No. 878,063. PATENTED FEB. 4, 1908.

J. A. HELSABECK.

LAMP BURNER.

APPLICATION FILED AUG. 20, 1907.

FIG. 1.

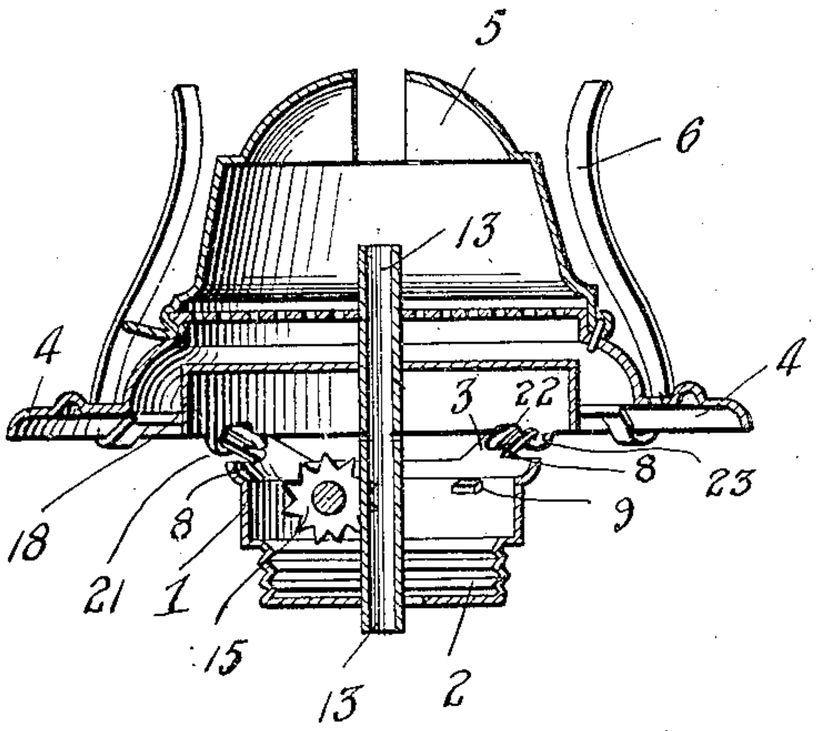


FIG. 2.

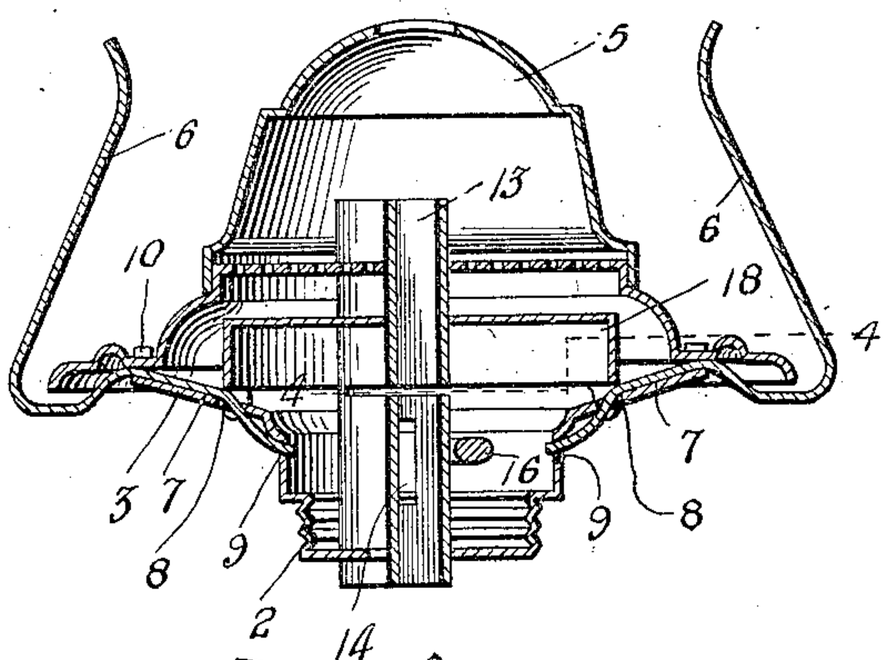


FIG. 3.

