E. E. Dailey's, W. H. Johnson & C. C. DuBois' Imp.d Lamp Burner

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PATENTED
FEB 18 1868

Fig: 1.

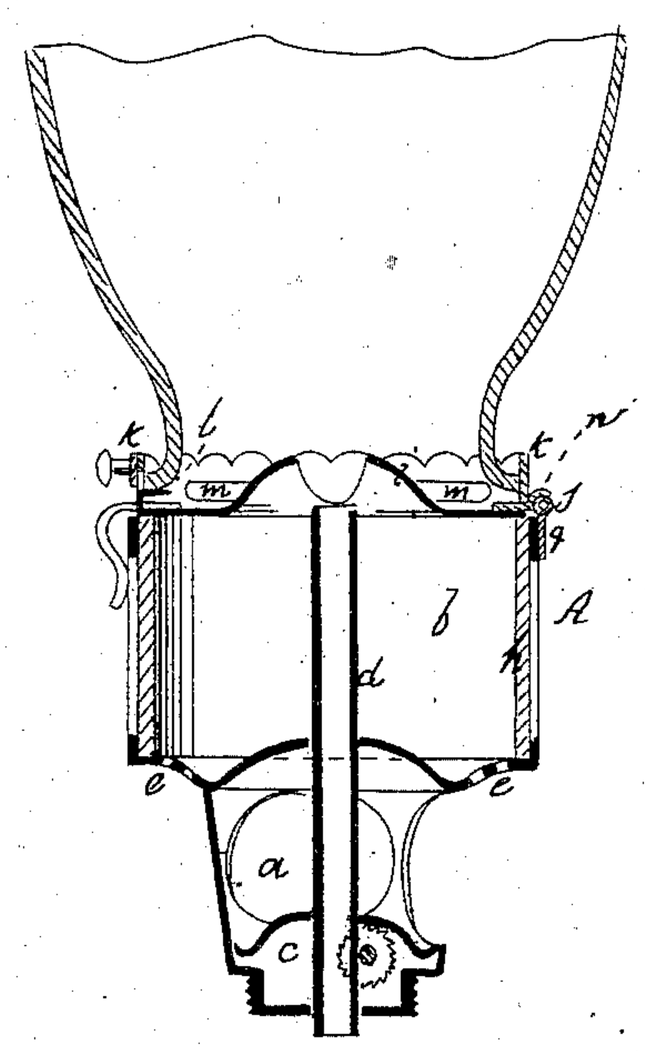
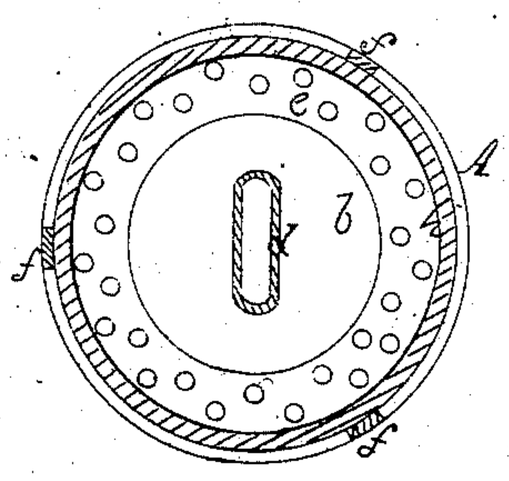


Fig: 2.



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Letters Patent No. 74,670, *dated February* 18, 1868.

IMPROVEMENT IN LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, E. E. DAILEY, WILLIAM H. JOHNSON, and C. C. DU BOIS, of Brooklyn, Eastern District, in the county of Kings, and in the State of New York, have invented a new and useful Improved Lamp-Burner; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a vertical central section of this invention.

Figure 2 is a horizontal section thereof.

Similar letters indicate corresponding parts.

This invention relates to a lamp-burner, which is intended more particularly for light oils, which cannot be burned with burners of the ordinary construction without producing an explosion.

Our burner, A, consists of a cooling-chamber, *a*, and of an air-supply chamber, *b*. The cooling-chamber is situated immediately above the compartment *c*, containing the feed-wheel, and it is constructed in such a manner that the air has free access to the lower part of the wick-tube *d*, so as to prevent the same from becoming overheated.

From the top of the cooling-chamber projects a broad flange, *e*, which is perforated with a large number of holes, and which connects by three (more or less) narrow strips, with a ring, *g*, that forms the guide for the transparent cylinder *h*. This cylinder is supported by the flange *e*, and it is made of glass, or other transparent material, which allows the light to pass through, and which at the same time is a bad conductor of heat, so that the lower portion of the burner is kept as cool as possible. The air rushes in through perforations in the flange *e*, and it passes from the air-chamber *b* to the cap *i*, where it comes in contact with the flame. This cap is connected to the ring *g* by a hinge, *j*, and it is provided with a rim, *k*, which forms the guide or socket for the chimney, and which is provided with projections, *l*, and large apertures, *m*, said projections being about at a level with the top edges of the apertures. The chimney is supported by the projections *l*, and the air has free access to the flame through the apertures *m*, and under the bottom edge of the chimney. Said chimney is held in position by lips and a set-screw, or in any other suitable manner, so that the same does not drop out when the burner is brought in an inclined position, or when the cap is turned up on its hinge. This hinge is constructed like an ordinary butt-hinge, but the parts *n*, which in butt-hinges are usually cut away, are bent up in our hinge, so as to form stops, which prevent the cap from turning back any further than desirable. By these means a safe and cheap hinge is obtained, which can be readily attached to the burner, and which is not liable to get out of order. The wick-tube *d* rises up to a level with the lowest parts of the opening in the cap, so that the heat of the flame is not reflected downwards, and the burner is kept at the lowest possible temperature.

The cap *i* is locked by a spring-catch, or any other suitable fastening, and when the cap is down, the transparent cylinder *h* is securely held in its place, and at the same time the metal parts are free to expand and contract without producing an injurious strain on the glass or other transparent material, from which the cylinder *h* is made. And furthermore, by raising the cap the cylinder can be readily removed, and the operation of cleaning said cylinder, or of replacing it by another, is materially facilitated, and all danger that the same will crack by the heat, or that it will accidentally drop out, is avoided.

The metallic parts of our burner are by preference made of white-metal, or other material forming a good reflecting-surface, so that the greatest possible amount of light is given out by the lamp.

What we claim as new, and desire to secure by Letters Patent, is—

The cooling-chamber *a*, air-supply chamber *b*, formed by the perforated flange *e*, ring *g*, transparent cylinder *h*, and locking-cap *i*, all arranged, constructed, and combined as described.

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Witnesses:
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