

(No Model.)

A. L. BARON.

LAMP BURNER.

No. 257,272.

Patented May 2, 1882.

Fig. 1.

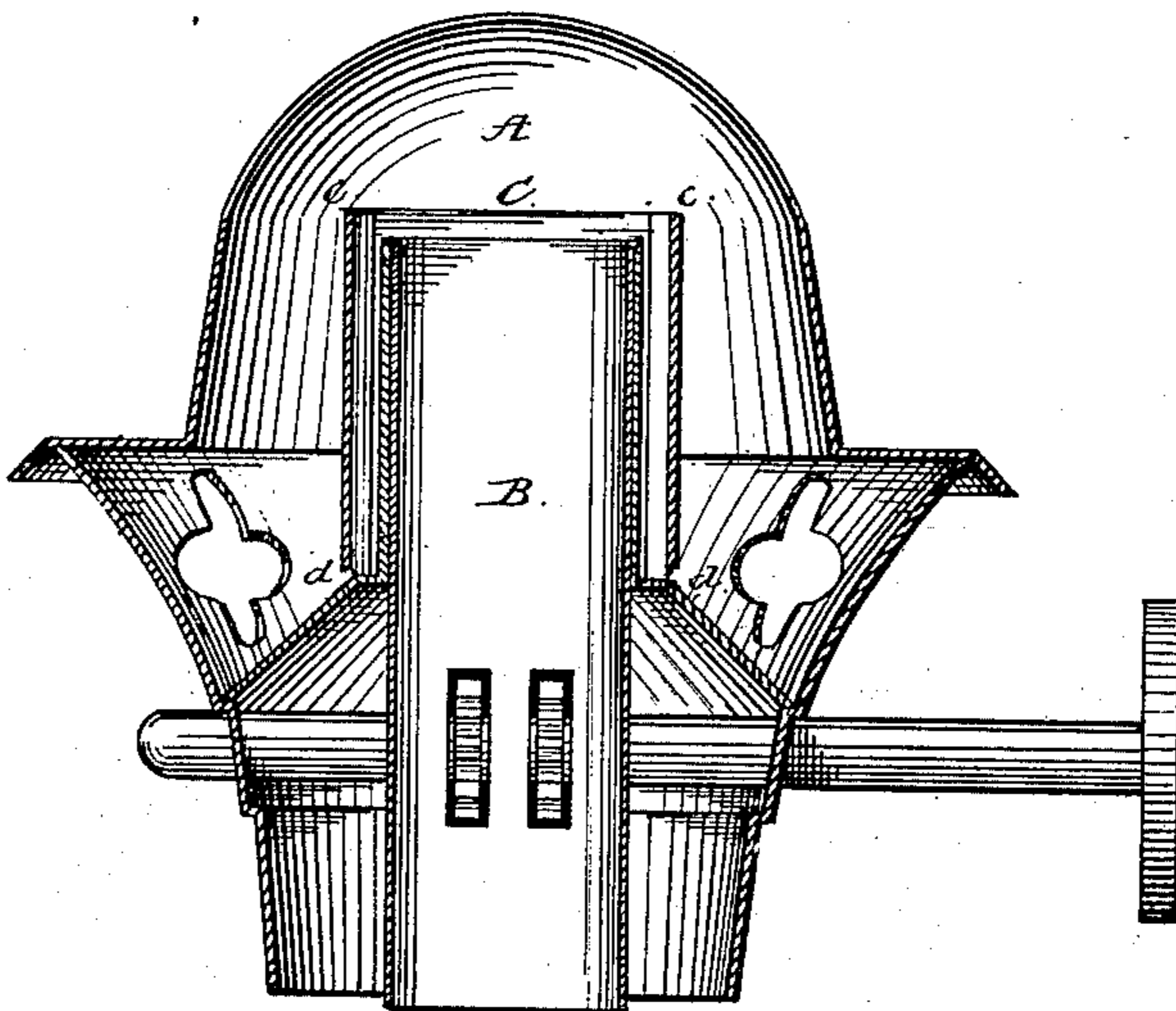


Fig. 2.

