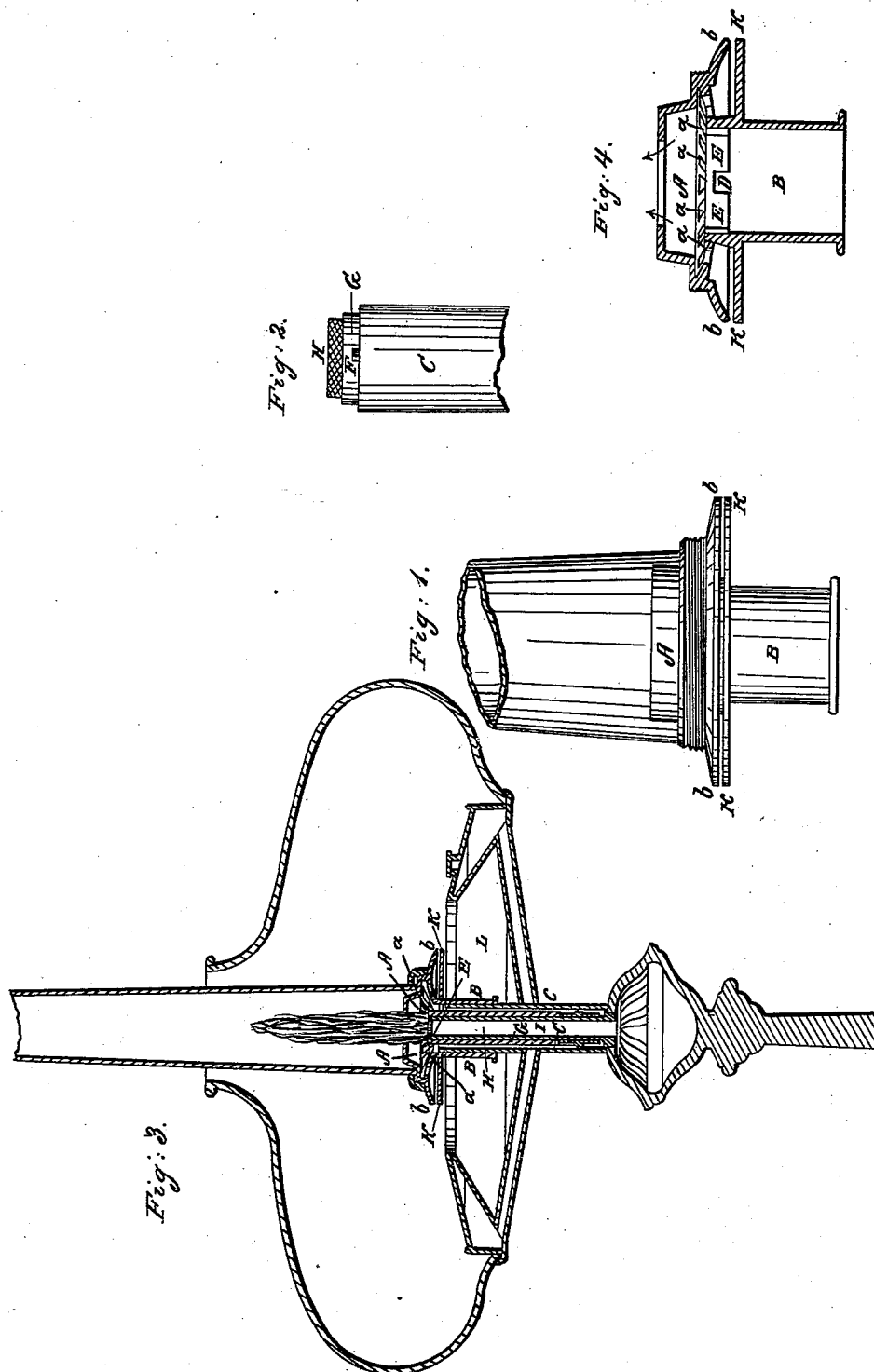


W. F. SHAW.

Lamp.

No. 2,893.

Patented Dec. 31, 1842.



UNITED STATES PATENT OFFICE.

WM. F. SHAW, OF BOSTON, MASSACHUSETTS.

LAMP.

