H. G. MOEHRING.

Wick-Raiser.

No. 163,507. Patented May 18, 1875.

*Fig. 1.*

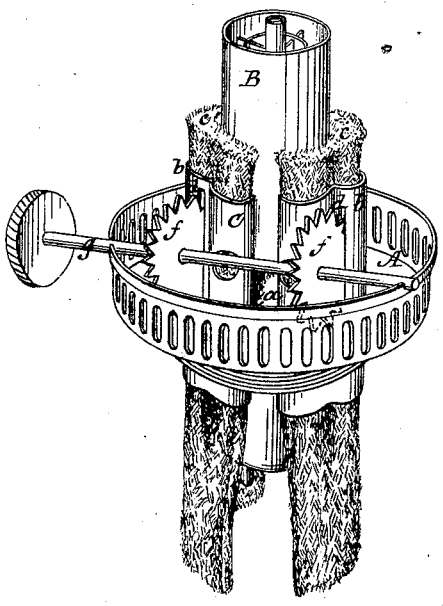
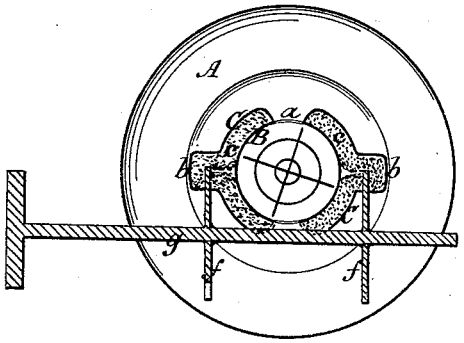



*Fig. 2.*




*Witnesses:*

Ewell & Dick

W. E. Chaffee

*Inventor:*

Herman G. Moehring

by Attys Bullock & Bailey

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

# UNITED STATES PATENT OFFICE.

HERMAN G. MOEHRING, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO RUFUS S. MERRILL, WILLIAM B. MERRILL, AND JOSHUA MERRILL, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN WICK-RAISERS.

Specification forming part of Letters Patent No. **163,507**, dated May 18, 1875; application filed May 1, 1875.

*To all whom it may concern:*

Be it known that I, HERMAN G. MOEHRING, of Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Wick-Raisers for Lamps, of which the following is a specification:

My invention has been designed more particularly with reference to the needs of lamp or lamp-burners in which two or more independent wicks require to be raised or lowered simultaneously and together. It is, however, applicable to lamp-burners or lamps in general, even where but one wick, and that a flat one, is used. In argand-lamp burners, or those in which two or more flat wicks are assembled together in the form of an annular wick, there has been much difficulty experienced in obtaining a reliable, yet cheap and uncomplicated, wick-raising device. The simplest device of all is the ordinary shaft and pinion used in flat-wick burners; and yet, inasmuch as one pinion at least is needed for each wick and wick-tube, it has been impracticable to arrange the several pinions to move together and simultaneously without multiplying gearing and incurring liability of lost motion, which, of course, renders the even and uniform movement of all the wicks uncertain, if not impossible. It has been my aim to use the ordinary toothed pinion or ratchet wick-raiser, and at the same time to avoid the complication of structure and uncertainty of operation above referred to. The most effective and, indeed, the only certain way of obtaining uniformity of movement is to mount the several pinions for the several wicks on one and the same shaft, which, when revolved, will, of course, cause the pinions to move together and in unison. To render this feasible it is, however, requisite to adapt the wick-tubes to the new arrangement. To this end I form each wick-tube on one of its broader faces with a longitudinal bulge offset or corrugation, into which the wick, when inserted in the tube, will be bent or crimped. The ratchet or toothed wick-raising wheel is arranged, not as heretofore, at right angles with the wick-tube, but parallel with said tube, (supposing the latter to be an ordinary flat-wick tube,) and it works through one side of the offset bulge or corrugation upon the crimped portion of the wick therein. With devices thus organized it is obvious that, by placing two or more of the wick-tubes in juxtaposition and in proper relations to one another, their wick-raising pinions may be mounted on one and the same shaft, by the revolution of which they will be compelled to revolve in unison.

