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BURNER FOR LAMPS FOR LIQUID FUEL

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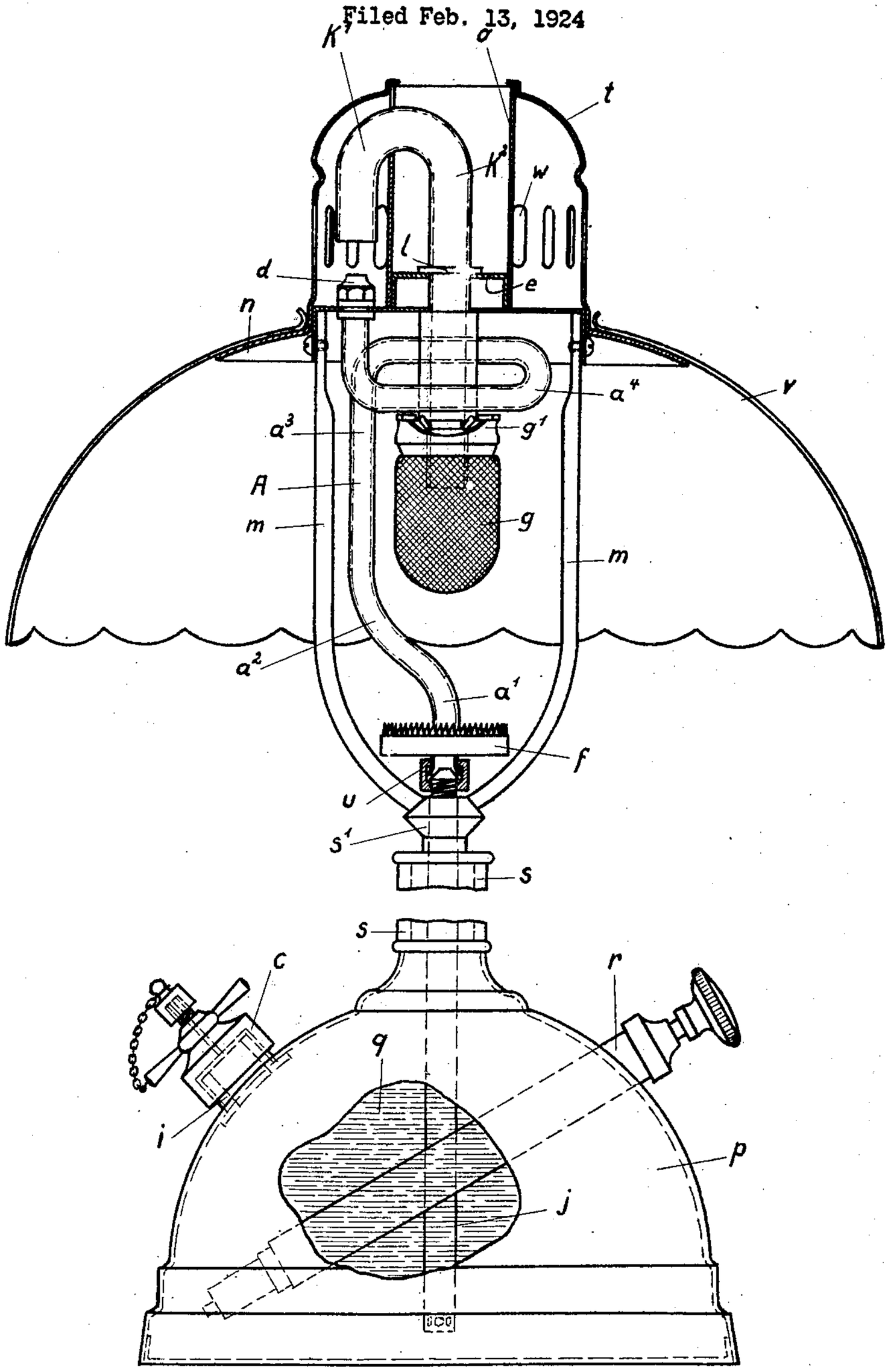

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BURNER FOR LAMPS FOR LIQUID FUEL.

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This invention relates to improvements in lamps in which liquid hydrocarbons are vaporized for heating inverted incandescent mantles.

