

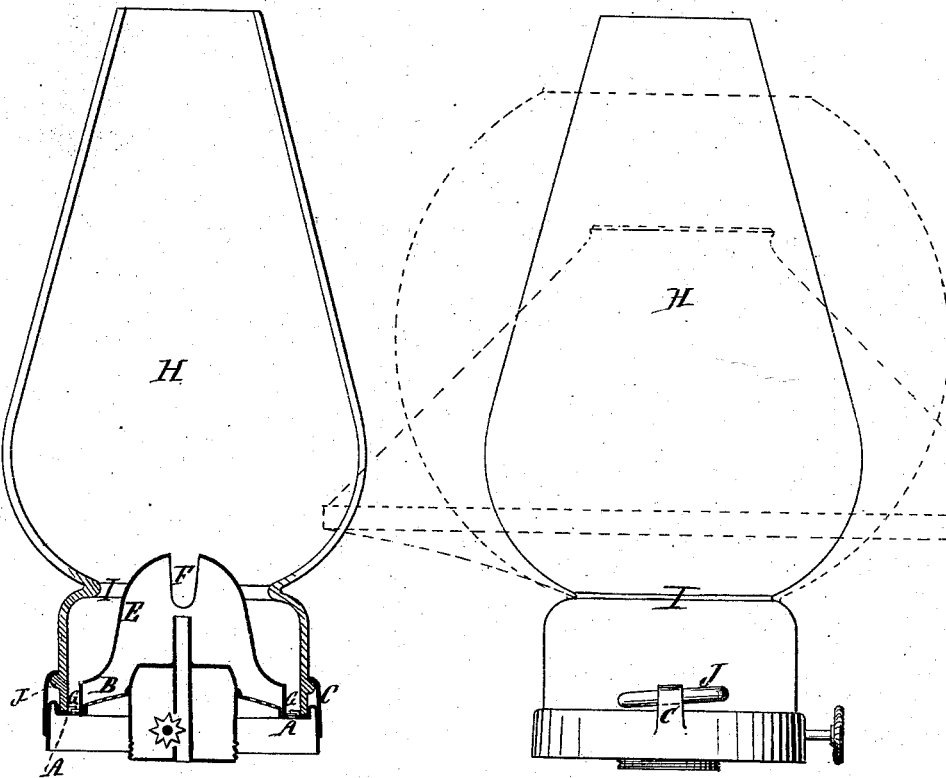
E. BLACKMAN.
LAMP-BURNERS.

No. 194,763.

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Fig. 1.

Fig. 2.



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IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. 194,763, dated September 4, 1877; application filed April 17, 1877.

To all whom it may concern:

Be it known that I, EBENEZER BLACKMAN, of the city, county, and State of New York, have invented a certain new and useful Improvement in Lamps for Burning Petroleum, Kerosene, and other Oils; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a vertical section. Fig. 2 is a side view.

The nature of my invention consists in the improved shape and construction of the burner, and in the mode of fastening the chimney to the burner, all of which will be fully hereinafter described in detail.

I construct my burner of metal, with the usual screw to attach it to the collar of the lamp, the ratchet-wheel for raising the wick, the wick-tube, and the base-plate or chimney-rest, as shown at A, Fig. 1. The base-plate or chimney-rest is flat near its outer edge, and then rises up vertically about one-eighth of an inch, more or less, running inwardly for half an inch, more or less, rises upwardly toward the wick-tube, then, tapering half an inch, more or less, runs flat to the wick-tube, and is perforated nearly its whole diameter, as shown at B, Fig. 1. The object of these perforations is to admit air to the burner and chimney, so as to make a perfect combustion, and prevent a smoky flame and flickering light. The outer edge or rim of the base-plate extends below the line of the perforations for half an inch, more or less, and can be curved inward, so as to avoid striking the filling-screw of the lamp. The object of this rim or flange below the burner is to make an air-chamber below it, and thereby direct the current of air into the burner more perfectly, and without being liable to the fluctuations by currents of air striking into the perforations, as is the case with all lamps not protected below the burners.

The upper edge of the rim or flange is raised slightly, so as to steady the chimney, globe, or reflector, which rests inside the rim. On two opposite sides of the base-plate are pieces

rising up a short distance from the base, and bent inward, one edge being higher than the other, and forming a segment of a screw, as shown at C, Fig. 2. The object of these segments is to fit over an inclined locking-thread on the base of the chimney, globe, or reflector. Through the base-plate, and near the outer edge on opposite sides, are two openings, for the purpose of locking the cone to the base, as shown at G, Fig. 1.

The cone E is constructed of metal, and rises up vertically about one-quarter of an inch, more or less, and then runs inward, rising up at an angle to the wick-tube one-half an inch, more or less, forming the same angle with respect to the wick-tube as in the base-plate, and then rises tapering to the top of the cone, which is slotted, as shown at F, Fig. 1. On the bottom of the cone, at opposite sides, are two projections, for the purpose of locking into the openings in the base-plate, as shown at G, Fig. 1.

The chimney H I make to rise up vertically from the bottom or base part about one inch, more or less, and then form an indentation, I. The chimney then takes a globular shape for a few inches, and then tapers to a contracted top. Above the indentation I the chimney may take the form of a globe or a reflector, having the same means of fastening as described below, and shown in dotted lines in the drawing. The object of the indentation I is to direct the current of air to the burner, and also serves to keep the base of the chimney cool. The bottom of the chimney, globe, or reflector is made round and smooth, without lip or flange.

On the base of the chimney, globe, or reflector, about one-quarter of an inch, more or less, above the bottom, on two opposite sides, and blown in the glass, are two segments of a screw, or inclined locking-threads, as shown at J, Fig. 2. The object of these locking-threads is to firmly secure the chimney to the burner, by locking into the female portion or segment C on the rim of the base-plate A.

The advantages of this form of lock over the ordinary bayonet-lock or square lock are obvious. This lock will accommodate itself to chimneys of unequal heights, which is not the case when the bayonet or square lock is used, as

each one has to be ground to the exact length or it cannot be locked tight. One or more locking-threads can be used on the chimneys and accomplish the same purpose.

A globe or reflector can be used on this burner when the locking-thread is blown into the glass-base, as shown by dotted lines in the drawing.

Operation: Secure the burner to the ordinary lamp-fount, insert your wick into the wick-tube, lock the cone to the base-plate, and lock the chimney, globe, or reflector by placing it inside the outer rim of the base-plate and turning it partly around. It is then ready for operation.

I am aware that it is not new to construct an ordinary lamp-chimney with flat-edged curved flanges projecting from the extreme lower edge or base of the chimney, adapted to engage with lugs on the burner; but such is objectionable, for the reason that when the flanges are so formed on the lower edges, the strain to which they are subjected causes them to easily break off, and, moreover, it is very difficult to so construct the chimney, inasmuch as the flanges require to be ground to one height in order to make a nice fit; whereas, in my invention, by forming the inclined segments in the vertical annular base above

the lower edges of the same, the strain on them is equalized, they are not liable to break off, and the segments allow for a variation of one-fourth inch, more or less, and hence do not require any grinding to make a fit.

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

1. The burner formed as herein described, having a rim or flange on the outer edge of the base-plate extending above and below said base-plate, and the locking device or segment C, substantially as and for the purpose herein set forth.

2. The cone E, constructed of metal, and formed as herein described, in combination with a flat-wick lamp-burner, substantially as and for the purpose herein set forth.

3. The chimney or globe H, constructed with the vertical annular base formed with the segmental inclined lugs J above and out of the lower edges of the base, adapted to engage segments C on the lamp-burner, as and for the purpose described.

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