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EDMUND B. LUDWIG, OF KANSAS CITY, MISSOURI.

VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 680,260, dated August 13, 1901.

Application filed April 28, 1900. Serial No. 14,674. (No model.)

To all whom it may concern:

Be it known that I, EDMUND B. LUDWIG, a citizen of the United States, and a resident of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Gasolene-Lamps, of which the following is a specification.

The object of this invention is to provide a cheap, simple, and efficient gasolene-lamp so arranged that it can be readily ignited and which will afford a steady and economical light.

The invention consists, essentially, of a generating-coil located at the flame-aperture and below the coil a vapor-chamber, which is fed by the terminal of the coil. The shell or casing of the burner is cylindrical in form and provided with a circular chamber at its upper end. The upper and lower walls forming this chamber have each a central aperture which are covered by two conically-formed reticulated caps, one above the other, said caps being located within a tubular shell which extends above the casing within the glass chimney, all of which will now be set forth in detail.

In the accompanying drawings, Figure 1 is a side view of my improved gasolene-lamp, showing the reservoirs and the valves and connections. Fig. 2 is a central vertical section of the lamp. Fig. 3 is a top view, looking down, with the chimney and reticulated screen-caps removed; and Fig. 4 is a horizontal view, looking down, across the line X of Fig. 2.

In constructing my gasolene-lamp I prepare a shell 5, open at its lower end. At the upper end of this shell is a casing composed of the top plate 6, the ring 7, and the lower plate 8, within which a coil 9 is formed from the feed-pipe 10. The pipe 10 leads from a suitable reservoir 11, located at any desired elevation, and the flow is governed by a valve 12. There is a central aperture through the plates 6 8, and around this aperture, between the upper and the lower plate, is the coil referred to, the terminal of the pipe 10 being connected with the vapor-chamber 13, hereinafter described. Above the plate 6 and rigidly secured thereto is an upwardly-projecting tube 14, and this tube, together with the top plate 6 and the rim 7, are preferably in one piece, the lower

plate 8 being secured to the upper plate by means of screws 15 or otherwise. The shell 5 is also adapted to be removed from the head or chamber formed by the upper and lower plates 6 8 and rim 7, a vertical slot 16 being formed at one side to admit the pipes which supply the burner.

Within the upper tube 14 is a reticulated cap 17, formed, preferably, of wire-gauze, the flanged base of which is below the top plate 6, and above this cap 17 is a larger reticulated cap 18, the dome of which projects slightly above the tube 14.

The chimney-rim 19 is adapted to fit snugly around the top of the shell 5 and is provided with an ornamental guard 20. This rim 19 may be made removable or integral with the top plate 6, as desired. It will thus be seen that the supply of air for the burner passes up through the lower open end of the shell, thence through the reticulated caps 17 18, and up through the chimney 21.

The vapor-chamber 13 is composed of a rectangularly-formed hollow shell, to one end of which the supply-pipe 10 is attached, the body of the vapor-chamber extending over to a point directly below the central opening in the plates 6 8, where a vapor-jet orifice 22 is provided for the escape of the generated gas. Directly below this orifice is a vertical needle-pointed valve 23, provided with a hand-wheel 24, which extends below the shell 5.

The packing-box 25, which is around the valve-stem 23, is provided on its upper side with a circular channel 26 and is adapted to hold alcohol or any other heating fluid, by means of which the vapor-chamber 13 may be initially heated. This channel is supplied by means of a pipe 27, which passes through the opening 16 in the side of the shell, and this pipe is connected with a reservoir 28, preferably located on the bracket 29, as shown. The pipe 27 is provided with a valve 30, so that the supply can be regulated.

In operating the lamp I first turn the valve 30 so as to supply the channel 25 with alcohol or such other suitable heating fluid, which is then ignited, and after the vapor-chamber 13 is suitably heated and the hydrocarbon oil within the coil 9 has a sufficient supply of generated gas the valve 30 is turned off and the valve 12 turned so that a proper supply

of gasolene is admitted to the vapor-chamber. It is obvious that the flame from the vapor-chamber will now generate the gas sufficiently to keep it in operation.

5 What I claim as new is—

In a gasolene-lamp the combination of a shell, open at its lower end and provided at its upper end with a casing composed of two plates separated from each other and having
10 central openings therein, a feed-pipe having a coil within the casing formed by said plates, said coil and casing being removable from the shell, a vapor-chamber and the terminal
15 chamber provided with a vapor-jet arranged

below the plates forming the casing and in vertical line with the axis of the central openings in said plates, a needle-valve arranged to control the opening in the vapor-jet, and a pair of reticulated conical caps
20 above the central openings of the plates, substantially as set forth.

Signed at Kansas City, in the county of Jackson and State of Missouri, this 19th day of March, A. D. 1900.

E. B. LUDWIG.

Witnesses:

CARL HOLTZSEHM,

C. E. YOUNG.