A. F. CHIESANOVA.

LAMP BURNING WITH HYDROCARBON OR OTHER VAPORS.

APPLICATION FILED MAY 27, 1908.

929,285. Patented July 27, 1909.

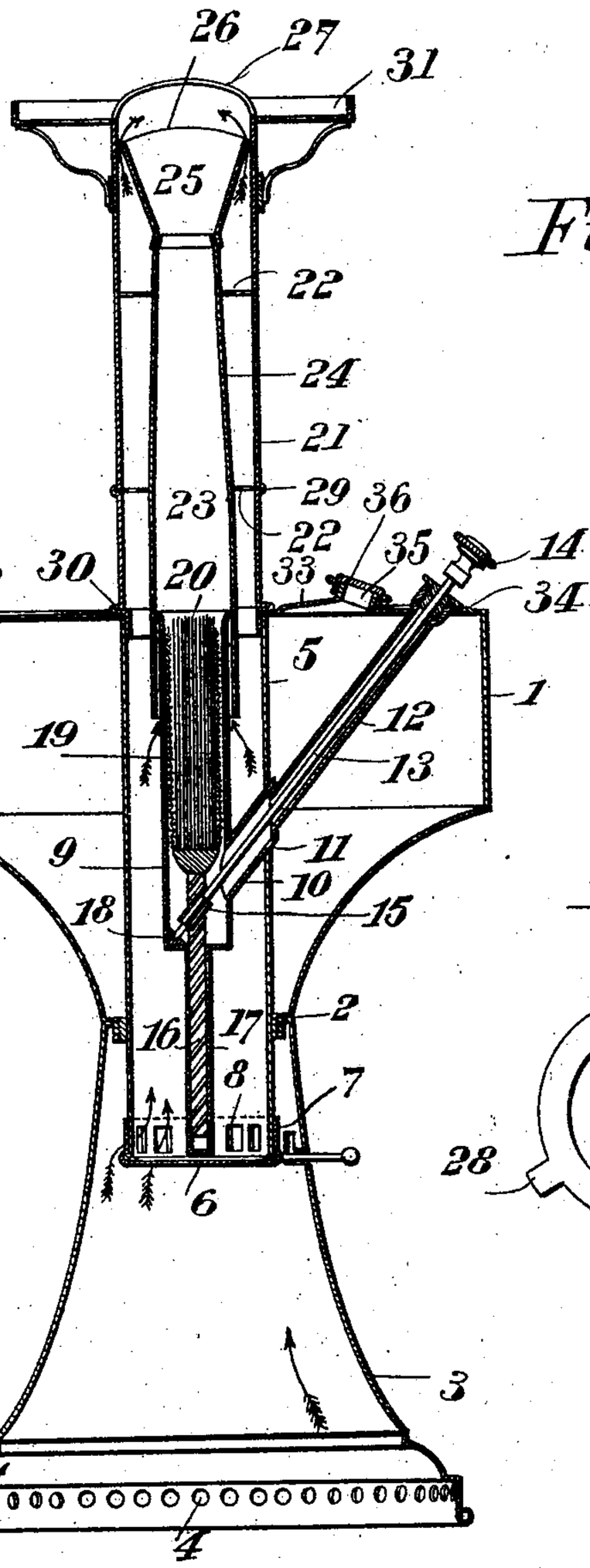


Fig. 1.

Fig. 3.

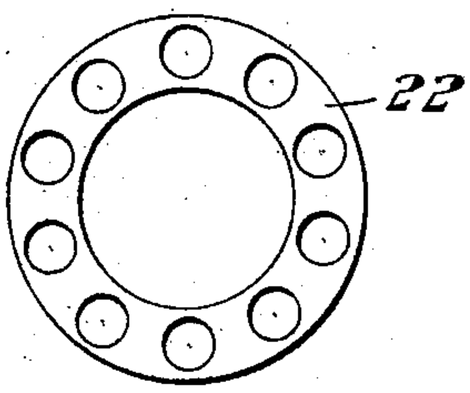
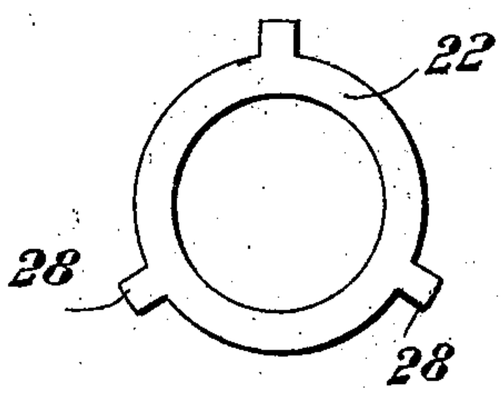


Fig. 2.



