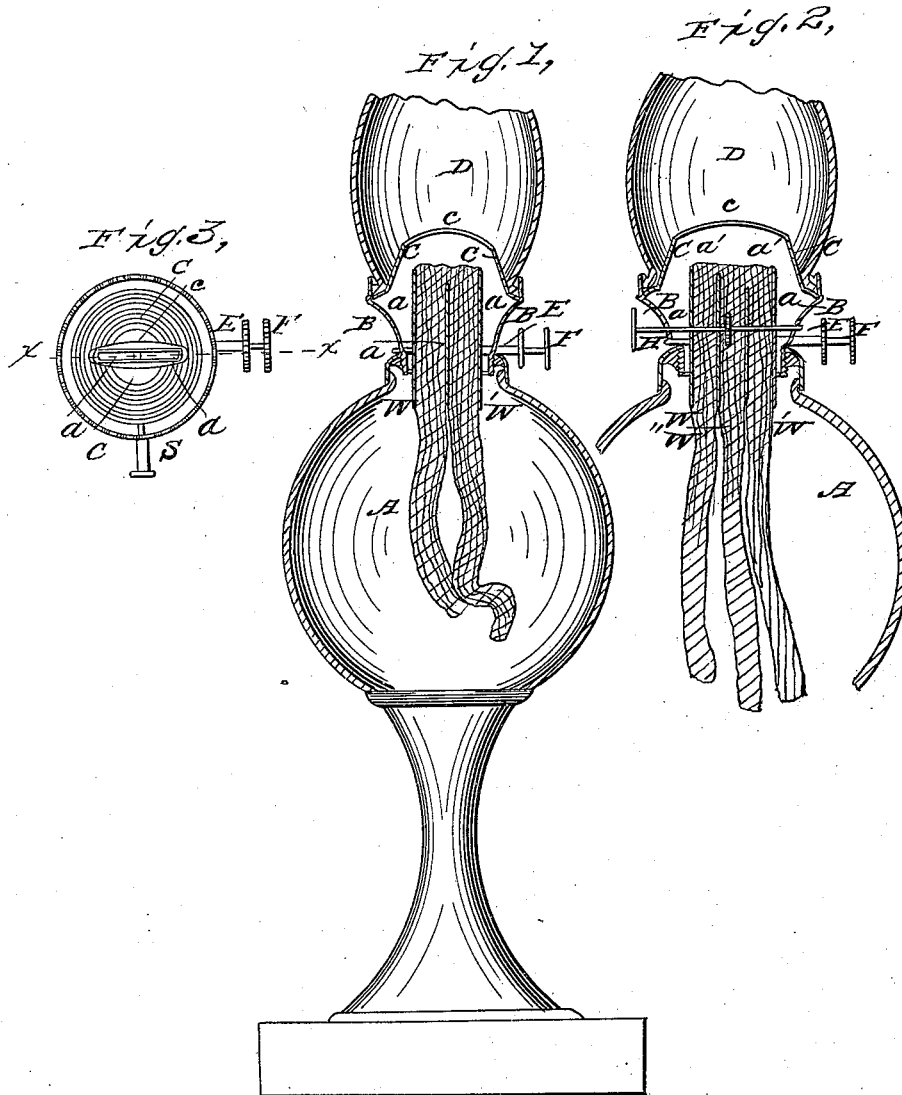


J. H. IRWIN.
Lamp Burner.

No. 46,363.

Patented Feb. 14, 1865.



Witnesses:
W. E. Mans
L. L. Coburn

Fig. 4,
J. E. F.

Inventor:
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UNITED STATES PATENT OFFICE.

JOHN H. IRWIN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN BURNERS FOR LAMPS AND LANTERNS.

Specification forming part of Letters Patent No. 46,363, dated February 14, 1865.

To all whom it may concern:

Be it known that I, JOHN H. IRWIN, of Chicago, in the county of Cook and State of Illinois, have invented and discovered a new and useful Improvement in Burners for Lamps and Lanterns; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and the letters and figures marked thereon, which form part of this specification.

