

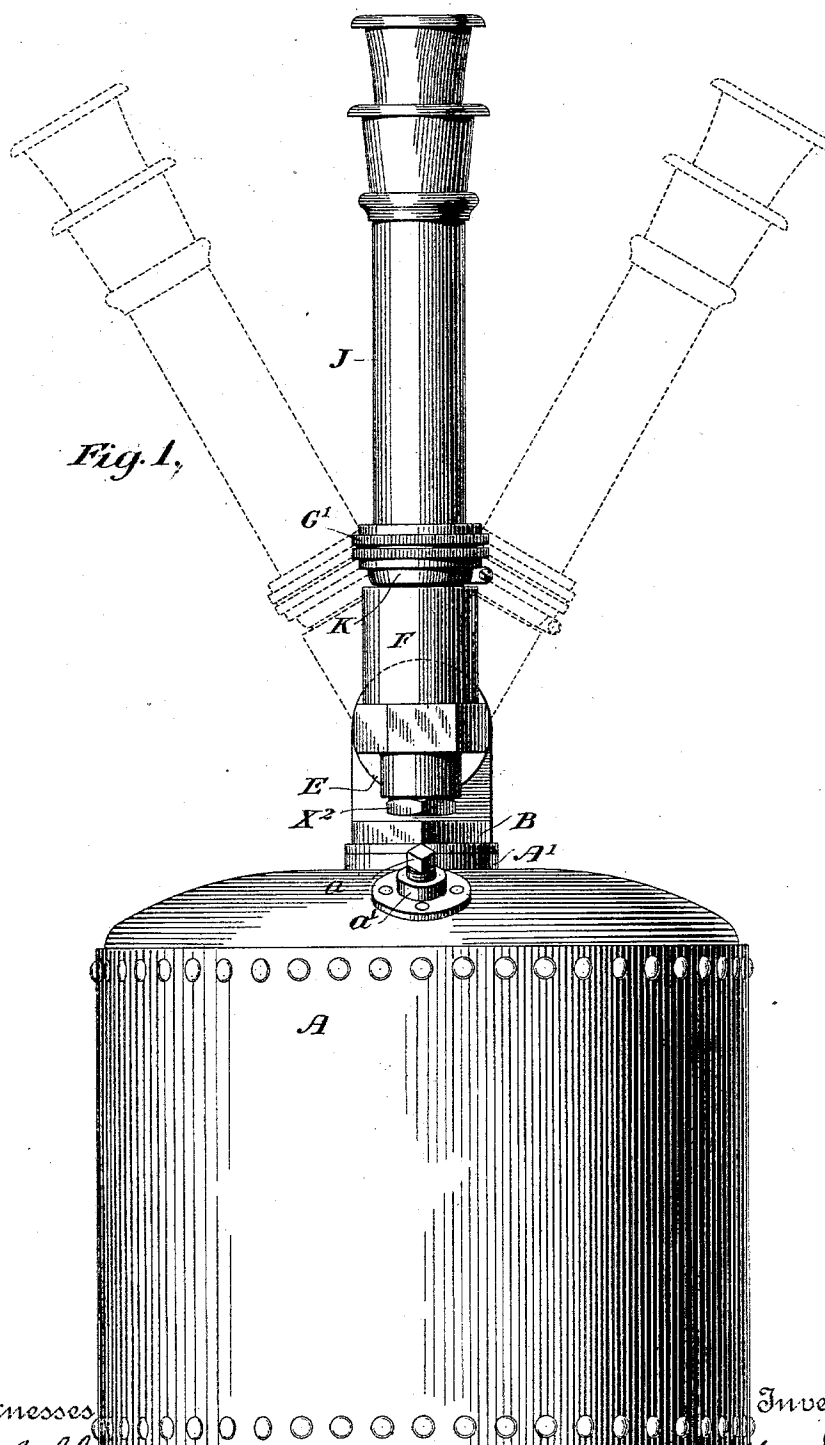
(No Model.)

4 Sheets—Sheet 1.

A. SHEDLOCK.
WICKLESS OIL LAMP.

No. 562,927.

Patented June 30, 1896.



Witnesses
C. E. Ashley
H. W. Lloyd.

Inventor
By his Attorneys Alfred Shedlock
Baldwin, Davidson & Wright.

(No Model.)

