

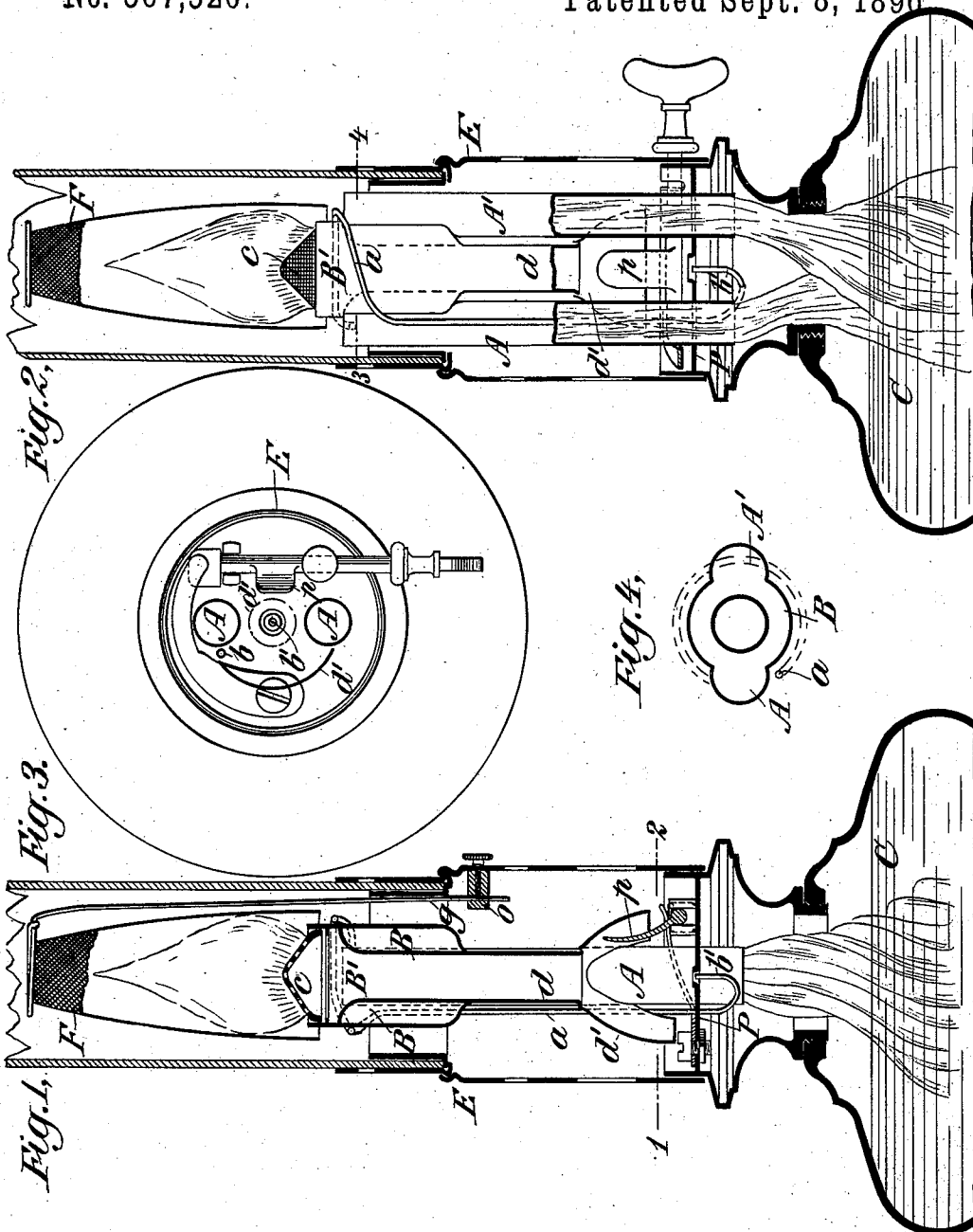
(No Model.)

2 Sheets—Sheet 1.

L. V. THOMAS.
INCANDESCENT LIGHT.

No. 567,520.

Patented Sept. 8, 1896



WITNESSES:

R. H. Haywood
E. J. Griswold

INVENTOR

Louis Victor Thomas

BY

Howson and Howson
his ATTORNEYS

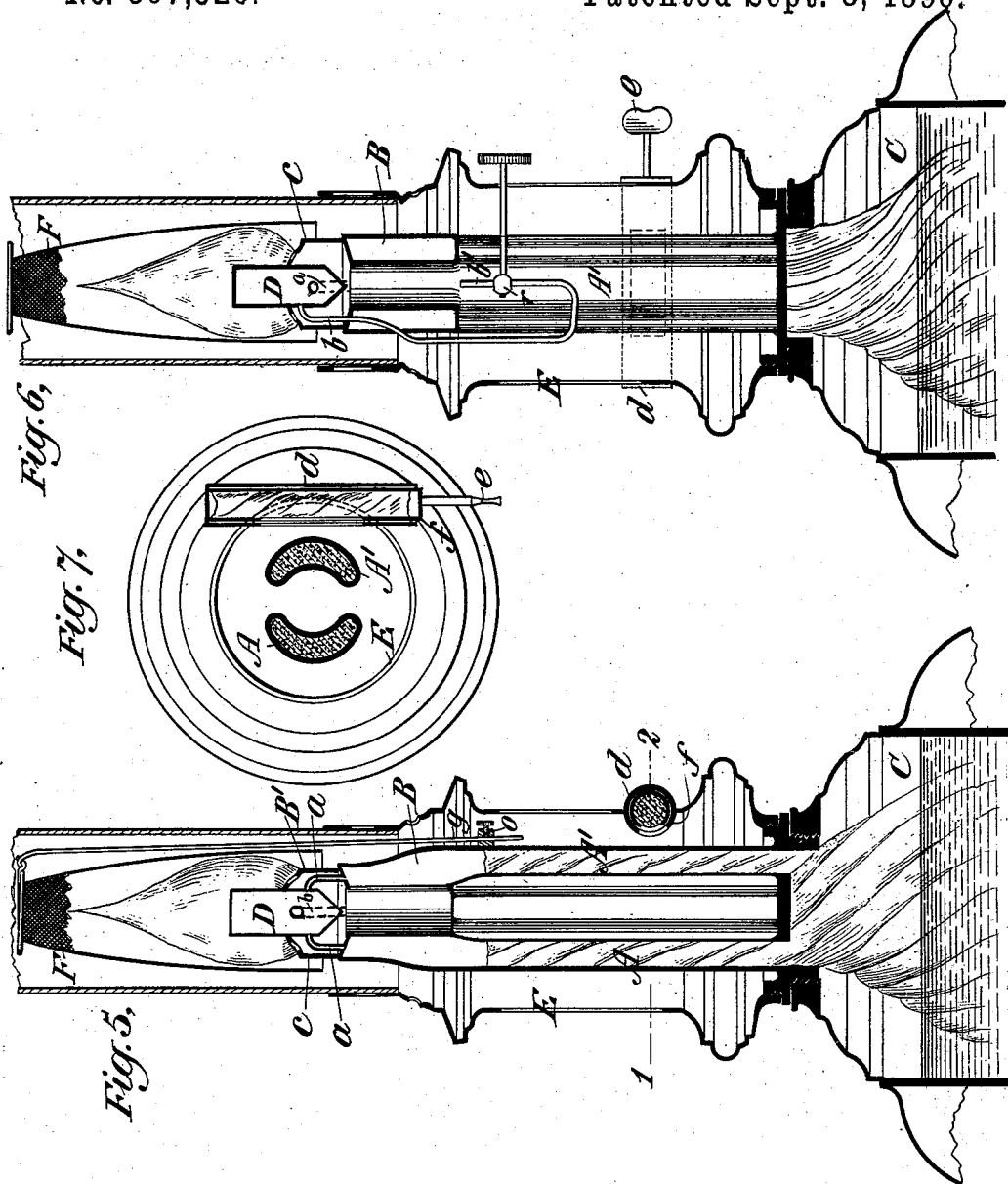
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UNITED STATES PATENT OFFICE.

LOUIS VICTOR THOMAS, OF PARIS, FRANCE.

INCANDESCENT LIGHT.

SPECIFICATION forming part of Letters Patent No. 567,520, dated September 8, 1896.

Application filed September 28, 1895. Serial No. 563,998. (No model.) Patented in France May 25, 1895, No. 247,688.

To all whom it may concern:

Be it known that I, LOUIS VICTOR THOMAS, a citizen of the Republic of France, residing in Paris, France, have invented certain Improvements in Oil-Lamps Burning with an Incandescent Light, (for which I have obtained a French patent, dated May 25, 1895, No. 247,688,) of which the following is a specification.

This invention relates to improvements in oil-lamps burning with an incandescent light.

A lamp constructed according to my invention is provided with a burner for volatilizing the oil and mixing the vapor with air, so as to produce a blue flame burning at a high temperature and capable of rendering a mantle or like body incandescent, as has been effected hitherto with the gas Bunsen burner.

The construction of the burner is exceedingly simple and will be described with reference to the accompanying drawings.

Figure 1 is a vertical section taken through the vertical axis of the burner. Fig. 2 is a vertical section at right angles to Fig. 1. Fig. 3 is a horizontal section taken on the line 1 2, Fig. 1. Fig. 4 is a horizontal section on the line 3 4, Fig. 2; and Figs. 5, 6, and 7 relate to a modified form of burner.