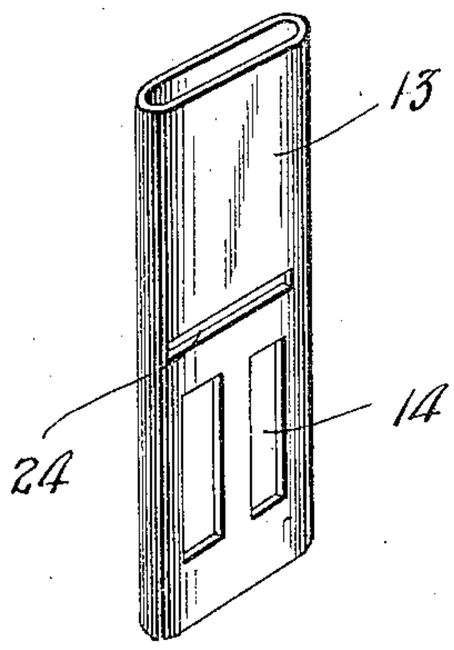


FIG. 4.

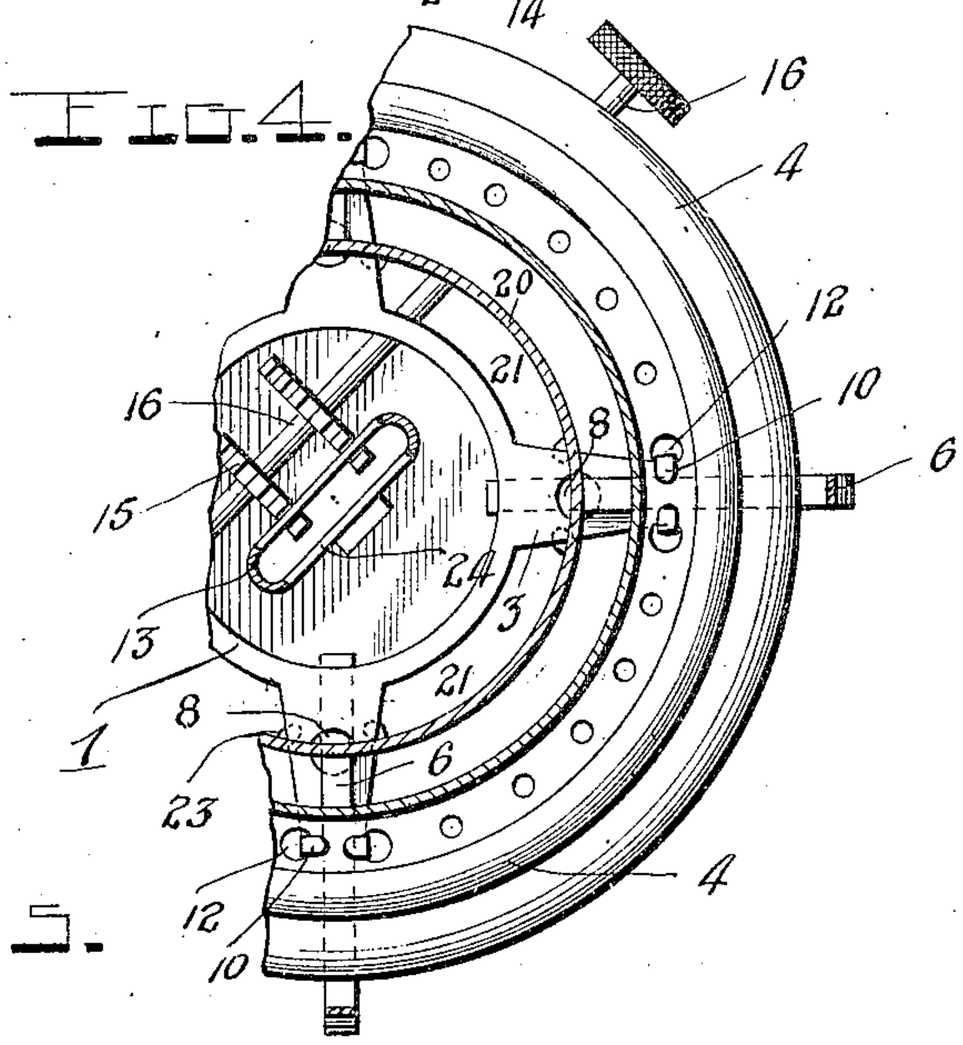
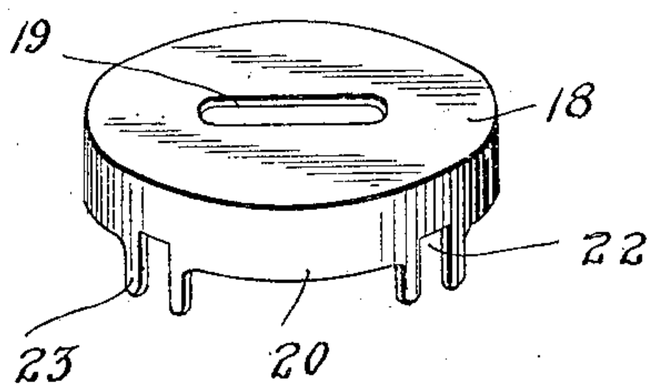