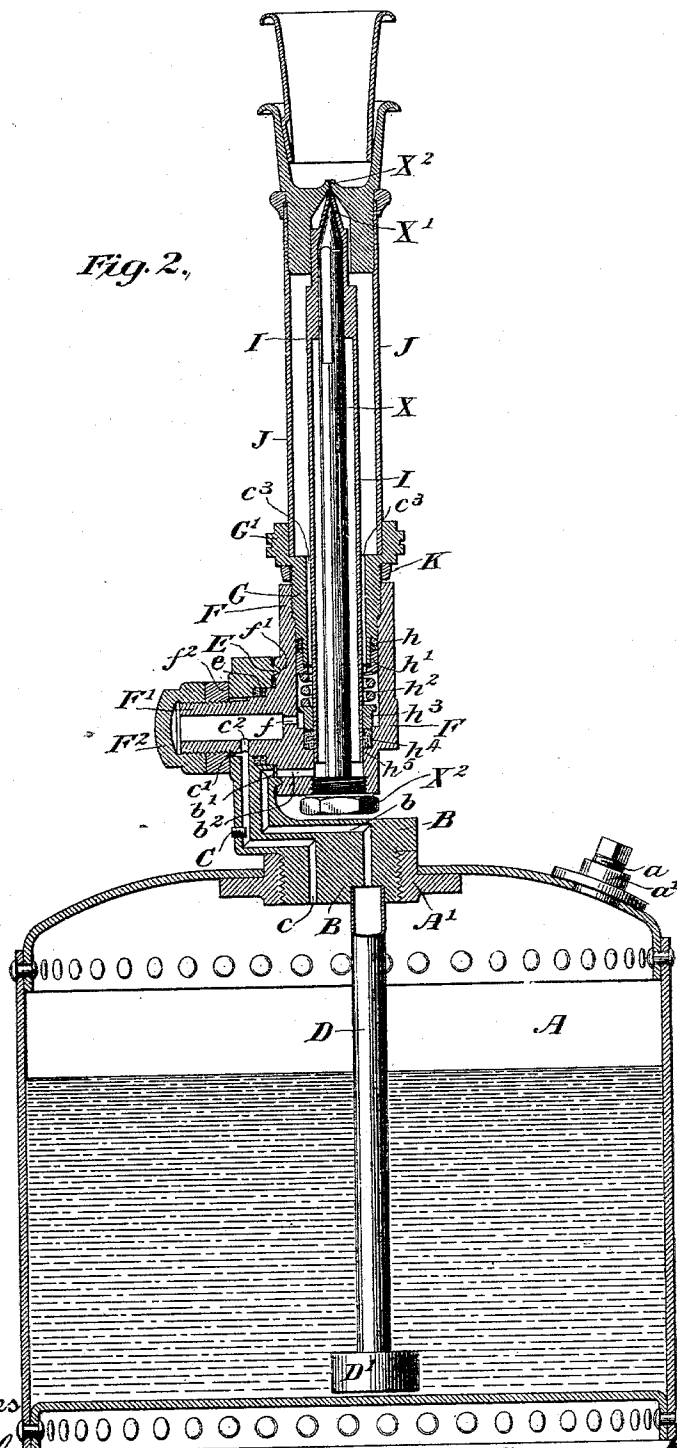
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Fig. 2.



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Fig. 3.

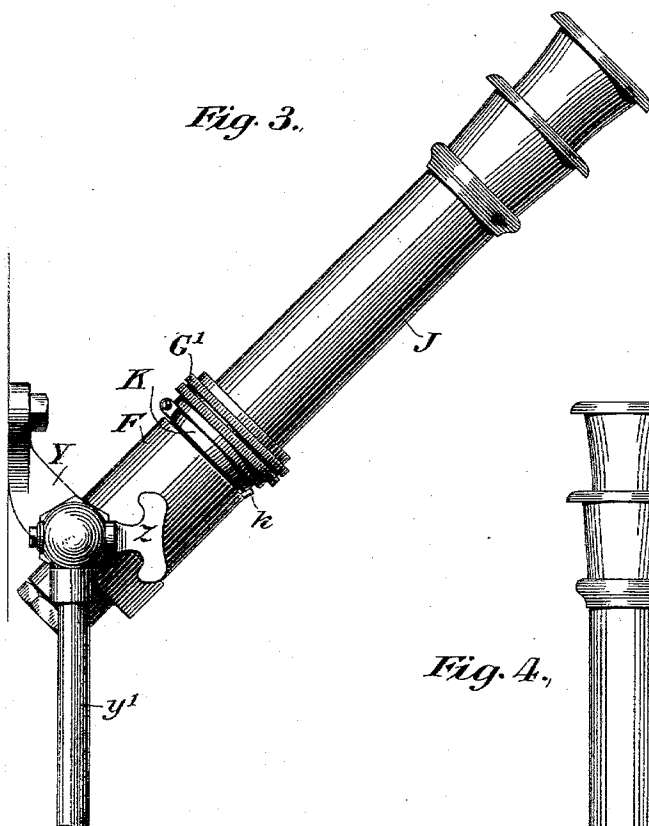
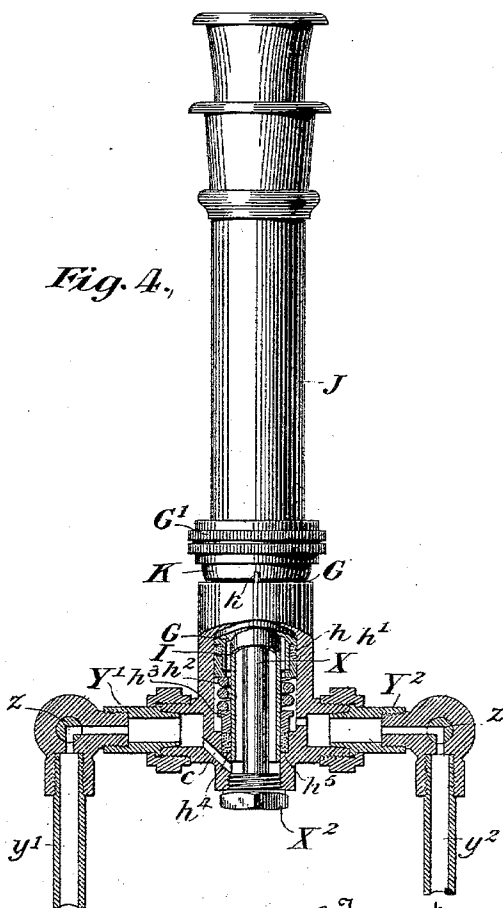