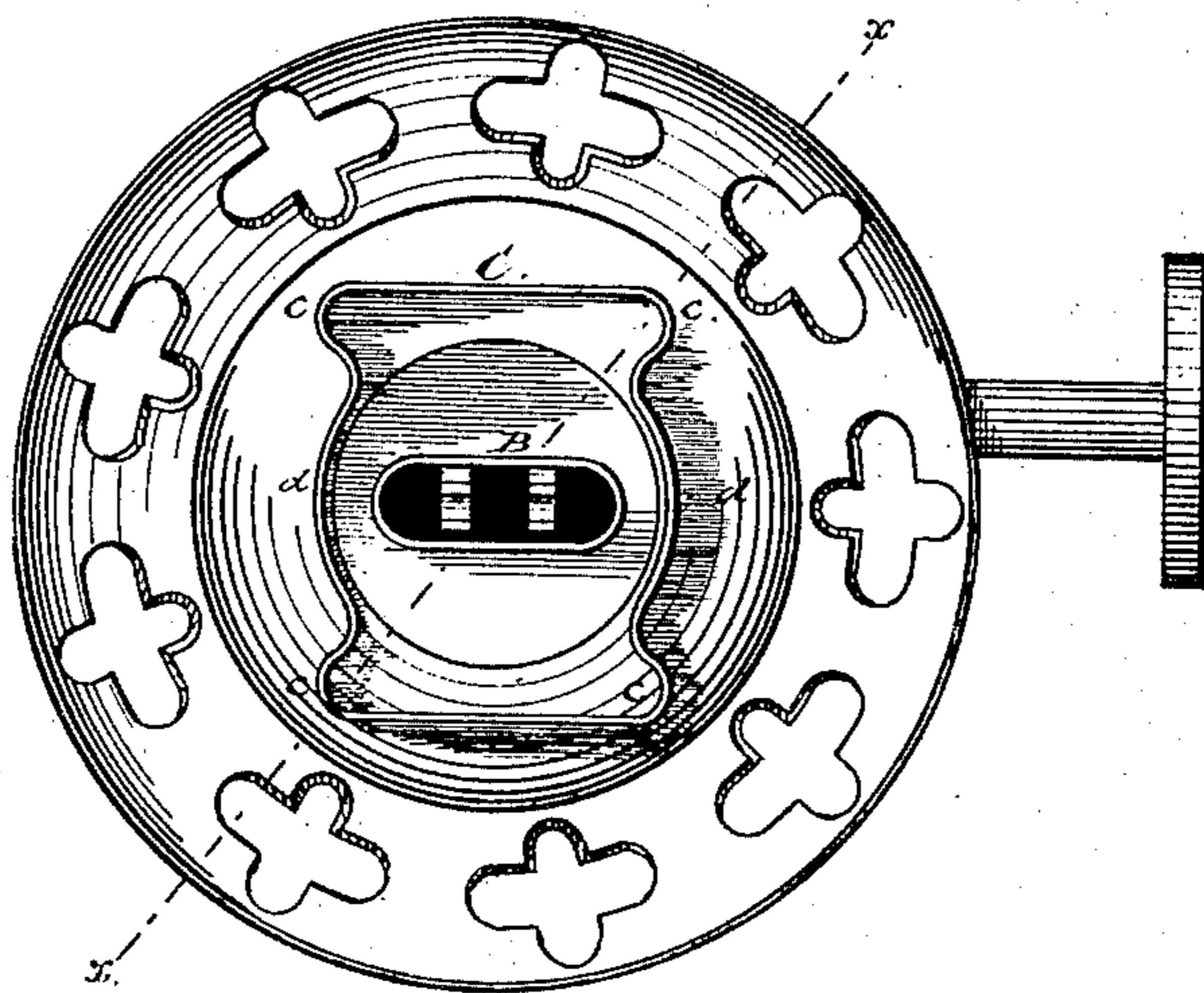
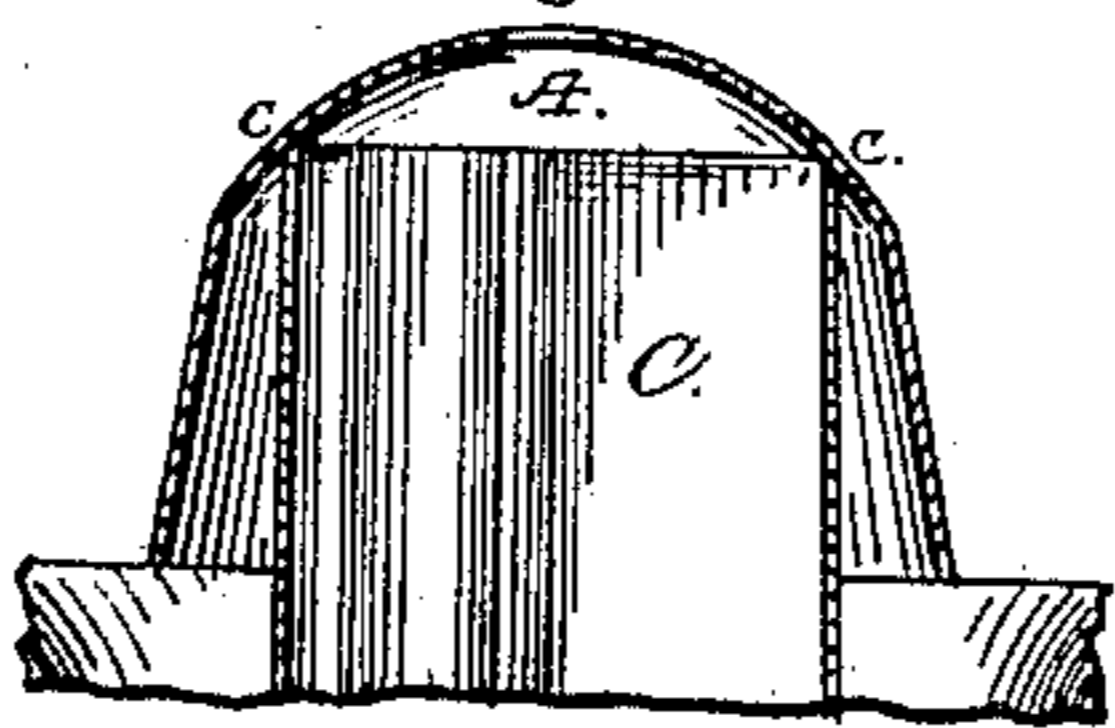


