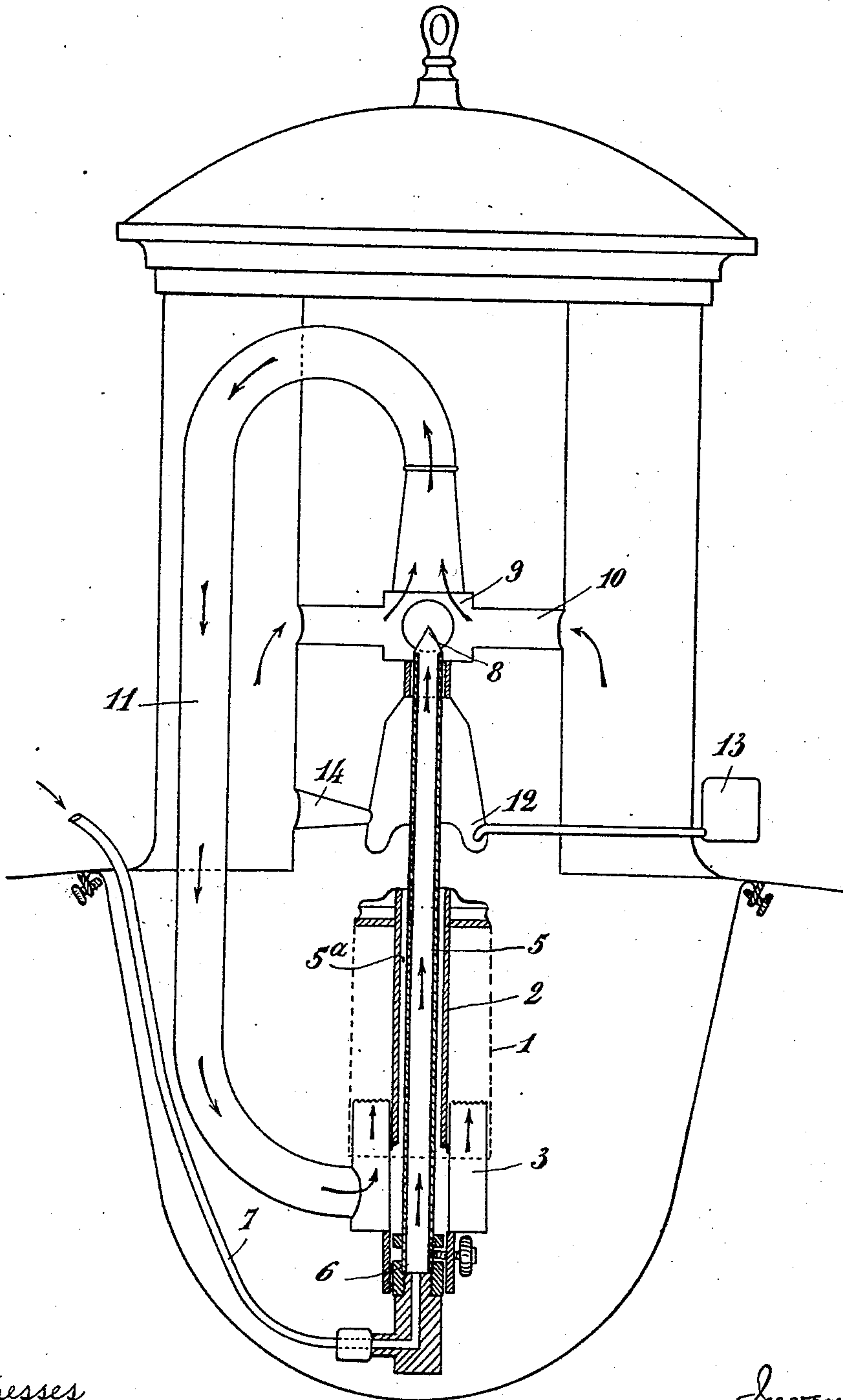


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 INCANDESCENT OIL LAMP.
 APPLICATION FILED NOV. 12, 1909.

999,070.

Patented July 25, 1911.



Witnesses
 B. M. Sommers
 May Ellis.

Inventor,
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UNITED STATES PATENT OFFICE.

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INCANDESCENT OIL-LAMP.

999,070.

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To all whom it may concern:

Be it known that I, HENRI WAUTHOZ, a subject of the Kingdom of Belgium, residing at 27 Place du Nouveau Marché-aux-Grains, Brussels, Belgium, have invented certain new and useful Improvements in Incandescent Oil-Lamps; 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.