Fig. 4.



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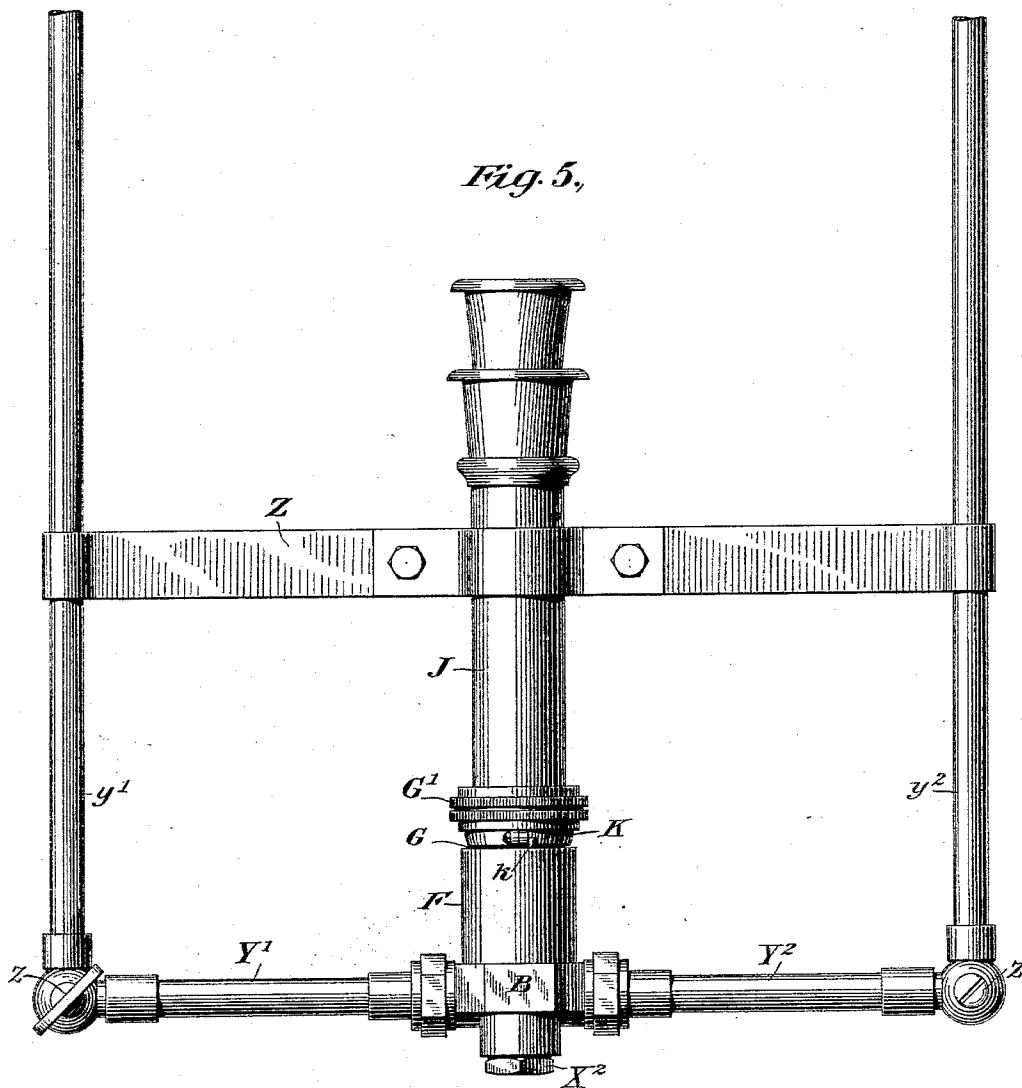
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Fig. 5,



