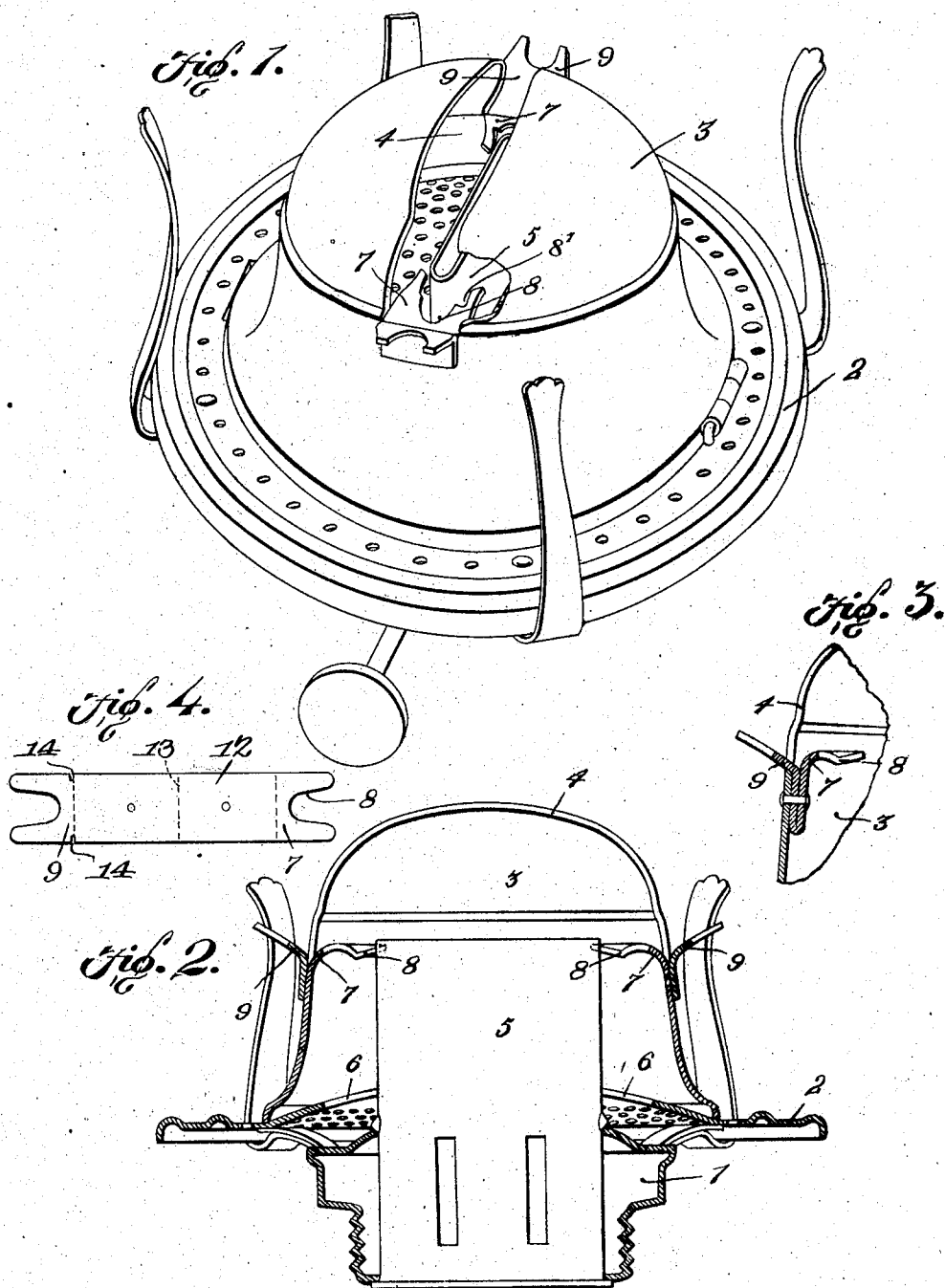


No. 839,175.

PATENTED DEC. 25, 1906.

J. H. MORRISON.
LAMP BURNER.

APPLICATION FILED MAY 31, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES HOLLIS MORRISON, OF DAYTON, OHIO.

LAMP-BURNER.

No. 839,175.

Specification of Letters Patent.

Patented Dec. 25, 1906.

Application filed May 31, 1906. Serial No. 319,623.

To all whom it may concern:

Be it known that I, JAMES HOLLIS MORRISON, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Lamp-Burner, of which the following is a specification.

This invention relates to lamp-burners.

In my United States Patent No. 827,812, dated August 7, 1906, for a lamp-burner I have described and claimed means by which the height and width of the flame of an oil-burner may be increased by the employment of air-currents.

The object of my present invention is to provide simplified and improved means for accomplishing the result above set forth.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a conventional form of lamp-burner equipped with the improvements of the present invention, the dome of the burner being partly broken away adjacent to the end of the flame-slot. Fig. 2 is a vertical section through the construction illustrated in Fig. 1. Fig. 3 is a vertical section through the modified construction. Fig. 4 is a plan view of the blank shown in Fig. 3.

Like reference-numerals indicate corresponding parts in the different figures of the drawings.

The improvements of my present invention can be readily used in connection with any old and well-known form of oil-burner.