Lamps of this kind are known wherein the vaporizer extends laterally outside the incandescent mantle in form of an upright tube. The vaporizer tube is consequently strongly over-heated by the heat radiating from the incandescent mantle at the comparatively short part which is closest to the incandescent mantle, the remaining parts of the vaporizer tube which are farther distant from the incandescent mantle being less heated, wherefrom results that the hydrocarbon is carbonized at the overheated parts of the vaporizer tube.

In accordance with the invention the feeding from a point above the reservoir and the vaporizing are effected by a single tube including a lower portion which extends axially upwardly from above the reservoir in alignment with the mantle, an intermediate bent portion and an upper offset portion both the bent portion and the upper offset portion extending close to and substantially following the contour of the mantle. In prior constructions having a similar external appearance the tube has served as a housing for separate devices or is built up of a number of parts or does not extend axially from the reservoir and does not serve both as a feeder and a vaporizer.

An embodiment of the invention is illustrated by way of example on the accompanying drawings in which a table lamp provided with an inverted incandescent mantle is shown.

The hollow foot p of the table lamp which serves as reservoir for the hydrocarbon q to be vaporized has a filling tube i for the liquid fuel closed by a screw cap c and a pump r designed to produce the required pressure in the reservoir. A hollow column s upwardly extending from the hollow foot p has a crown s' which carries a lyre-shaped support m for a canopy n. The lamp shade v rests on said canopy n. A tube j extending through said hollow column s serves to feed the liquid fuel from the reservoir p to the vaporizer tube A fixed on the upper end of tube j by means of an internally threaded sleeve u. The feeding and vaporizer tube A comprises a lower portion a' which forms the extension of the tube j, a bent portion a^2 and an upper offset portion a^3 which is parallel to the lower branch a' and the coil portion a^4 forming an extension of the portion a^3. A heating cup f serving to start the heating is mounted on the lower branch a', said cup being filled with an easily vaporizing fuel (spirit). The coiled portion a^4 wound around the arm k' k^2 of the mixing tube terminates in a nozzle d standing opposite the upwardly extending arm k' of the U shaped mixing tube on the downwardly directed arm k^2 of which the incandescent mantle g is suspended with the aid of a porcelain ring g'. The arm k^2 of the mixing tube traverses the bottom plate e of a chimney o, a collar l of said arm k^2 securing the mixing tube in its position. The chimney o is carried by the support m through the intermediary of a casing t having slits w. The vaporizer tube A the branch a' of which extends in axial direction from the column s, s' is bent at a^2 so that its arm a^3 is as close as possible to the cylindrical incandescent mantle g for the longest possible extent.

The liquid fuel which has been brought under pressure in the reservoir p by means of the pump r is forced up through the pipe j into the vaporizer tube A in which it is exposed to the action of the heat radiating from the incandescent mantle g. The lamp is lighted by the flame produced in the heating cup f. As the fuel is strongly heated as soon as it enters into the branch a' of the vaporizer A, the heating increasing gradually and remaining uniform for a rather long extent, a carbonizing of the fuel on the strongly heated part of the vaporizer is avoided. The fuel is vaporized in tube A and flows out as gas from the nozzle d into the mixing tube k', k^2 where it admixes with the air, the mixture being burned in the inverted incandescent mantle g.

By reason of the shape of the vaporizing tube the vaporizing temperature is attained with certainty, and any objectionable or detrimental high temperature is avoided. At the same time there are avoided all sharp edges, soldered parts, or parts otherwise joined which would complicate the manufacturing, add to the expense, and cause unsightliness and obstruction of the tube. Furthermore the shape of the tube permits accessibility of the incandescent mantle and reduce to a minimum shadows from the light.

I claim:—

1. A burner including a reservoir for liquid fuel, a tube extending upwardly from the reservoir, a vaporizing tube having its lower end secured to the said first mentioned tube and having a nozzle at its upper end, an inverted U-shaped mixing tube having one end disposed above said nozzle and the other end disposed in alinement with the first mentioned tube and provided with a mantle support, a canopy support, a chimney mounted on the canopy support, said mixing tube being supported from said chimney, and a loop portion formed in the vaporizing tube and encircling one leg of the mixing tube and confined between the chimney and the mantle support.

2. In combination, a liquid fuel reservoir, a mantle support and a single fuel feeding and vaporizing tube including a lower portion extending axially upwardly from said reservoir in alignment with the mantle, an intermediate bent portion and an upper offset portion, both the bent portion and the upper offset portion extending close to and substantially following the contour of the mantle.

In testimony whereof I affix my signature.

WILHELM FEZER.