Specification of Letters Patent No. 2,893, dated December 31, 1842.

To all whom it may concern:

Be it known that I, WILLIAM FRANKLIN SHAW, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new method of readily arranging the cylindrical tubular burner of an ordinary astral or Argand lamp so as to operate on the principle of the "solar lamp," and that the following specification, taken in connection with the accompanying drawings, forms a full and exact description of the same.

In the said description I have set forth the nature and principles of my improvement, by which it may be distinguished from others of like character, together with such parts thereof as I claim and consider new.

Figure 1, of the drawings above referred to, exhibits an outside view or side elevation of my improved apparatus to be applied to a cylindrical Argand or astral burner. Fig. 2, is a side view of a burner. Fig. 3, is a vertical and central section of an astral lamp, arranged according to my improved method. Fig. 4, is a vertical and central section of the movable tube, which encompasses the exterior tube of the burner, the said section being taken in a plane at right angles to that on which Fig. 3, is delineated.

A Fig. 1, and A A, Fig. 3, represent an ordinary solar cone or apparatus mounted upon the top of a cylindrical tube B, Figs. 1, 4, and B B Fig. 3, which tube on a removal of the chimney shelf and apparatus which usually operates the wick tubes and wick, is to be placed over and surround the outer tube C C Fig. 3, and C Fig. 2, of the tubular burner as seen in the section Fig. 3. The internal diameter of the tube B should be equal to or a very little greater than the external diameter of the outer tube C of the burner, or in other words should fit closely thereon and still admit of being turned around laterally upon the same, for the purpose of elevating or depressing the wick, which is accomplished by a notch D Fig. 4, formed or cut out of an internal ring or shoulder E E, projecting from the interior circumference of the tube B at its top. When the tube B is passed over or slid upon the burner, the shoulder or ring E E rests upon the top of the outer tube C C thereof, and at the same time the notch D receives the pin F, which generally projects from the tube G G Fig. 3 and G Fig. 2, surrounding the wick H H and by the lateral revolu-

tions of which, the wick is caused to ascend or descend.

The inner tube I and other parts of the burner and lamp are arranged in the usual manner.

The solar cone A is attached to the top of the tube B by a series of arms *a, a, a*, between which the current of air which rushes through the cone passes, as denoted by the arrows in Fig. 3, the spaces between these arms constituting so many air ducts for this purpose. The lower part of the solar cone generally extends outward, or beyond the arms as seen at *b, b*, Figs. 1, 3. At a very short distance below the lowest part *b b* of the solar cone, a circular plate K K is attached to the tube B B Figs. 1, 3, so as to extend around the same as seen in the drawings. The object of this plate is to cause the air, which passes into the cone, to do so in a thin sheet through the opening between the plates *b b* and K K as denoted by the arrows in Fig. 3, and also to protect the said current of air from lateral atmospheric currents which would otherwise create a flickering of the flame or unequal action of the outer current thereon.

By the above arrangement of the solar apparatus upon a movable tube, which may be placed over the burner of an ordinary astral lamp, whenever it may be desirable to burn the lamp on the solar plan, it will be readily understood how easily this can be effected, and without any alteration or change of the lamp fountain or oil reservoir L Fig. 3.

Having thus explained my invention, I shall claim—

1. Arranging the solar cone and ducts for the outer current of air upon a tube or other contrivance of like nature, which may be slipped over the outer tube of the burner of the lamp, and which may be removed therefrom at pleasure to admit of a substitution of the ordinary apparatus by which the chimney is supported and by the aid of which the wick is elevated or depressed, the whole being arranged and operating substantially as herein set forth.

2. Also. The combination with the cone or cone plate *b b* of a circular plate K K applied to the tube B a short distance below the cone plate in order that the current of air, which is supplied to the outside of the flame may be introduced into the solar cone in a thin sheet and be protected by said

plate from the action of other atmospheric currents, which would be likely to affect the proper operation of the said external current upon the flame, the whole being as
5 hereinabove described.

In testimony that the foregoing is a true description of my said invention and im-

provements I have hereto set my signature this third day of December, in the year eighteen hundred and forty-two.

W. F. SHAW.

Witnesses:

R. H. EDDY,

E. LINCOLN, Jr.