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LAMP BURNING WITH HYDROCARBON OR OTHER VAPORS.

No. 929,285. Specification of Letters Patent. Patented July 27, 1909.

Application filed May 27, 1908. Serial No. 435,229.

To all whom it may concern:

Be it known that I, ANGEL FRANCISCO CHIESANOVA, a citizen of Argentina, and resident of Brussels, Belgium, have invented certain new and useful Improvements in Lamps Burning with Hydrocarbon or other Vapors, of which the following is a specification.

The present invention has for its subject matter a lamp burning with hydrocarbon or other vapors and producing a perfectly white lighting flame without giving any smell

In the annexed drawing, given by way of example, Figure 1 is a longitudinal section of the lamp. Figs. 2 and 3 show top plan views of two rings.

The reservoir 1 containing petroleum, alcohol, benzin or similar liquid is connected by a screw threaded joint 2 with the lamp base 3 so that both parts may be easily separated with a view of their transport. The bottom part of the base 3 is provided with a series of holes 4 allowing of the access of the combustion air as indicated by the arrows.

The reservoir 1 is crossed along its longitudinal axis by a vertical tube 5 soldered at its top and its bottom to the walls of said reservoir or receptacle so as to form an annular space to receive the liquid fuel. The tube 5 is closed at its lower end by a bottom 6 provided with a manipulating rod and adapted to act as a controlling slide or damper. To this end the edge of the tube as well as the vertical rim 7 of the bottom are provided with a series of rectangular holes 8 the width of which is less than the space existing between two neighboring openings so that by giving the damper 6, 7 a rotary motion, one may entirely or partly close the openings pierced into the lower border of the tube 5 the access of the air being thus adapted to be easily controlled.

Provided inside the tube 5 is a second one 9 the branched part 10 of which is soldered into the wall of the said tube and is provided with an opening 11 giving access to the liquid. The prolongation 12 of the branched part 10 as well as the latter serves to receive a rod 13 provided at its upper end with a manipulating button 14 and at its lower end with a toothed pinion 15 meshing with a toothed rack provided with inclined teeth and guided in a tube 17 forming the extension of the tube 9. The rod 13 is terminated by a point which engages a foot bearing 18. The toothed rack carries a sort of basket 19 made of wire gauze or the like and intended to receive the wick 20. The latter is formed by iron wires parallelly arranged with reference to each other or by bronze or copper wires or by asbestos or by pumice stone or by coke carbon or by a fabric made of animal or vegetable fibers. By giving the button 14 a rotary motion, one may cause the wick-carrier 19 and the wick 20 to rise or to be lowered.

Secured by frictional engagement into the upper opening of the tube 5 is a chimney tube 21 carrying inside two rings 22 of the kind shown by Figs. 2 and 3. These two rings are soldered upon an inner tube 23 which is cylindrical at its lower part and conical on the remainder of its length; this pipe receiving a sort of cap 25 provided with a slot 26 corresponding to that 27 of the chimney tube 21. Instead of giving the upper part a conical form one may also flatten it from the place where in the preceding case it began to become conical or tapered. The upper ring 22 bears against the inner wall of the chimney tube, while the lower ring shown by Fig. 2 is engaged by its three extensions 28 into a circular fold 29 of said tube 21. The lower swelling 30 serves as a bearing member for the chimney tube 21. 31 is a crown adapted to support a globe of glass, porcelain etc. The cover 32 of the receptacle is provided with a radial rib 33 which communicates with the circular rib 34 upon which is arranged the filling opening 35 closed by a screw plug 36.

When it is desired to light the lamp, one removes the chimney tube 21, one raises the metallic or other wick 20 by causing the button 14 to rotate and one lights it. The wick is in this case at about 1 centimeter above the edge of the tube 9. The tube 21 is then replaced. Owing to the heat produced by a circular flame which is formed at the surface to the wick 20, vapors are developed which rise in the tube 23 and which are lighted at 26 whereby a lighting white flame is obtained.

When it is desired to extinguish the lamp, it is sufficient to close the damper 6 and to lower the wick into the position shown by Fig. 1.

The ribs 33 and 34 have for their object to

always keep a certain quantity of air above the level of the liquid.

The above described lamp is especially distinguished by the facility with which it is taken into pieces for transporting purposes and by the simplicity of its members.