The manner in which my invention is or may be carried into effect will be understood by reference to the accompanying drawing, in which—

Figure 1 is a perspective view of so much of an argand-lamp burner as is needed to illustrate my invention. Fig. 2 is a section through the wick-tubes, wick-raiser, and central draft-tube in a horizontal plane passing through the axis of the wick-raising shaft.

The burner shown in illustration of my invention is one embodying certain peculiarities of construction, for which I have filed application for a patent of even date herewith.

My present invention relates to the wick-raising alone, and to that I shall confine my specification. It is only necessary to say that A is the base of the burner; B, the central draft-flue, with an air-passage, *a*, between the wick-tubes leading into it. The burner is provided, besides, with a wick-assembling shell, which surrounds the wick-tubes and central draft-flue, and with the latter form an annular chamber in which the wicks from the independent wick-tubes are received and assembled together in the shape of an annular wick. The feature, however, is not here shown, inasmuch as it is unnecessary for my present purposes. The wick-tubes are seen at C, and, being designed for an argand burner, are preferably curved to fit the central draft-flue, around which they are assembled. Each wick-tube on its outer face is provided with an offset, bulge, or corrugation, *b*, which may extend wholly or partly the length of the tube. The wick *c* inserted in the tube is wider than the part of the tube that is corrugated, so that when pushed into the tube it will be crimped, bent, or folded into the corrugated part, as shown in Fig. 2. In one of the sides of the

corrugations is an aperture, *d*, through which the wick-raising pinion *f* works against the crimped portion of the wick. The pinion thus operates substantially as in ordinary flat-wick tubes, the wick being compressed between the pinions on the one side and opposite wall of the corrugation on the other. The two wick-tubes being placed opposite one another, with their corrugations or offsets in the position shown, it will be seen, by reference to the drawing, that it is entirely feasible to mount the two pinions *f* upon a single shaft, *g*, provided with the usual milled head, and arranged to revolve in bearings in the body of the burner in the ordinary way. By revolving the shaft both pinions will, of course, be put in motion, and will be operated to raise or lower their wicks simultaneously.

I have shown my invention as applied to two curved wick-tubes. It may be applied as well to flat wick-tubes—to such an arrangement, for instance, as embodied in what is known as the "Dual Burner," manufactured under the Halvorson patent, reissued June 6, 1871, No. 4,413, and extended September 20, 1873. This invention is also applicable not only to two wick-tubes, but to burners or lamps employing a less or greater number.

Where the invention is applied to what is termed the "Dual Burner" the corrugated part of the wick-tube is preferably surmounted by a plain flat-wick tube of somewhat greater width. It is, however, unnecessary to further specify the details of arrangement which may be employed in the application of my invention to various styles of burners. This will be understood without further explanation by those skilled in the art to which my invention pertains.

What I claim, and desire to secure by Letters Patent, is—

1. A wick-tube formed on one of its sides with an offset, bulge, or corrugation to receive a portion of the wick which is crimped or bent therein, in combination with a wick-raiser working through an opening in said bulging part or offset of the tube upon the crimped portion of the wick, substantially as set forth.

2. The combination of two or more wick-tubes, each formed with an offset, bulge, or corrugation to receive a crimped portion of the wick, as described, with wick-raising pinions or ratchets, one for each tube, working through openings in the bulging parts of the tubes upon the crimped parts of the wicks, and a single rotary shaft or spindle, upon which all the pinions are fixed, substantially as set forth.

In testimony whereof I have hereunto signed my name this 24th day of November, A. D. 1874.

H. G. MOEHRING.

Witnesses:
ARTHUR R. SWAN,
THEODORE M. PLIMPTON.