In order to convey a clear understanding of the invention, I have illustrated it in connection with an ordinary form of oil-burner comprising a threaded feed-wheel chamber 1, in which is mounted the usual feed-wheel for the wick; a supporting-plate 2, suitably mounted above the feed-wheel chamber and adapted to support the lamp-chimney, and an ordinary dome 3, pivoted in the usual manner to the supporting-plate 2 and formed with the usual flame-slot 4. These parts, as before explained, can be of any suitable form and construction.

Adjacent to the opposite ends of the flat wick-tube 5, which extends in the ordinary manner through the feed-wheel chamber 1,

the supporting-plate 2 is formed with a pair of air-inlet openings 6, which serve to permit the entrance of two columns of air at opposite ends of the wick-tube. Disposed within the dome 3 is a pair of inwardly-extending guide-plates 7, each of which is formed with a U-shaped slot 8, into the open end of which partially extends the wick-tube 5. The U-shaped slots 8 in the guide-plates 7 constitute means located above the supporting-plate 2 for producing currents of air at the ends of the wick-tube, the function of these currents of air being to cool the ends of the wick, so as to prevent it from charring or burning up rapidly, as well as to cause the wick to burn more brightly and to give the flame an upward impetus, which increases its height and illuminating power.

It will be obvious that if the columns of air passing through the inlet openings or passages 6 in the supporting-plate should become broken up before they reach the upper end of the wick-tube the guide-plates 7, with their U-shaped slots 8 at the ends of the wick-tube, would serve to form the air again in the columns. By using the guide-plates 7, which, as will be apparent, are extremely simple and inexpensive in construction, as well as capable of being readily attached to any form of burner, I am enabled to dispense with the use of the U-shaped air-guide tubes shown in my before-mentioned patent.

In addition to providing means located above the supporting-plate for forming the air into columns, and thus increasing the height of the flame, it is desirable also to provide means for broadening the flame, so as to further increase its illuminating power.

In my former patent I have described tubes or air-guides which are secured to the interior of the dome 3 and are provided with outwardly and upwardly directed ends, which produce two converging columns of air, the tendency of which is to broaden the flame.

My present invention provides simple and inexpensive means located at the ends of the flame-slot for accomplishing this result of broadening the flame. The specific means which I provide herein consists of a pair of oppositely-extending upwardly-inclined plates 9, which are suitably secured to the outside of the dome 3 adjacent to the ends of the flame-slot 4 by solder or any other suitable means. The guide-plates 9 serve

to prevent the air from entering directly into the flame-slot and cause it to be directed outwardly in two diverging currents, the tendency of which is not only to spread the flame, but also to supply a quantity of air to the upper portion of the flame for the purpose of supporting the combustion at that point. By actual experiment I have found that the action of the guide-plates 9 in broadening and improving the flame is advantageously effected by forming said plates with V-shaped or U-shaped notches having their open ends directed outwardly, as shown clearly in the drawings.

It will be obvious that the improved means which I have provided for forming columns of air at the ends of the wick-tube, so as to increase the height and illuminating power of the flame and for producing converging currents of air by which to broaden the flame, can be easily applied to all conventional forms of burners without necessitating any reconstruction thereof, it being only necessary to provide air-inlet means in the supporting-plate and to attach the guide-plates 7 and 9 to the dome 3 adjacent to the ends of the flame-slot 4.

It will be apparent that many changes in the precise embodiment of the invention illustrated and described may be made within the scope of the claims without departing from the spirit of the invention or sacrificing any of the advantages. Furthermore, the U-shaped slots 8 in the guide-plate 7, as shown in Fig. 1, in some instances may be widened, as indicated at 8', so as to extend partly along the sides of the wick-tube 5 at the ends thereof, whereby to cause a thin envelop of air to be fed to the sides of the flame at the ends thereof. Moreover, the guide-plates 7 and 9, if desired, may be

formed from an integral blank 12, as shown in Fig. 4, said blank being folded at the dotted line 13 and suitably riveted or otherwise secured to the dome 3, as shown in Fig. 3, with the guide-plate 7 extending inward and the guide-plate 9 extending outward, said blank being preferably formed with notches 14 adjacent to the guide-plate 9 to fit the edges of the flame-slot.

In practice it is sometimes found desirable to bend the projecting ends of the guide-plate 7 on opposite sides of the U-shaped slot 8, as shown clearly in Fig. 3 of the drawings.

What is claimed is—

1. A lamp-burner comprising a supporting-plate having air-inlets, a wick-tube, a dome having a flame-slot, interiorly-arranged guide-plates extending from said dome at the ends of the flame-slot, and having U-shaped slots fitting around the ends of the wick-tube, and outwardly and upwardly inclined slotted guide-plates secured to the dome near the ends of the flame-slot.

2. A lamp-burner comprising a supporting-plate having air-inlets, a wick-tube, a dome having a flame-slot, interiorly-arranged guide-plates secured to the dome at the ends of the flame-slot and having slotted ends embracing the ends of the wick-tube, and outwardly and upwardly inclined slotted guide-plates integral with the first-mentioned guide-plates and extending through the flame-slot at the ends thereof.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES HOLLIS MORRISON.

Witnesses:

DAN H. PFOUTZ,
WM. A. BUDROE.