren

by W. W. J. Howard

Atty.

UNITED STATES PATENT OFFICE.

CHARLES M. LUNGREN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN ARGAND-LAMP BURNERS.

Specification forming part of Letters Patent No. **201,805**, dated March 26, 1878; application filed February 9, 1878.

To all whom it may concern:

Be it known that I, CHARLES MARSHALL LUNGREN, of the city of Baltimore and State of Maryland, have invented certain Improvements in Argand Burners for Lamps, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

This invention relates to certain improvements in that class of Argand burners for lamps wherein a cylindrical wick is used, the said wick being elevated and depressed, to increase and diminish the flame, through the medium of a wick-carrier in connection with a threaded tube rotated by means of the chimney-supporter or other suitable device; and the invention consists in a novel construction of certain parts of the burner, and in the means for supplying air to the flame to insure perfect combustion of the illuminating fluid, with a view of adapting the said burner to lamps of ordinary description or those commonly in use.

In the description of the improved Argand burner which follows, reference is made to the accompanying drawing, forming a part hereof, and in which—

Figure 1 is a vertical section of a part of a lamp, showing the application of the improved burner thereto. Fig. 2 is a similar section of a part of the burner and lamp as seen from a different point of view. Figs. 3 and 4 are transverse sections of the burner, respectively, on the lines *v w* and *x y*.

Similar letters of reference indicate similar parts in all the views.

A is the lamp, and B the central air-tube of the burner, closed at its lower end and connected, by means of the lateral air-pipes *a*, to the stationary burner-supporting tube C, which is screwed into the lamp. The lateral air-pipes *a* form the only means for admitting air to the tube B and to the interior of the flame. D is a revoluble threaded pipe, to which the chimney-supporter E and shield F are attached, sustained by the tube C, as shown. The shield F serves to conduct air to the exterior of the flame, the air being admitted to the shield through the lower portion of the chimney-supporter.

The wick-carrier (represented by G) is formed of two cylindrical shells, *b*, connected by means of ribs *c;* and the outer shell is spirally grooved, in order that it may fit the projecting thread on the pipe D.

The central air-pipe B is provided with a groove, *d*, in its outer surface, extending longitudinally thereof, and the inner shell of the wick-carrier G, with a projection, *e*, which fits within the said groove, and thereby prevents the turning of the wick-carrier in the rotation of the threaded pipe D, for the purpose of elevating and depressing the wick.

The direction of air-currents toward the flame is indicated by arrows.

In applying the cylindrical wick to the burner, the part thereof intended to project below the ribs of the wick-carrier is slit to allow of the passage of the wick past the said ribs and below the lateral air-pipes *a*. This slitting of the wick does not in any manner impede the flow of fluid through the same or affect the flame in any manner.

The burner, constructed as described, is comparatively inexpensive. The air-passages *a* admitting a current of air to the interior of the flame, while the outer portion of the flame is supplied with air through the medium of the shield F, perfect combustion of the fluid is accomplished, and a brilliant white light produced, free from smoke and unpleasant odor.

The burner, being complete in itself, is applicable to lamps of the ordinary description, originally fitted with the common flat-wick burner, without alteration of the lamp being made. This advantage will be appreciated when the superiority of the Argand principle is considered.

I do not claim, broadly, a detachable burner provided with a central tube, having passages leading thereto from the outer air, as such a contrivance is not new; but

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. The burner-supporting tube C, the lower portion of which is adapted to screw into the neck of the lamp, combined with the central

air-tube B and lateral air-passages *a*, substantially as described.

2. The burner-supporting tube C, central air-tube B, and lateral air-passages *a*, combined with the revoluble threaded pipe D and wick-carrier G, the latter consisting of the shells *b* united by ribs *c*, substantially as specified.

In testimony whereof I have hereunto subscribed my name this 28th day of January, in the year of our Lord 1878.

CHAS. M. LUNGREN.

Witnesses:
WM. T. HOWARD,
THOS. MURDOCH.