

(No Model.)

L. J. ATWOOD.

ARGAND LAMP.

No. 387,756.

Patented Aug. 14, 1888.

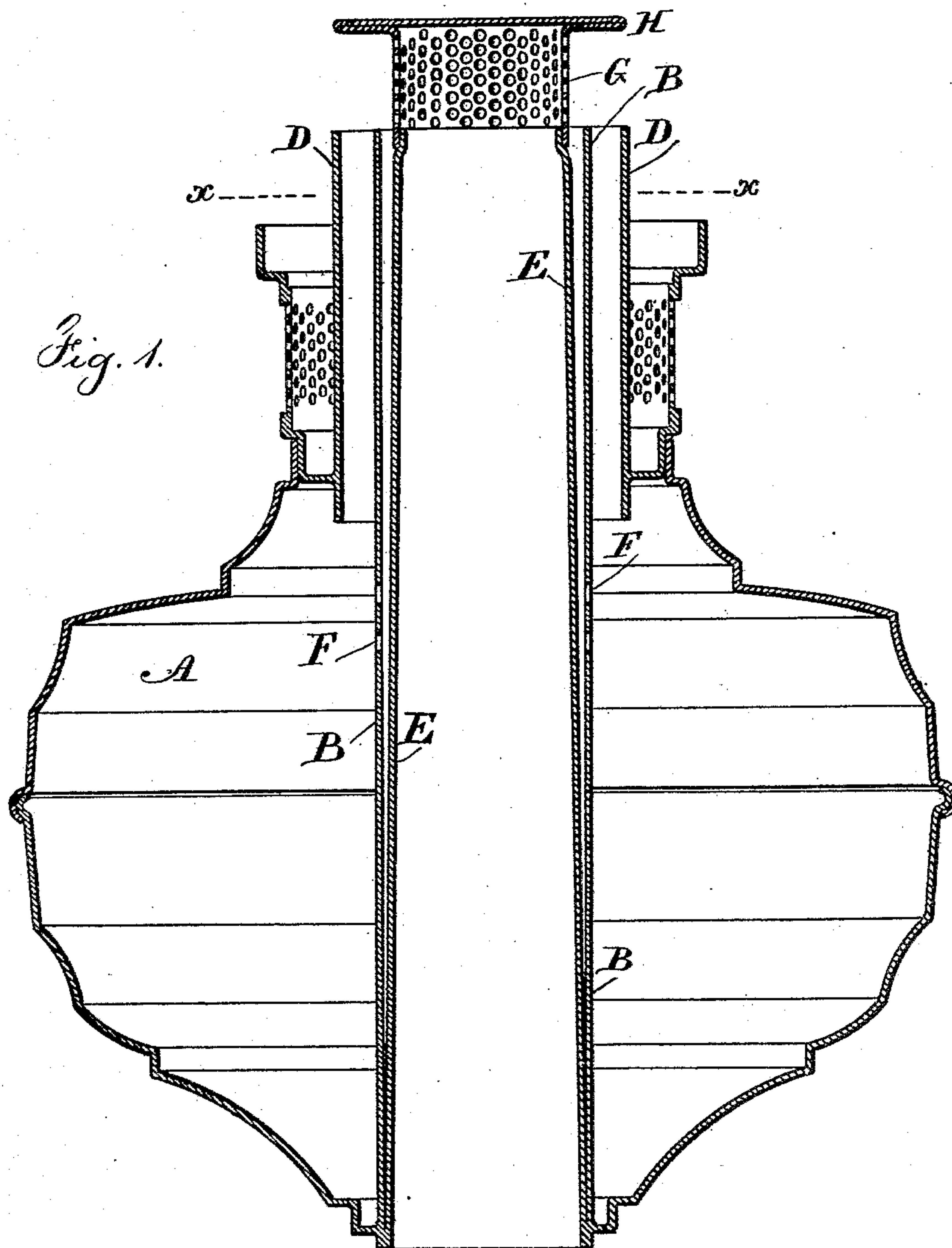
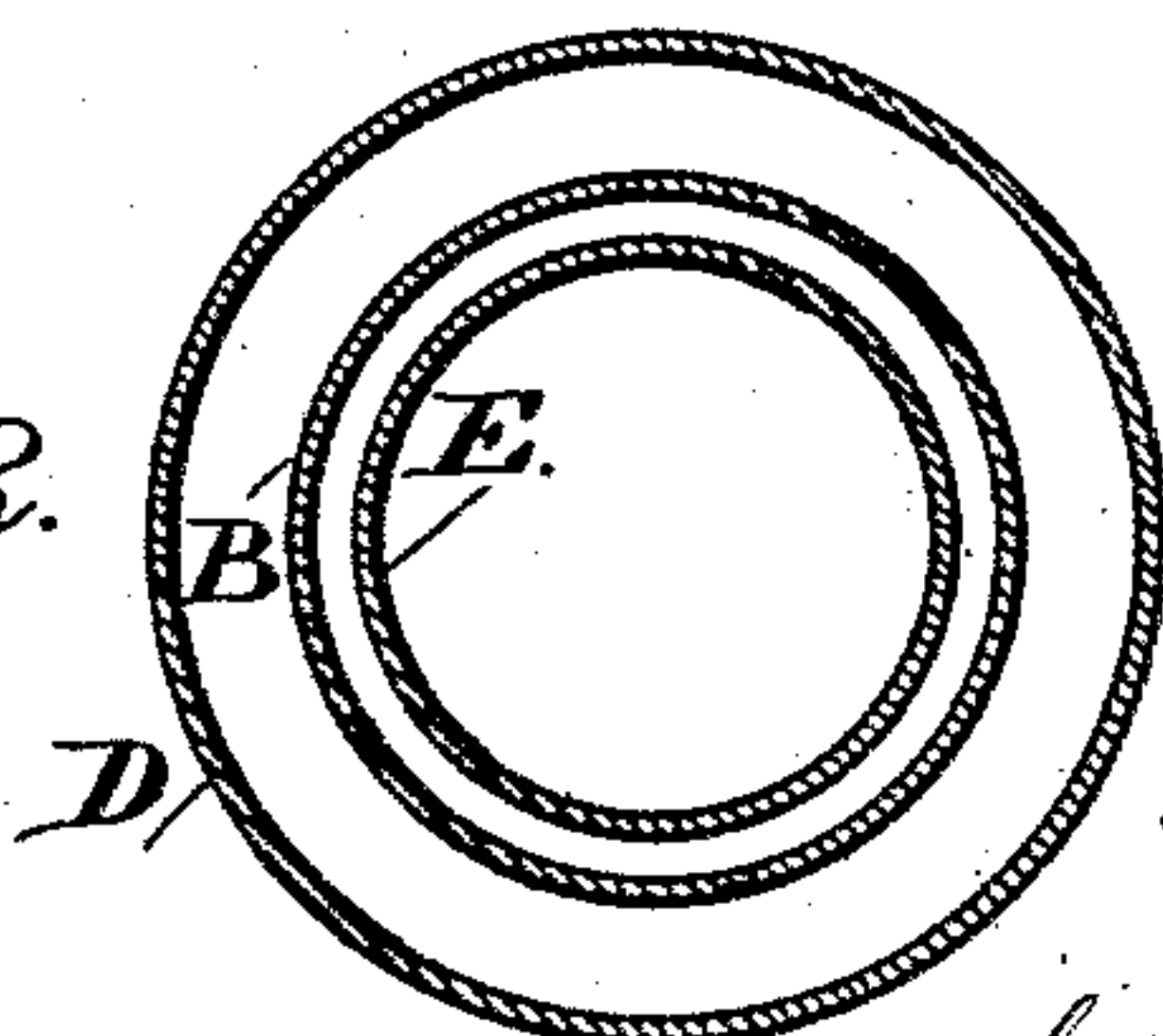


