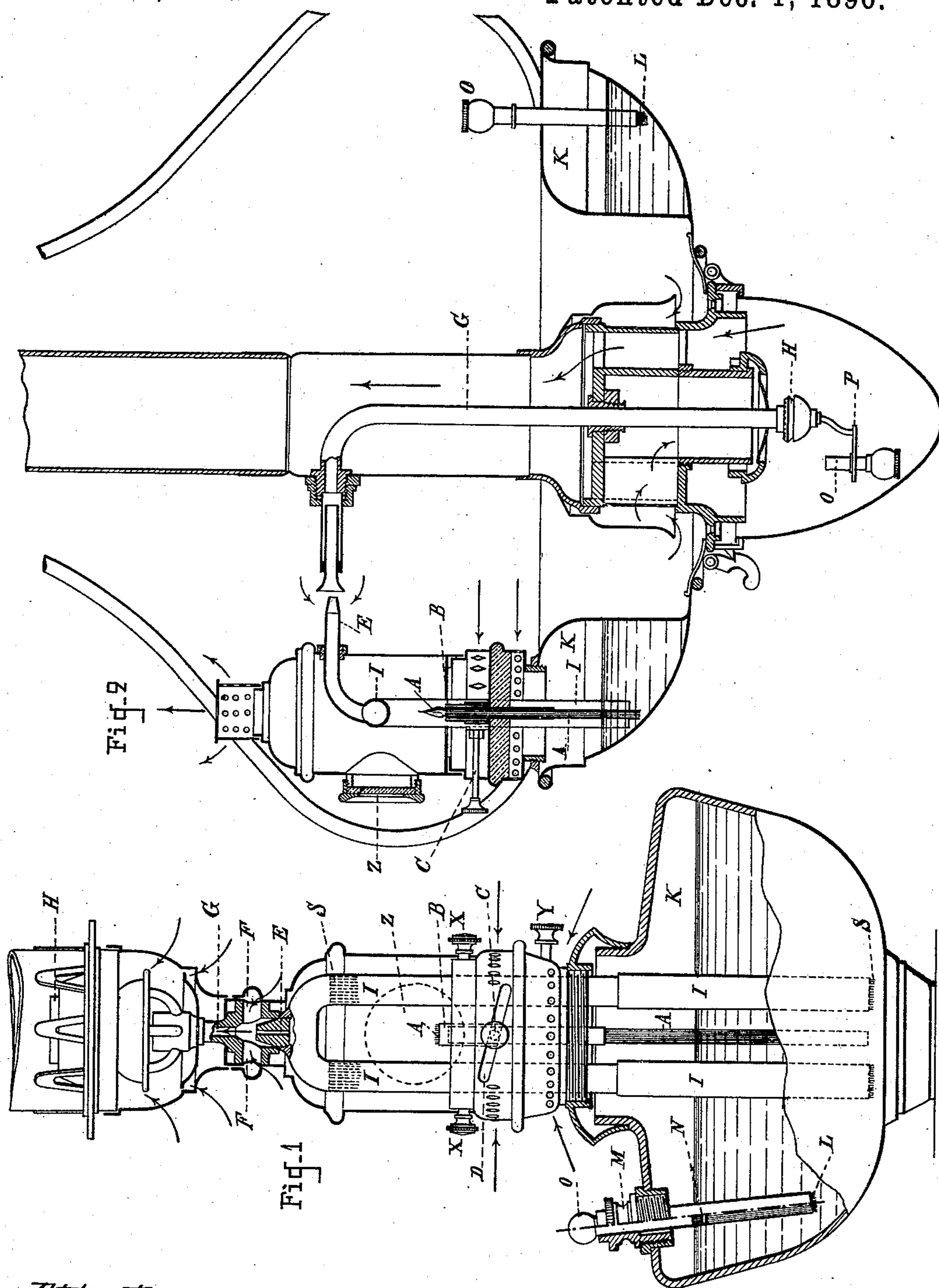


(No Model.)

P. L. GIRARDET.
LAMP.

No. 572,505.

Patented Dec. 1, 1896.



Attest,
 Oscar Daniels,
 J. L. Madhatter.

Inventor
Pierre Louis Girardet
by Richards & Co. attys

UNITED STATES PATENT OFFICE.

PIERRE LOUIS GIRARDET, OF PARIS, FRANCE, ASSIGNOR TO RENÉ
AUGUSTIN POITRIMOL, OF SAME PLACE.

LAMP.

SPECIFICATION forming part of Letters Patent No. 572,505, dated December 1, 1896.

Application filed September 3, 1892. Serial No. 445,021. (No model.) Patented in Belgium August 27, 1889, No. 87,519; in England August 27, 1889, No. 16,393; in France November 14, 1889, No. 201,923; in Italy August 16, 1892, No. 32,501; in Switzerland August 18, 1892, No. 5,501, and in Russia July 11, 1895, No. 14,257.