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALFRED L. BARON, OF BELLAIRE, OHIO, ASSIGNOR TO HIMSELF, BENJAMIN F. COCKAYNE, AND WILLIAM T. RUFER, ALL OF SAME PLACE.

LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 257,272, dated May 2, 1882.

Application filed December 6, 1881. (No model.)

To all whom it may concern:

Be it known that I, ALFRED L. BARON, of Bellaire, in the county of Belmont and State of Ohio, have invented a new and useful Improvement in Lamp-Burners; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

It is of the highest importance in burners for lamps or lanterns that the air which passes up around the wick-tube to furnish combustion to the flame should be fed to the base of the flame as nearly as possible with currents the most direct and uniform at all points, because under any movement of the lamp or lantern, or under the impulse of gusts of wind, air which is fed to the flame by a whirling motion or by a strong current upon one side of the wick-tube and a weak one upon the other causes the lamp to burn irregularly and to smoke or to be extinguished. This feeding of air for combustion in direct and uniform currents is of the greatest importance in that class of lanterns which are adapted to hold light under all circumstances of exposure to violent motions of every kind and to violent gusts of wind from any direction.

Efforts have been made with some degree of success to overcome the defects alluded to in the action of burners by supplying deflectors of various kinds; but these have not been effective under the conditions of exposure before mentioned, mainly because they afforded an unbroken channel or passage-way around the wick-tube near its top.

My invention consists in the peculiar form and arrangement of the deflector within the cone, which may be described in general form as a quadrangle having perpendicular sides, two of which are depressed toward the flat sides of the wick-tube, but having the central portions of these depressions curved outwardly toward the cone, as shown in Fig. 2. The other two sides have level surfaces.

Figure 1 is a vertical central section of the burner; Fig. 2, a top plan view of the same with the cone proper removed; and Fig. 3, a section taken through the line *xx*, Fig. 1.

In the drawings, A represents the burner-

cone, and B a flat wick-tube, both of a well-known form.

C is the deflector placed around the wick-tube, as above described. The corners *c* touch at their tops the inner surface of the cone, and at their bottoms extend to a point near the inner surface of the cone-support. These bottoms are curved upwardly a little between the corners, so as to fit closely to the base *d* of the wick-tube.

It will be apparent that by thus placing this deflector, which is quadrangular in form, on the convex surface of the cone-support there will be provided at each corner of said deflector a small opening through which a current of cool air may be gradually admitted into the space formed between such deflector and the wick-tube, by means of which construction the wick-tube is cooled and the heated air within said deflector is carried off.

The deflector as a whole extends from the base of the wick-tube to a point in substantially the same horizontal plane with the top of the wick-tube or a little above it. The object of the corrugated sides is to supply the flame with the requisite volumes of air at a proper point to secure a good combustion and to give the flame a desirable shape. I have used many other forms of corrugations, but prefer the one herein described. By the corners *c* touching at their tops the inner surface of the cone four separate channels are created, by which the air is divided at a proper point before entering the flame into four distinct currents, which pass to the flame with a regular and uniform action.

I consider the form of deflector described as the best, yet many others may be made, provided the upper corners touch the inner surface of the cone, thereby forming distinct air-passages.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a lamp-burner, the combination of a wick-tube and a deflector with outwardly-corrugated corners, the deflector being adapted to touch only at its corners the inner surface of the burner-cone, whereby separate and independent air-currents may pass over the up-

per sides of said deflector between its corrugated corners to feed combustion of the flame, substantially as set forth.

2. In a lamp-burner, the combination of a
5 wick-tube and a deflector with outwardly-corrugated corners, as described, the deflector being constructed and arranged to rest only at its sides upon the base of the wick-tube, whereby separate and independent air-currents may
10 pass up the corrugated corners between said wick-tube and deflector, as and for the purposes set forth.

3. In a lamp-burner, the combination of the
15 wick-tube, its base, and the burner-cone with a deflector having outwardly-corrugated cor-

ners, said deflector resting at its sides upon the base of the wick-tube and touching the burner-cone at each of its corrugated corners, whereby independent air-currents pass up within the corrugated corners and other independent air-currents pass over the top of the deflector between its corners and mutually assist in maintaining an equilibrium of air-supply, substantially as described. 20

This specification signed and witnessed this
5th day of December, 1881. 25

ALFRED L. BARON.

Witnesses:

B. F. COCKAYNE,
D. W. COOPER.