

J. T. BETHEL.
LAMP BURNER.

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1,035,307.

Patented Aug. 13, 1912.

FIG. 1.

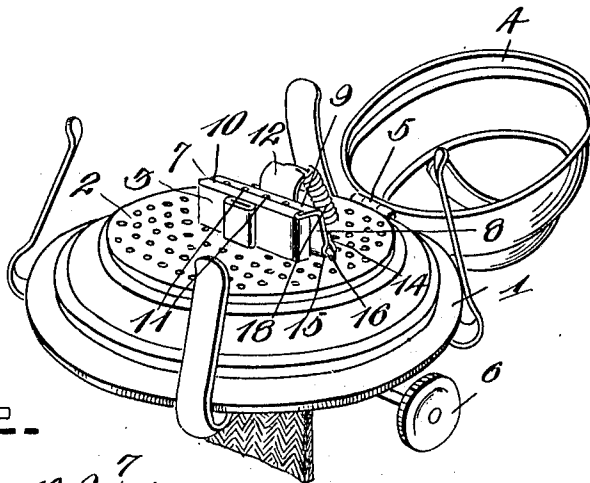


FIG. 2.

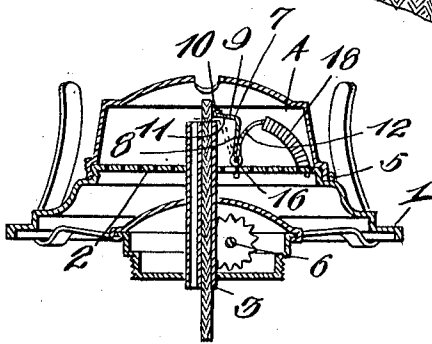


FIG. 4.

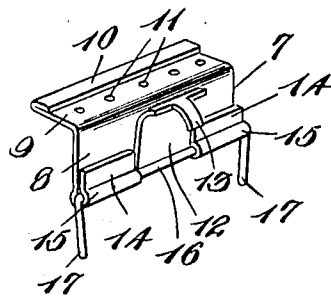
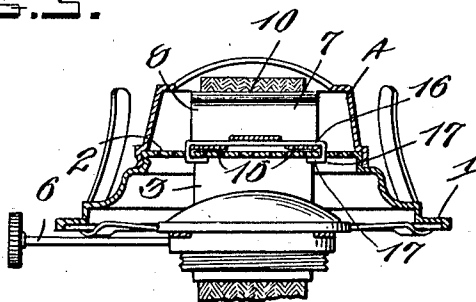


FIG. 3.



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LAMP-BURNER.

1,035,307.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH THADDEUS BETHEL, a citizen of the United States, residing at South Richmond, in the county of Chesterfield and State of Virginia, have invented certain new and useful Improvements in Lamp-Burners, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in lamp burners and especially with reference to an attachment for a lamp burner, which attachment operates automatically as an extinguisher when the wick is turned down, also, when the wick is turned up and the lamp is burning, acts to compress the wick at one point slightly below the flame so as to increase the density of the wick at that point and thereby reduce its capillary capacity so as to prevent an undue quantity of oil from being fed to the flame and the latter from becoming abnormally high and smoking, the attachment also serving, when the wick is turned down to remove the carbon from the upper end of the wick, so as to keep it trimmed and to also prevent the down turned wick from smoking, the invention consisting in the construction, combination and arrangement of devices hereinafter described and claimed.

30 In the accompanying drawings: Figure 1 is a perspective view of a lamp burner of ordinary form provided with my improved extinguishing attachment, the dome of the burner being shown open, so as to fully disclose the extinguishing attachment; Fig. 2 is a vertical sectional view of the same; Fig. 3 is a similar view on a plane at right angles to that of Fig. 2; and Fig. 4 is a detail perspective view of the attachment.

40 For the purposes of this specification my improved attachment is shown in connection with a lamp burner of common form, which lamp burner includes the usual gallery 1, the perforated base 2, the wick tube 3 and the cone 4, the latter being hinged at one side, as at 5. The wick raiser is indicated at 6.

50 In accordance with my invention I provide an attachment 7 which may be, and is here shown as, struck up from a single piece of thin sheet metal, preferably brass. This attachment comprises a plate or body 8 of rectangular form and the length of which slightly exceeds the width of the wick tube. At the upper end of the plate 8 is a lip or flange 9, bent at right angles therefrom and