To all whom it may concern:

Be it known that I, PIERRE LOUIS GIRARDET, a citizen of the French Republic, residing at Paris, in the Department of the Seine, France, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

The invention has been patented in Belgium, No. 87,519, dated August 27, 1889; in England, No. 16,393, dated August 27, 1889; in France, No. 201,923, dated November 14, 1889; in Italy, No. 32,501, dated August 16, 1892; in Switzerland, No. 5,501, dated August 18, 1892, and in Russia, No. 14,257, dated July 11, 1895.

My invention includes a reservoir for the oil, a gas-generator arranged in connection therewith, and a jet for the introduction of the gas to the burner-tube, the said tube being arranged to draw in a supply of fresh air.

The invention includes, further, the particular form of gas-generator tube and the means for heating the same, with regulating devices therefor, a lighting device, and details of construction hereinafter pointed out.

In the drawings, Figure 1 is an elevation, partly in section, of my improved lamp. Fig. 1^a is a detail sectional view of the lighting device. Fig. 2 is a central vertical section of a modification.

The same letters refer to the same parts in all the figures.

K is the reservoir containing the mineral oil. A tube I, having the form of a reversed U, is dipped into the oil. The two vertical branches of the tube are filled by a wick or wicks S of aimanthus or any other material adapted to raise the mineral oil, which must be changed into gas or vapor, to the upper part of the vertical branches, by capillary attraction. This change to vapor or gas is obtained by the means of a feeble source of heat placed at A, consisting of a wick dipped directly into the combustible liquid, the height of the flame of which is regulated by a movable tube B, connected with a rod C, which can be worked in an inclined slot D, so that it is possible to lower and to raise the tube, which

acts as a moderator, by pushing the rod to the left or to the right. The gas produced by the vaporization as a consequence of the heating of the upper parts of the tube I issues at the point E by a tube or nozzle, the result of which is a strong jet, which carries along the exterior air, which it carburets, into the central tube G, the air entering by the lateral openings F. From there the mixed air and gas goes to the burner H, which is made like an ordinary gas-burner. The stopper M, by which the reservoir K is filled, is screwed upon the same. It can be made as an ordinary screw-stopper or, as it is represented in the drawings, it can be perforated and carry a tube containing a wick L at its inferior part.

A small body O, carrying a tube in which an aimanthus wick is located, serves as a lighter. It is to the moistening of this lighter that the tube M' below has been introduced into the stopper M, so that the wick N can be constantly impregnated with liquid by its contact with the wick L.

The advantage of the wick L is that the lighter may always be saturated with oil, even when the oil is very low in the reservoir, and, further, the lighter O will not be deeply immersed in the oil when the reservoir is full, as it may extend only a short distance into the same. The arrows on the drawings show the passages for the air.

X X are the supporters, which can be used to fasten the lamp in a suspension, if desired. Y is a pin which enables one to lower or to raise the wick A, the intensity of the flame of which is regulated at pleasure by the tube B, as has been said before. An eye-hole Z makes it easy to look after the regulating and serves, besides, for the lighting of the wick A at the moment the lamp must be used.

In Fig. 2, where the same letters represent the same devices, the gas-generator is fixed upon the ring-shaped reservoir K. The burner H is supplied with gas from the pipe G, which extends vertically through the chimney and out through the side thereof, its open end being opposite the end of the lateral

nozzle E, leading from the vaporizer off to one side of the reservoir. The arrows represent the currents of air to support combustion.

- 5 The lighter O is fixed upon a support P, its position being indicated at O', Fig. 2, placed underneath the burner at the moment of lighting.

10 The gas ignites at its contact and the extinction of the lighter takes place a few minutes later. All the other elements of the burner shown in Fig. 2 are analogous to those in Fig. 1.

I claim—

- 15 1. In combination, the main reservoir, the main burner arranged centrally thereof, the generator arranged at one side of the main burner, and on the reservoir, said generator comprising the inverted-U-shaped tube hav-
20 ing a nipple at the junction of its side mem-

bers extending radially inward toward the axial line of the lamp, the heating-burner, the main burner arranged axially of the lamp and the conduit leading thereto from the radially-extending nipple, substantially as de- 25
scribed.

2. In combination in a lamp, the reservoir, a stopper M having the opening therein and a tube extending therefrom with a wick there- 30
in, and the lighter O adapted to the opening in the stopper and to the tube thereof, said lighter carrying a wick, substantially as de-
scribed.

In witness whereof I have hereunto set my hand in presence of two witnesses.

PIERRE LOUIS GIRARDET.

Witnesses:

ROBT. M. HOOPER,
JULES FAYOLLET.