In the figures, A and A' are cylindrical tubes opening laterally toward their upper ends into an annular chamber B and extending at their lower ends into a reservoir C, containing the oil. Wicks in the said tubes A A' cause the oil to rise by capillary attraction toward the upper ends of these tubes. In one of these tubes or in the annular chamber B one end of a small pipe a is fixed. The said pipe is coiled around the burner proper, B', in which is the annular chamber B, descends vertically to the under side of a platinum plate P, where it is turned up, and projects in the form of a jet b' through a central opening provided in the said plate. Into the axis of the burner B' opens a tube d, which extends downwardly, terminating at its lower end in a cap d', covering the jet b', the distance between the lower end of the cap and the platinum plate being sufficient to allow for the passage of air to be mixed with the gas which escapes from jet b', as hereinafter described. This distance can be regulated by sliding the cap d' on the tube d. On the upper end of the burner B' is a

metal gauze cap c, preferably convex or bulged. The burner is provided with a gallery E for carrying the chimney, and is surmounted by a mantle or the like F, of suitable composition, which is rendered incandescent by the heat from the burner-flame. The mantle-support g may be fixed to the gallery E by clamping the same against a lug o or in any other suitable manner.

On the platinum plate P is mounted a rod extending outside the gallery and terminating in an operating key or button carrying at its center part a small plate p, which can be lowered onto the jet b' for causing the extinguishing of the burner.

In order to light the burner, the tubes A A' are heated, for example, by a plug soaked in alcohol and ignited, so as to cause the oil to rise in the said tube and become volatilized. In a short time enough vapor has been generated to allow of the said vapor issuing by the jet b' from the tube a to be ignited. The heat generated by the jet b' warms the annular chamber B and the pipe a, which surrounds it, causing the volatilization of the oil, which passes out at once under pressure. The vapor under pressure takes with it a certain amount of air, with which it mixes, and is then burned above the metal gauze cap c with a blue flame, which still more highly heats the chamber B and the pipe a, surrounding it on the outside. In this pipe a the complete and absolute volatilization of the oil is secured. The heat from the flame is such that the mantle F is at once brought to a state of incandescence, producing a white light of very considerable illuminating power. The lamp is extinguished by merely lowering the plate p onto the jet b', as already described.

In the modification shown in vertical sections in Figs. 5 and 6 and in horizontal section in Fig. 7 the wick-tubes A and A', opening upwardly into the annular chamber B and extending downwardly into the oil-reservoir C, are again employed, as well as the burner B', with perforated top c, the small tube a, the tube b, and the jet or nozzle b'. The main difference consists in the fact that the pipe a, instead of surrounding the burner B', as hereinbefore described, is surmounted by a chamber D, which, being placed in the

midst of the flame, secures the volatilization of the oil. A small pipe *b* descends from this chamber, terminating at its other end in the nozzle or jet *b'*. In all other respects the parts are similar to those already described with reference to Figs. 1, 2, 3, and 4. On the gallery *E* a sleeve *d*, opening longitudinally on the side of the tubes *A A'*, is provided, in which by means of a button or key *e* a tube *f*, inclosing a wick which may be impregnated with alcohol, may be operated, constituting a preliminary heating device.

I do not limit myself to the precise forms or dimensions of the burners which I have described nor to the metal of which the various parts are constructed, and it will be understood that the lamp may be of any desired form and constructed of any suitable material.

What I claim is—

1. In an incandescent oil-lamp, the combination of an oil-reservoir, an annular chamber near the burner and a wick to take the oil from the reservoir to the annular chamber, with a passage leading from the annular chamber and passing upward to be heated by the flame of the lamp itself, and then bent downward, a central mixing-chamber into which the said passage opens, and a perforated cap, all substantially as set forth.

2. In an incandescent oil-lamp, the combination of an oil-reservoir, an annular chamber near the burner and a wick or wicks to take the oil from the reservoir to the annular chamber, with a passage leading from the annular chamber and heated by the flame of the lamp itself, a central mixing-chamber into which the said passage opens, and a plate adapted to be turned down to cover the opening in the said passage, all substantially as set forth.

3. In an incandescent oil-lamp, the combination of an oil-reservoir, an annular chamber near the burner and a wick to take the oil from the reservoir to the annular chamber, with a passage leading from the annular chamber and passing upward to be heated by the flame of the lamp itself, and then bent downward, a central mixing - chamber, a sleeve carried by the gallery of the lamp, and a tube adapted to work in the sleeve and to carry a wick saturated with alcohol, all substantially as and for the purposes set forth.

4. In an incandescent oil-lamp, the combination of an oil-reservoir, an annular chamber near the burner and a wick or wicks to take the oil from the reservoir to the annular chamber, with a passage leading from the annular chamber, and passing through the flame of the burner, and a central mixing-chamber into which the said passage opens, all substantially as and for the purposes set forth.

5. In an incandescent oil-lamp, the combination of an oil-reservoir, an annular chamber near the burner and a wick or wicks to take the oil from the reservoir to the annular chamber, with a passage leading from the annular chamber and heated by the flame of the lamp itself, a platinum plate and a central mixing-chamber above the plate and adjustable nearer to or farther from the said plate, the said passage opening into the said mixing-chamber, all substantially as and for the purposes specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS VICTOR THOMAS.

Witnesses:

LEON FRANCKENS,
CLYDE SHROPSHIRE.