the outer edge of which is doubled and rounded, as at 10. This lip or flange is foraminous, being provided with a suitable number of minute perforations 11. Formed with the plate 8, bent therefrom, and disposed on the rear or outer side thereof, is an upwardly extending arm 12 which terminates at its upper end in a rearwardly projecting stud 13. At opposite sides of the lower portion of the arm 12, and hence at the ends of the plate 8, are doubled portions 14 which bear against the rear side of the plate and in connection therewith form bearings 15 for an inverted U-shaped pintle rod 16, the downturned arms 17 of which pass through certain of the openings in the perforated base 2 and are clenched on the under side of said base and thereby the said pintle rod serves to pivotally mount the extinguishing device or attachment on the perforated base of the burner and at a point to one side of and spaced from the wick tube. The height of the plate or body 8 of the extinguisher is such that the lip or flange 9 thereof is adapted to move transversely over and bear upon the upper end of the wick tube, when the wick is lowered to the extinguishing point. A coiled extensile spring 18 has one end secured on the perforated base 2 and its upper end engaged with the stud 13 of the extinguisher. This spring acts to press the extinguisher toward the wick tube so that when the wick is raised the rounded edge of the lip or flange of the extinguisher bears against one side of the wick, and when the wick is lowered the said lip or flange of the extinguisher passes over the upper end of the wick and also over the upper end of the wick tube.

The operation of my invention is as follows: Let it be assumed that the wick is lowered so that its upper end is just level with that of the wick tube. In this position of the wick, the extinguisher will be disposed, by the action of the spring 18, with its lip or flange 9 extending across the upper end of the wick tube and also across and bearing on the upper end of the wick, as indicated in dotted lines in Fig. 2. The extinguisher, however, being yieldably held by the spring 18, permits the operation of the wick in the usual manner by the wick raiser 6, so that when the wick raiser is turned to raise the wick the latter moves the flange or lip 9 of the wick raiser to one side and out

of the way, and hence the wick may be raised to any desired point according to the size of the flame required. However, while the wick is thus raised in position for burning, the rounded edge 18 of the flange or lip of the extinguisher is pressed, by the action of the spring 18, against one side of the wick at a point immediately above the upper end of the wick tube. Hence the wick is compressed between one side of the wick tube and the flange or lip of the extinguisher so that the density of the wick is increased at this point and hence the capillary capacity of the wick is reduced at this point and hence an undue quantity of oil is prevented from being fed to the flame, the flame is prevented from becoming casually unduly increased in size and smoking is prevented. The rounded edge of the extinguisher which bears against one side of the wick when the latter is thus raised permits the wick to move freely under the action of the wick raiser so that my extinguisher does not at all interfere with the free operation of the wick by the wick raiser. When the wick is turned down so that its upper end is very nearly on a level with the upper end of the wick tube, the action of the spring 18 is such as to cause the lip or flange of the extinguisher to move partially across the upper end of the wick, thus partially but not entirely extinguishing the flame and by properly manipulating the wick raiser the extinguisher may be caused to cover the upper end of the wick to any desired extent according to the size of the flame desired when the wick is turned down. By lowering the wick so that its upper end becomes level with that of the upper end of the wick tube the extinguisher is caused, by the action of the spring, to move its lip or flange directly across the upper end of the wick and the upper end of the wick tube, thereby putting out the flame, and the lip or flange of the extinguisher, by such action in moving across the upper end of the wick, also serves to trim the wick by removing the carbon therefrom, as will be understood.

My improved lamp extinguisher and trimmer may be readily manufactured at very slight cost and may, if desired, be used in connection with lamp burners of ordinary construction.

It will be observed that the body of the extinguisher is spaced from the wick tube and directly pivotally connected to the perforated base of the burner. Hence, no alterations whatever are made in the wick tube, the making of the perforations in the wick tube is entirely avoided and no oil from the wick goes to the outer side of the wick tube or on any part of the burner, to become

ignited as in the case of some of the burners heretofore proposed in which the extinguishing devices have been directly connected to the wick tube.

While I have herein shown and described one form of my invention I would have it understood that changes may be made in the form and construction of the invention without departing from the spirit of my invention and within the scope of the appended claims.

Having thus described my invention I claim:

1. In combination with a lamp burner including a wick tube and a perforated base, a lamp extinguisher comprising a plate having a bearing at its lower side and a flange at its upper side, a pintle rod extending through the bearing and having downturned arms passed through certain openings of and clenched on the under side of the base, thereby pivotally mounting the extinguisher, and a spring connected with the extinguisher and with the base and exerting tension on the extinguisher to normally move the latter to extinguishing position.

2. In combination with a lamp burner including a wick tube and a base, an extinguishing attachment comprising a body pivotally mounted on the base at a point near one side of the wick tube said body having a flange or lip projecting from one side thereof to pass over the upper end of the wick tube, and also having a stud projecting from the opposite side thereof, and a coil spring having its lower end attached to the base and its upper end arranged around and engaged with said stud, said spring exerting tension on the extinguisher to normally move the latter to extinguishing position.

3. An extinguishing attachment for that type of lamp burner in which there is a wick tube and a perforated base, said attachment comprising a sheet metal plate having a flange at its upper end projecting from one side, bearings at its lower end, an arm extending upwardly on the side opposite the flange and provided with an attaching device, a pintle rod extending through the bearings and having downturned arms to pass through perforations in the base, and a spring having its upper end engaged with the said attaching device and adapted to have its lower end secured to the base.

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

JOSEPH T. BETHEL.

Witnesses:

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GEO. S. LIVINGSTON.