Fig. 2.



Witnesses,

Chas H. Smith.

J. Hail.

Inventor.

Lewis J. Atwood.

per Lemuel W. Perrell.

att.

UNITED STATES PATENT OFFICE.

LEWIS J. ATWOOD, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE
PLUME & ATWOOD MANUFACTURING COMPANY, OF SAME PLACE.

ARGAND LAMP.

SPECIFICATION forming part of Letters Patent No. 387,756, dated August 14, 1883.

Application filed January 3, 1883. Serial No. 259,606. (No model.)

To all whom it may concern:

Be it known that I, LEWIS J. ATWOOD, of Waterbury, in the county of New Haven and State of Connecticut, have invented an Improvement in Argand Lamps, of which the following is a specification.

Argand lamps have heretofore been constructed in which a cylindrical wick is received between a central air-tube and an exterior tube or case, usually known as the "wick-tube," and a button or deflector has been provided at the upper end of the air-tube and within the flame. In lamps of this character difficulty often arises from the kerosene or other oil percolating down the air-tube into the drip-cup at the bottom thereof. This arises most frequently when a carbonaceous crust is formed upon the upper end of the air-tube, and when pieces of carbon adhere to the interior of such air-tube, near the top end thereof, and act to draw over the oil from the wick by capillary attraction.

My present invention is intended to prevent this difficulty; and it consists in a supplemental air-tube that catches and returns into the lamp-reservoir any oil that might otherwise run down into the drip-cup or the base of the lamp.

In the drawings, Figure 1 is a vertical section representing a portion of an Argand lamp, and showing the wick-tube, air-tube, supplemental air-tube, and deflector; and Fig. 2 is a sectional plan view at the line *x x*.

The reservoir A of the lamp is of any desired shape or size, and the air-tube B passes vertically through the reservoir, and it is open at the lower end and united with the reservoir, so that oil will not leak at the joint. The wick is cylindrical, or a flat wick bent into a cylindrical form, and it occupies the space between the air-tube B and the wick-tube D, and this wick-tube D may only extend above the reservoir, or it may pass down into said reservoir, and the devices for raising and lowering the wick may be of any desired character. Within the air-tube is a supplemental air-tube, E, the lower end of which is sufficiently large to be in contact with the exterior of the air-tube B, and at this point the supplemental air-tube is soldered tightly to the air-tube. This

supplemental air-tube E tapers slightly, so that its upper end is at a slight distance within the upper end of the air-tube B; hence any oil that may pass over the top of the air-tube B will run down into the space between such air-tube B and the supplemental air-tube E, and one or more openings are provided, such as at F, in the air-tube, so that the oil may return through such openings into the reservoir of the lamp.

The upper part of the air-tube B, between the supplemental air-tube E and the wick, may be more or less perforated, as desired, and by preference it is made as a fixture; but it might be removable vertically to facilitate the cleaning of the lamp. At the upper end of this supplemental air-tube E there is a flame-regulator, which I prefer to make as a foraminous skirt, G, resting upon the top of the supplemental air-tube, with a ledge to retain the same in the proper position, and the deflector H is in the form of a disk or button head at the top of this foraminous skirt G.

It will now be understood that the top end of the wick being outside the air-tube B cannot come into contact with either the supplemental air-tube E or the foraminous skirt G, and the flame will burn above the top edge of the air-tube, and it will be supplied with air and deflected outwardly by the air that passes up through the supplemental air-tube and through the perforations of the skirt G, and these perforations being fine the currents of air will be subdivided and will reach the flame with uniformity, so that the combustion will be perfect.

It is to be understood that any suitable deflector outside the wick-tube and a chimney-holder and chimney are to be used in connection with the present improvement.

I claim as my invention—

1. The combination, in an Argand lamp, with the wick-tube D, of the air-tube B, extending through the fount and connected at its lower end to the same and perforated about midway of its length, and the supplemental air-tube E within the air-tube B, and rigidly fastened thereto at its lower end, said tube E being tapering and imperforate, its upper end being smaller than the air-tube B, so that an

annular space is formed between the parts to catch overflowing oil and return it to the reservoir, substantially as specified.

2. The combination, in an Argand lamp,
5 with the wick-tube D, of the air-tube B, extending through the fount and connected at its lower end to the same, and perforated about midway of its length, and the supplemental air-tube E within the air-tube B, and rigidly fast-
10 ened thereto at its lower end, said tube E being tapering and imperforate, its upper end being smaller than the air-tube B, so that an

annular space is formed between the parts to catch overflowing oil and return it to the reservoir, the extreme upper end of the tube E 15 being formed with a ledge or offset which is adapted to support a foraminous skirt and deflector, substantially as set forth.

Signed by me this 29th day of December, 1887.

LEWIS J. ATWOOD.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.