Having now fully described my said invention, what I claim and desire to secure by Letters Patent is:—

1. In a lamp of the kind described in combination an annular receptacle, the lamp base, a screw threaded connection between the said receptacle and the said base, a tube secured into the said receptacle axially thereof, a wick carrying tube centrally secured into the said tube, a lateral branch tube connected with said wick carrier 9 and soldered into the wall of said axially disposed tube, the said branch tube being provided in the said annular receptacle with a fuel admission hole, a tubular extension for the said lateral branch tube, this tubular extension extending through the said annular receptacle up to the cover thereof, a controlling rod rotatably mounted in the said extension, a pinion on the lower end of said rod, a toothed rack vertically and axially arranged in said wick carrier and meshing with the said pinion and a wire gauze basket carried upon the said toothed rack and adapted to receive the wick, substantially as and for the purpose described.

2. In a lamp of the kind described in combination, an annular receptacle, the lamp base, a screw connection between them, a tube axially arranged in said receptacle, a wick carrying tube centrally arranged in said axial tube, a lateral branch tube provided on said wick carrying tube and soldered into the wall of said axial tube, a fuel admission hole in said branch tube inside the said annular receptacle, an extension on said branch tube extending through the top of the receptacle, a controlling rod in said extension, an actuating knob on the outside end of said rod and a pinion on the inside end of same, a thin tubular central lower extension on said wick carrying tube, a toothed rack engaged into and guided in said extension and meshing with the said pinion and a wire gauze basket carried on the top of said toothed rack and adapted to receive the wick, substantially as and for the purpose set forth.

3. In a lamp of the kind described in combination an annular receptacle for the fuel, a central air tube in said receptacle, a wick receiving tube in said central air tube, a wick receiving wire gauze basket contained in the said wick receiving tube, means for vertically shifting the said basket and a wick formed of parallel metal wires contained in said basket, substantially as and for the purpose set forth.

4. In a lamp of the kind described in combination an annular fuel receptacle, a central air tube in said receptacle, a wick receiving tube in the said air tube, a wick receiving wire gauze basket engaged into the said wick receiving tube, means for vertically shifting the said basket and a wick supported in said basket, substantially as and for the purpose set forth.

5. In a lamp of the kind described in combination an annular fuel receptacle, the lamp base, a screw connection between the said receptacle and the said lamp base, a central burner, a cover for said receptacle, a circular rib on said cover, a filling opening for said receptacle, a screw plug closing the said filling opening, and a radial rib communicating with the said circular rib, substantially as and for the purpose set forth.

6. In a lamp of the kind described the combination of an annular fuel receptacle, the lamp base, a screw joint between the two, a central vertical air tube in said receptacle, means for admitting air thereto through the lamp base, a central wick in said air tube, means for raising and lowering the said wick, a chimney tube removably secured to the top of the said receptacle, a second tube arranged concentrically in the said chimney tube this second tube being cylindrical at its lower part and tapering at its upper part, a cap provided with an upper slot and secured to the upper end of said second tube, and a slot at the upper end of said chimney tube registering with the slot of said cap, substantially as and for the purpose set forth.

7. In a lamp of the kind described the combination of an annular fuel receptacle, a lamp base, a screw connection between the two, a plurality of air admitting holes in the said lamp base, a vertical central air admitting tube in said receptacle, a central wick in said air tube, means for controlling the admission of air to the said air tube, means for controlling the wick, a chimney tube removably secured into the upper end of the said air tube, a second tube centrally secured in said chimney tube, this second tube being cylindrical in its lower part and flattened toward its upper end so as to be terminated by a slot, and a slot at the upper end of said chimney tube registering with the slot of said second tube, substantially as and for the purpose set forth.

8. In a lamp of the kind described the combination of an annular fuel receptacle, the lamp base, a screw connection between the two, a plurality of air admitting holes in the said lamp base, a vertical central air duct in the said annular receptacle ending and flush with the upper surface of said receptacle, a central wick in the said air duct, means for controlling the admission of air to the said air duct, means for controlling the wick, a chimney tube frictionally engaged at its lower end into the upper end of said air duct, a swelling near the lower end of said chimney tube and adapted to engage the upper surface of the said receptacle adjacent the upper opening of

the air duct, a second tube centrally arranged in the said chimney tube, two rings provided with ears secured in spaced relation on said second tube and a circular fold provided in said chimney tube and adapted to receive the ears of the lower one of said rings, substantially, as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two witnesses.

ANGEL FRANCISCO CHIESANOVA.

Witnesses:
CRAN NELSEN,
GREGORY PHELAN.