

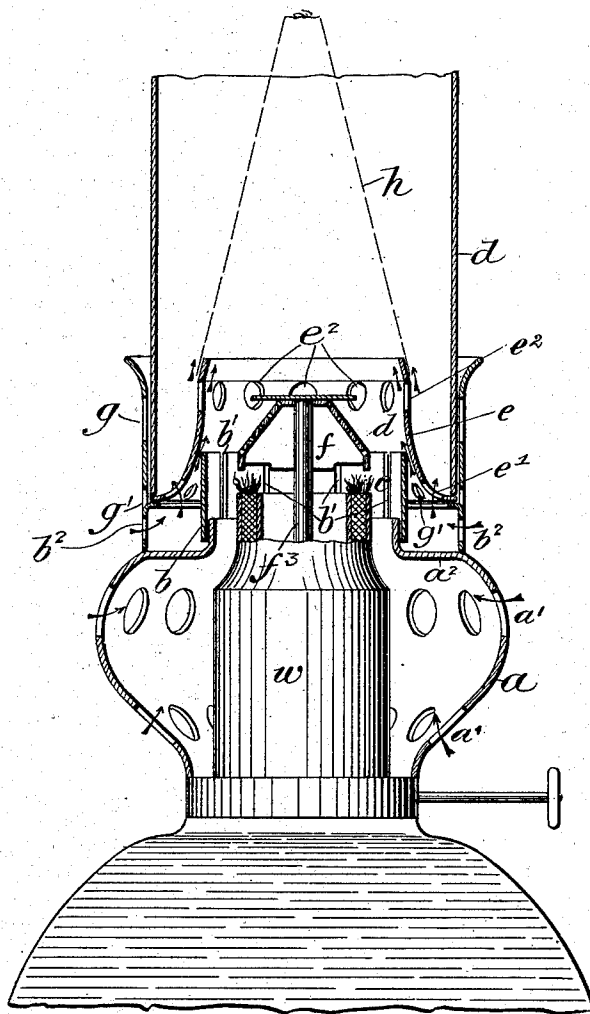
No. 712,352.

Patented Oct. 28, 1902.

A. ALBRECHT.
INCANDESCENT BURNER FOR LIQUID HYDROCARBONS.

(Application filed Jan. 25, 1902.)

(No Model.)



WITNESSES:

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INCANDESCENT BURNER FOR LIQUID HYDROCARBONS.

SPECIFICATION forming part of Letters Patent No. 712,352, dated October 28, 1902.

Application filed January 25, 1902. Serial No. 91,258. (No model.)

To all whom it may concern:

Be it known that I, ADOLF ALBRECHT, a citizen of the Empire of Germany, residing at Schoeneburg, near Berlin, Germany, have invented certain new and useful Improvements in Incandescent Burners for Liquid Hydrocarbons, of which the following is a specification.

This invention relates to an incandescent burner for liquid hydrocarbons, and has for its object to provide an improved burner of this character by which a perfectly white incandescence of the mantle is obtained and any blacking of the mantle or disagreeable odor of the flame is avoided; and the invention consists of an incandescent burner for liquid hydrocarbons which comprises an annular body having a contracted upper portion, forming a seat, and having air-inlet openings in its circumference, a wick-tube arranged centrally within said body, a slitted cylinder, a gallery having air-inlet openings in its circumference, at the lower edge thereof, said cylinder and gallery being supported on said seat and the former being arranged within the latter and a cone supported on said gallery, a vaporizer adjustably supported in relation to the upper edge of the wick-tube, said cone serving to direct the air entering said gallery to the interior and exterior of the mantle; and the invention consists, further, of certain details of construction and combination of parts, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawing is shown a central vertical section of my improved burner with parts in elevation.

Referring to the drawing, *w* represents the wick-tube of my improved incandescent burner for liquid hydrocarbons that is composed of concentric tubes. The wick-tube *w* is surrounded by an annular body *a*, which is provided with a number of openings *a'*, through which the air is conducted to the flame in the usual manner. The upper end of the annular body *a* is contracted, so as to form a seat *a''*, upon which rests a cylinder *b*, concentric with the wick-tube. The contracted portion and the cylinder *b* serve to direct the air closely to the flame. The cylinder *b* is provided with vertical slits *b'*, through which passes a current of air, that is supplied through

the openings *b''* at the lower part or base of the gallery *g*. The gallery *g* rests on the seat *a''* of the annular body *a* and supports on inwardly-bent lugs *g'* the cone *e* and the chimney *d*, as shown clearly in the drawing, the chimney resting on the base of the cone. The cone is provided in its circumference with a lower and an upper row of openings *e'* and *e''*, respectively. The lower openings *e'* serve to conduct part of the air that is supplied through the openings *b''* in the base of the gallery *g* to the space between the cone *e* and the chimney *d* and then to the outer surface of the mantle *h*, while the other part of the air is conducted through the annular space between the cylinder *b* and the cone *e* along the inner surfaces of the cone to the mantle *h*, as shown by the arrows. The mantle *h* is supported in any approved manner above the cone, the lower part of the mantle forming contact with the upper end of the cone, as shown by dotted lines.

Above the wick-tube *w* is arranged a vaporizer *f*, which is of conical shape and provided either with perforations or slits. The blue flame that is formed between the wick and the lower circumference of the vaporizer passes upwardly between the vaporizer and the cone and then into the mantle.

When the flame is lighted, the air is supplied through the openings *a'* in the annular body *a*, so as to produce proper combustion, and is conducted in upward direction around the vaporizer to the interior surface of the mantle. A current of air is supplied through the openings *b''* in the lower part of the gallery *g* and is heated by coming in contact with the cylinder *b* and cone *e*, and part thereof is conducted to the interior of the cone and mixes with air that is passing from the annular body *a* to the mantle *h*. The other part of the air, however, passes through the lower row of openings *e'* in the cone through the space between the cone and the chimney and is conducted to the outer surface of the mantle, so that perfect combustion may be obtained to heat the mantle to incandescence.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with an annular body

having a contracted portion and air-inlet openings provided in its circumference, of a wick-tube arranged within said annular body, a vaporizer, a reservoir for the hydrocarbon, 5 a cylinder seated on said contracted portion around the upper end of the wick-tube, a gallery surrounding said cylinder and having air-inlet openings, and a perforated cone supported on said gallery with its lower edge 10 above the air-inlet openings thereof, said cone serving to divide the air entering through the openings in said gallery into two currents to the interior and exterior of the mantle, substantially as set forth.

15 2. The combination, with an annular body having a contracted upper portion forming a seat and having air-inlet openings in its circumference, of a wick-tube centrally arranged within said body, a vaporizer, a reservoir for

the hydrocarbon, a slitted cylinder arranged 20 around the upper end of the wick-tube, a gallery surrounding said cylinder and having air-inlet openings at its lower edge, said cylinder and gallery being supported on said seat, and a cone supported on said gallery, 25 said cone having openings at its lower edge, said gallery and cylinder forming in connection with the cone a heating-space from which the air is directed by the cone to the interior and exterior of the mantle, substantially as 30 set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ADOLF ALBRECHT.

Witnesses:

MAX PAUL SCHULZ,
PAUL TICHLER.