In said drawings, Figures 1 and 2 represent central vertical sections of my invention at the line *x* in Fig. 3. Fig. 3 is a plan or top view of the same, and Fig. 4 is a detached view of the device for adjusting the wicks in the wick-tube.

The nature of my invention consists in the employment in the ordinary flat wick-tube of two or more wicks, arranged in such a manner that the upper ends thereof shall meet and produce a single flame of the dimensions of the wick-tube, said wicks being adjusted separately and independently of each other, and used in combination with a single slotted cone.

The object of my invention is to produce a lamp in which the flame shall burn evenly, and be of the same height and illuminating-power at each end of the flat wick-tube or longitudinal aperture occupied by the upper end of the wick, and thus give a better and more uniform light, and also avoid the breaking of chimneys produced by the unevenly burning wick in ordinary lamps. It is true that the same results are obtained by properly trimming the wicks; but the difficulty of this operation is so great that but very few persons succeed in accomplishing the task, and as a result the wicks burn unevenly, the flame, shooting far up at one side and burning very feebly at the other side, heats the chimney upon the one side and causes it to crack and break, and the wick also smokes very badly and gives a feeble and imperfect light unless it be turned down so far as to stop the burning altogether at the other side of the wick, in which case also the light is very feeble and imperfect. By my invention the wicks are readily and speedily adjusted so as to make the flame burn perfectly evenly, and so as to give the greatest possible quantity of light, and at the same time prevent the frequent breakage of the chimneys.

To enable those skilled in the art to understand, make, and use my invention, I will proceed to describe the same with particularity, reference being made to the aforesaid drawings.

A represents the lamp or oil reservoir, which may be constructed in any of the known forms.

B is the perforated annular cone-supporter.

C is the cone surrounding the top of the wick-tube, and provided with the slot *c*; and D is the glass chimney.

a represents the flat wick-tube, seen in section through its longer diameter, and may be provided with the partitions *a'*, extending up near to the top to divide the tube into compartments for each wick, and thus facilitate the adjustment of each wick independently of the other. These partitions, however, I do not consider necessary, as the same result can be attained without them, although they are of advantage in facilitating the operation.

W W' W'' represent the wicks arranged in the tube as shown, Fig. 1 representing two wicks, which are sufficient for ordinary sized lamps, but larger lamps may require three wicks, as shown in Fig. 2, to insure the desired result. The device shown in Fig. 4 is designed to effect the adjustment of the several wicks independently of each other, and is used when two wicks are used.

F represents the ordinary rod, provided with a bur upon the end projecting outside of the lamp, and with the toothed wheel *f* for raising the wick. Upon this shaft F, and having a rotary motion independent thereof, is placed the hollow shaft E, which is also provided with a bur for turning it and the toothed wheel E, for regulating the wick. As arranged in the lamp, the toothed wheel *f* rests against the wick W, and the wheel *e* against the wick W'. In Fig. 2 a separate rod and wheel are employed for regulating the central wick; but it is obvious that the system shown in Fig. 4 may be extended so as to regulate three or more wicks in the same manner by placing another hollow shaft upon E, and so on. The cone C is provided with a single slot, as shown, concentrates the draft, and thus effectually combines the flame of the separate wicks into a single flame.

When the lamp is lighted, if either wick burns brighter than the other, the one burning with the lesser brilliancy may be readily

arranged until the wicks burn evenly, or if the flame of either shoots up so far as to endanger the chimney or to smoke, then by gradually turning down said wick the difficulty may be avoided without putting out the light and retrimming the lamp. When three wicks are used, the central wick may be regulated as desired, and then the two side wicks adjusted so as to conform thereto.

Having described my improvement in burners, I will specify what I claim as new therein and desire to secure by Letters Patent:

1. The employment of two or more wicks,

arranged and operating as shown and described, in combination with a single slotted cone, substantially as and for the purposes herein specified and shown.

2. Providing the wick-tube with the partitions *a'*, as and for the purpose specified.

3. The combination of two or more wick-regulators E and F, arranged as shown and described.

JOHN H. IRWIN.

Witnesses:

W. E. MAUS,

L. L. COBURN.