This invention relates to a lamp for burning oil vaporized by the heat of the burner, the vaporizer in this lamp being placed in the center of the incandescent mantle, and the invention consists in providing a lamp in which the vaporizer is placed inside a muffle made of refractory material. The use of this muffle of refractory material offers the following main advantages:—

1. The temperature of the vaporizer is practically uniform over its whole length and it can be regulated. Practice has shown that when the vaporizer is placed in the center of the mantle, without a refractory muffle, it becomes heated to too high a temperature. The muffle diminishes the temperature by preventing the direct transmission of the heat, and particularly because of the vertical current of air created on the outside wall of the muffle. By regulating the dimensions of the parts the intensity of the current of air can be varied, and consequently the internal temperature of the mantle can be regulated.

2. The refractory muffle is heated to such a temperature that its external surface becomes more or less luminous, or at least white. In the center of the incandescent mantle there is therefore no body of a more or less dark color to diminish the value of the illumination, which objection is found in the already known incandescent lamps in which the vaporizer is in the middle of the flame.

The annexed drawing shows a lamp constructed in accordance with the present invention.

Along the central axis of the incandescent mantle 1 there is placed a muffle 2 of refractory material. In the form shown on the

drawing this muffle 2 rests on the burner 3 and serves itself as a support for a crown 4 from which the mantle 1 is suspended.

The muffle 2 and the burner 3 are traversed along their axes by a metal pipe 5, fixed at 6, at the base of the burner, and this pipe 5 serves as the vaporizer. Said pipe is of smaller diameter than the muffle 2 and forms an annular air space 5^a between the muffle and pipe for the purpose of further controlling the heat of the latter. The oil is brought to the vaporizer under natural or artificial pressure, by a thin tube 7, and at its upper end the vaporizer terminates in a small orifice 8, through which the vaporized oil escapes under pressure, into the mixing chamber 9. The vapor carries along with it the air drawn into the chamber 9 through the passages 10, 10. The combustible mixture thus produced is directed through the pipe 11 to the burner 3, where it burns in such a way as to heat the incandescent mantle 1 and the muffle 2.

To light the lamp there is placed around the tube 5, at 12, a crown which catches alcohol or spirit poured into an external funnel 13 and this spirit is ignited at the opening 14 and heats the tube 5 sufficiently to vaporize a certain quantity of oil and thus produce a sufficiency of combustible mixture to light the burner 3. The heat produced by the burner 3 renders the mantle 1 incandescent and heats the muffle 2. The vaporization of the oil is continuous being effected by a portion of the heat produced by the burner 3. The muffle 2 may advantageously be made of quartz, instead of fire-clay, or of china clay, pipeclay, or such like.

It is needless to say that the tube 5, serving as a vaporizer, might be a spiral, or of any other suitable form, instead of being cylindrical.

Claims:—

1. An incandescent oil lamp comprising a burner, a vaporizing pipe mounted in and extending above the burner, a liquid fuel conduit communicating with the pipe, a muffle surrounding the pipe and forming an annular air space between them, a mixing conduit communicating with the pipe and burner and a mantle surrounding the muffle.

2. An incandescent oil lamp comprising a burner, a vaporizing pipe mounted in and extending above the burner, a liquid fuel

conduit communicating with the pipe, a muffle of refractory material surrounding the pipe and forming an annular air space between them, a mixing conduit communi-
5 cating with the pipe and burner and a mantle surrounding the muffle.

3. An incandescent oil lamp comprising a burner, a metal pipe extending through the latter and having a small orifice in the top,
10 a liquid fuel conduit communicating with the pipe at its bottom, a muffle of refractory material surrounding the pipe and forming an annular air space between them, a mixing conduit projecting over the orifice of the
15 pipe and communicating with the burner outside of the muffle and lateral air conduits communicating with the mixing conduit near said orifice.

4. An incandescent oil lamp comprising
20 a burner, a metal pipe extending through

the latter and having a small orifice in its top, a liquid fuel conduit communicating with the pipe at its bottom, a muffle of refractory material surrounding the pipe and forming an annular air space between them, 25 a mixing conduit projecting over the orifice of the pipe and communicating with the burner outside of the muffle, lateral air conduits communicating with the mixing conduit near said orifice and a heating device 30 surrounding the pipe between the mixing conduit and muffle, for the purpose specified.

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

HENRI WAUTHOZ.

Witnesses:

JULES GHILAIN,

EUGÈNE VANDENPLAS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