FIG. 5.



Witnesses
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JOHN AUGUSTUS HELSABECK, OF ETHER, NORTH CAROLINA.

LAMP-BURNER.

No. 878,063. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed August 20, 1907. Serial No. 389,407.

To all whom it may concern:

Be it known that I, JOHN AUGUSTUS HELSABECK, a citizen of the United States, residing at Ether, in the county of Montgomery and State of North Carolina, have invented certain new and useful Improvements in Lamp-Burners, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in burners for oil lamps, and consists of the novel construction and the combination and arrangement of parts hereinafter described and claimed.

The object of the invention is to provide a lamp burner of simple, durable and inexpensive construction, and in which the danger of explosion will be reduced to a minimum.

The above and other objects which will appear as the nature of the invention is better understood, are attained in its preferred embodiment illustrated in the accompanying drawings in which

Figure 1 is a vertical section through the burner; Fig. 2 is a vertical section taken on the plane through two of the resilient chimney engaging arms; Fig. 3 is a perspective view of the wick tube; Fig. 4 is a horizontal section through the same taken on the plane indicated by the line 4—4 in Fig. 2, and Fig. 5 is a perspective view of the guard plate or partition.

In the drawings 1 denotes the body of the burner which has at its lower end the usual screw threaded portion 2 for attachment to the lamp and, at its upper end, radiating arms 3 which are inclined outwardly and upwardly and which support the perforated chimney supporting plate on base 4. The usual cap 5 is hinged to the raised central portion of the base plate 4 and the usual resilient chimney holding arms 6 are attached to arms 3 of the body by setting them in grooves 7 formed in said arms and passing their bent inner-ends through apertures 8, 9 formed in the inner portions of the arms 3 and the upper portion of the body. The chimney holding arms 6 pass beneath the outer edge of the base plate 4 and are retained in position by said plate which is in turn secured upon the arms 3 by forming the latter with lugs or projections 10 adapted to be passed through apertures 12 in the base plate and to be bent over upon the top of the latter as clearly shown in the drawings. The numeral 13 denotes the wick tube which is secured centrally in the body 1 and the base plate 4 and is provided with one or more vertical slots 14 for spur wheels 15 upon a wick operating shaft 16 journaled in the body 1.

