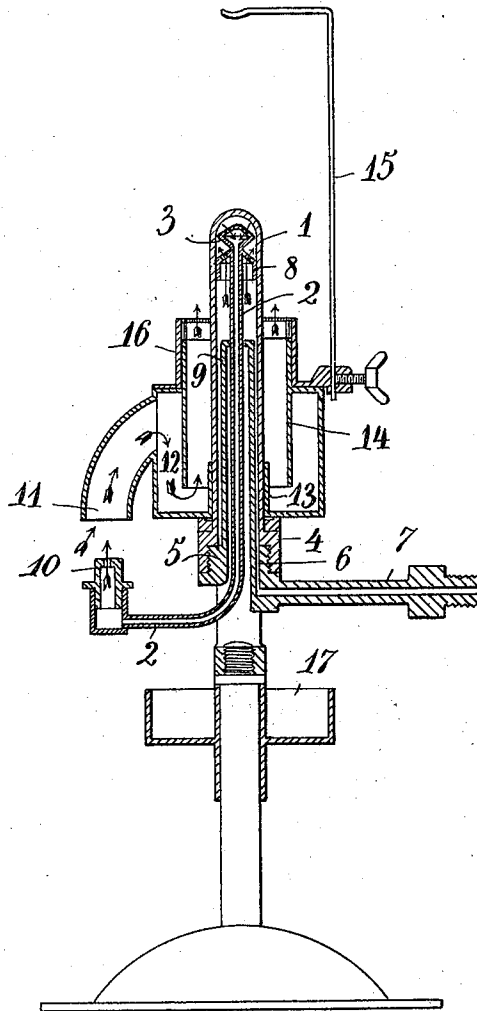


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 PETROLEUM VAPOR LAMP BURNER.
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UNITED STATES PATENT OFFICE.

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PETROLEUM-VAPOR-LAMP BURNER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OLE JOHANSEN, a subject of the King of Norway, residing at Christiania, Norway, have invented certain new and useful Improvements in Petroleum-Vapor-Lamp Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to a vapor lamp burner of the kind, in which the vaporization takes place in the upper portion of an oil chamber extending centrally through the burner, and is particularly characterized by the arrangement of the oil chamber between an outer tubular body, the upper end of which is surrounded by the burner, and an inner tubular body for discharging the generated gas for the purpose of enabling the vaporization chamber to be readily and quickly cleaned.

The invention is illustrated in the accompanying drawing which shows a vertical section through the apparatus.

The oil chamber of the burner is formed by the space between a tubular body 1 with thick walls and having its upper end closed, and a tubular body disposed within said tubular body 1 and having its upper end 2 provided with a suitably-shaped mouth-piece 3 with openings for the passage of the petroleum vapors. To the lower end of the outer tubular body 1 is attached a nut 4 having internal threads engaging with external threads on the bottom piece 5 which is integral with the inner tubular body 2. The bottom piece 5 has in its wall a vertical bore 6 with a narrow discharge opening at the top of the bottom piece. This bore 6 communicates with the oil supply pipe 7 attached to the bottom piece and communicating with a suitable oil tank.

The upper portion of the tubular body 2 is provided below the mouth-piece with a collar 8 the diameter of which corresponds to the inner diameter of the tubular body 1, so that the upper portion of the space between said tubular bodies is divided, in a sense, into a tubular portion and a lower chamber. The tubular body 2 is attached to the upper closed end of a sleeve 9 surround-

ing the lower portion of the tubular body 2 (with a space left between those two tubular members for the sake of insulation). Below the bottom piece 5 the tubular body 2 is bent so as to extend laterally and is provided with a mouth-piece 10 with a capillary opening pointing upward.

Communicating with the upper portion of an annular chamber 12 surrounding the lower portion of the tubular body 1, is a tube 11 having its opening above said capillary opening. The walls 13 of said annular chamber 12 at the bottom tightly engage the tubular body 1 and at the top closely surround the burner tube 14 opening into the lower portion of the chamber and having its upper end, which is closed by means of a wire net or the like, located at such a height that about one third of the tubular body 1 extends above the same. The top of the chamber may serve to support the plate 16 carrying the support rod 15 of the incandescent cap. Underneath the vaporization device a receptacle 17 may be provided in a known manner for the reception of fuel for preheating the vaporization device.

When the apparatus is in use, the oil is flowing from the pipe 7 through the bore 6 into the narrow space between the outer tubular body 1 and the sleeve, ascending in this space until it reaches a point of the tubular body 1 which is so hot that the vaporization takes place. The gas generated collects in the space under the collar 8 passing through the holes in the same upward into the upper portion of the vaporization chamber where an intense heating of the gas takes place which then passes through the holes in the mouth-piece 3 and through the tubular body 2 downward to the mouth-piece 10 through the capillary opening of which it is discharged as a fine jet carrying air with it into the annular chamber 12 where a complete intermixing of the petroleum vapor and the air is effected. The combustion of this mixture thereupon takes place above the wire net around the upper portion of the tubular body 1, so that the latter is maintained at an intense heat.

The cleaning of the vaporization chamber is effected after the tubular body 1 has been unscrewed from the bottom piece 5, all parts, in which tar or cokes may have deposited during the vaporization, becoming thereby readily accessible. Owing to the point of connection between the tubular

body 1 and the bottom piece being located a comparatively great distance below the flame, the same will not be so strongly heated that it will stick on account of deposited tar and cokes or the like. The cokes deposit in the upper end of the tubular body 1 from where they are readily removed. This is a great advantage above petroleum incandescent lamps of the known type in which the cokes are very difficult to remove thus necessitating a frequent exchange of the parts of the vaporizer.

Claims.

1. A vapor lamp burner comprising an oil chamber formed between an inner tubular body and an outer tubular body, the latter being easily removable and forming with its upper closed part a vaporization chamber extending into the flame, and a tube passing through the inner tubular body and opening within the upper part of the vaporization chamber.

2. In a vapor lamp burner the combination with an outer removable tubular body forming with its upper closed part a retort and an inner tubular body, of a base for the latter, having external screwthreads corresponding with internal screwthreads on the lower end of said outer tubular body, said base having an oil channel therein corresponding with the space between the two tubular bodies, an oil supply pipe connected with the base and communicating with the oil channel and a tube passing through the inner tubular body and opening within the upper part of the retort.

3. In a vapor lamp burner two tubular bodies forming between them an oil chamber and the outer one forming with its up-

per part a retort, a tube passing through the inner tubular body opening into the retort and having its lower end bent and provided with a mouthpiece with a capillary opening pointing upward, a tube having its opening directed downward above said mouthpiece and communicating with the upper portion of a relatively large chamber formed around the said oil chamber and a burner tube communicating with the lower part of said large chamber.

4. A vapor lamp burner comprising an oil chamber formed between an inner tubular body and an outer tubular body, the latter being easily removable and forming with its upper closed part a retort extending into the flame, and a tube passing through the inner tubular body and opening within the upper part of the retort, being provided below its upper end with a perforated collar corresponding in diameter with the inner diameter of the retort.

5. A vapor lamp burner comprising an oil chamber formed between an inner tubular body and an outer tubular body, the latter being easily removable and forming with its upper closed part a retort extending into the flame, and a tube passing through the inner tubular body and opening within the upper part of the retort, said tube being separated from the said inner tubular body to form an insulating space between them.

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

OLE JOHANSEN.

Witnesses:

HENRY BORDEWICH,
NANA PEDERSON.