In order to prevent the flame of the wick from being drawn down through the perforated base plate 4 and the body, and into the body of the lamp, I provide a partition or diaphragm 18 in the form of a plate which is arranged beneath the perforated central part of the said base plate and the open top of the body as clearly shown in Figs. 2, 3. This guard plate 18 has a central aperture 19 to snugly fit the wick tube and it is also provided with a surrounding depending flange 20, of greater diameter than the open end of the body 1 so as to form air inlet spaces 21. The depending flange 20 is formed with recesses 22 which are adapted to engage the inner ends of the resilient chimney holding arms 6, and said flange is also formed with lugs or projections 23 which are bent over the side edges of the arms 3 and serve to hold the guard plate in position. Any other suitable means may be provided for accomplishing the purpose of the projections or lugs 23.

In order to prevent suction in the wick tube and to prevent the heat of the flame and the upper end of the wick tube from being conducted to the lower portion of the burner and the lamp body, I form in the wick tube at a suitable point beneath the guard plate or partition 18, horizontal slots 24. I preferably form these slots by cutting through the opposite sides of the wick tube and leaving just sufficient of the ends of the latter to connect the upper and lower portions of the same, as will be readily seen upon referring to Figs. 3, 4. By providing these slots or openings 24 in the wick tube beneath the guard plate 18, it will be seen that the wick tube and the interior of the lamp body will be supplied with air passing between the upper end of the body 1 and the depending flange 20 of said plate 18, so that there will be practically no suction in the wick tube and hence no danger of the flame being drawn downward through the same.

From the foregoing, it will be seen that the provision of the guard plate 18 and the slots or openings 24 in the wick tube reduce to a minimum the danger of the explosion of the lamp, and at the same time this arrangement of parts does not interfere with the efficiency of the burner. It will be also noted that the construction of the burner is such that it

may be produced at a comparatively small cost and will be strong and durable in use.

Having thus described my invention what I claim is:

1. A lamp burner comprising a body having radially projecting arms, a perforated chimney-supporting base plate arranged above the body and secured upon said arms, a wick tube arranged in said body and plate, and an imperforate guard plate or partition surrounding the wick tube and arranged between said base plate and said body, said guard plate or partition being of greater diameter than said body and having around its edge a depending flange engaged with and secured to said arms of the body, substantially as and for the purpose set forth.

2. A lamp burner comprising a body provided with radial arms, a perforated chimney supporting base plate arranged above the body and secured to the outer portions of said arms, a wick tube arranged in said body and plate, and an imperforate guard plate or partition surrounding the wick tube and arranged between the base plate and the body, said guard plate or partition being of greater diameter than the body and carrying attaching projections to engage the arms of the body, substantially as and for the purpose set forth.

3. A lamp burner comprising a body having radiating arms, a perforated chimney supporting base plate attached to said arms, resilient chimney holding arms connected to the arms of the body, a wick tube arranged in the body and base plate and an imperforate guard plate or partition surrounding the wick tube and arranged between the body and the base plate, said guard plate having a surrounding flange notched to receive the chimney holding arms and provided with projections to engage the arms on the body, substantially as described.

4. A lamp burner comprising a body having radiating arms, a perforated chimney supporting base plate attached to said arms, resilient chimney holding arms connected to the arms of the body, a wick tube arranged in the body and base plate and formed with transverse slots arranged upon opposite sides of the same to lessen the conduction of heat from the upper to the lower portion of said tube, an imperforate guard plate or partition arranged upon the wick tube above its slots and between the base plate and the body, and means for securing said guard plate to the arms on the body, substantially as described.

5. A lamp burner comprising a body, a perforated chimney supporting base plate arranged above the same, a wick tube arranged in said body and plate and formed upon its opposite sides with transverse slots to lessen the conduction of heat from the upper to the lower portion of said tube, and an imperforate guard plate or partition arranged upon the wick tube above its slots and between the body and the base plate, substantially as described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN AUGUSTUS HELSABECK.

Witnesses:
SUEL. H. FREEMAN,
BRANT E. MOORE.