Witnesses

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UNITED STATES PATENT OFFICE.

ALFRED SHEDLOCK, OF JERSEY CITY, NEW JERSEY.

WICKLESS OIL-LAMP.

SPECIFICATION forming part of Letters Patent No. 562,927, dated June 30, 1896.

Application filed August 14, 1891. Serial No. 402,621. (No model.)

To all whom it may concern:

Be it known that I, ALFRED SHEDLOCK, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Wickless Oil-Lamps, of which the following is a specification.

My invention relates to what are known as "spray-lamps," in which oil is sprayed by compressed air, a perfect combustion and brilliant light resulting.

The main portion of the lamp or that part comprising the nozzle where the air and oil commingle and issue in a spray and the controlling mechanism consists of a body portion centrally bored and having air and oil ducts entering therein and adapted to be connected to sources of air and oil supplies, a valve-rod rigidly centrally secured to the body and extending some distance above it, an oil-pipe with an oil-nozzle on its upper end surrounding the oil-valve rod and carried by an adjustable sleeve screwed in the central bore of the body, an air-pipe surrounding the oil-pipe and an air-nozzle secured to the top of this pipe, suitable packing connections between the sleeve and oil-pipe and the body, and an adjustable stop arrangement for controlling the distance the sleeve is allowed to move to open the oil-valve.

The invention also embraces a pivotal or swing connection between the main portion of the lamp and a fixed support whereby the lamp may be set in different angular positions.

The subject-matter is hereinafter specifically set forth and claimed.

In the accompanying drawings, Figure 1 is a side elevation showing in dotted lines the burner swung to the right and left; Fig. 2, a vertical central section on the line 2 2 of Fig. 1; Fig. 3, a side elevation showing the lamp arranged as a bracket-lamp; Fig. 4, a front elevation of the same, partly in section; and Fig. 5, a front elevation showing the lamp suspended.

Referring to Figs. 1 and 2, A is the oil-tank, having an aperture in its top, closed by a plug *a*, through which oil is supplied. Air from any suitable compressor is also supplied to the top of the tank in any usual manner, for instance through the screw-threaded hub *a'*, the plug being removed. In a screw-threaded

hub A' in the top of the tank is seated a standard B, having therein an oil-duct *b* and an air-duct *c*. A pipe D, secured in the bottom of the standard and connecting with the oil-duct therein, extends to the bottom of the tank and is provided with an enlarged head D', that may have a wire-gauze strainer as usual. The pressure of the air upon the surface of the oil forces it up through the pipe and duct to the burner proper, as presently described. The upper end of the standard B has a circular opening therethrough and on one face an annular flange E, preferably V-shaped in cross-section, and concentric with the opening through the standard.

The body F of the burner is of right-angular shape (in Fig. 2) and both its horizontal and upright portions are hollow, their bores being connected by an aperture *f*. The horizontal portion F' passes through the opening in the standard, and is screw-threaded upon its end for the reception of the clamping check-nuts F², while the upright portion has in its face an annular groove *f'*, corresponding in cross-section and coincident with the flange E on the standard. When the nuts are screwed up, an air and oil tight pivotal connection between the body and standard is thus formed. A packing-ring *e* lies within the opening in the standard and between shoulders on the standard and body. The air-duct *c* leads into the opening in the standard, and the horizontal portion of the body in the plane of the duct is reduced, forming an annular chamber *c'* for the air which is connected with the interior of this part of the body by an aperture *c*². The oil-duct *b* opens on the face of the standard within the annular flange E, and as the face of the upright part of the body does not come against the standard an annular oil-chamber *b'* is formed that is connected with the interior of the upright part of the body near its lower end by an aperture *b*².

The valve-rod X of the oil-nozzle X' extends up centrally through the upright portion of the body and is screwed into and closes its lower end, the rod being provided with an enlarged screw-threaded head X². An externally-screw-threaded sleeve G, having an elongated head G', screws into the top of the body, the opening in which is slightly

enlarged and provided with a screw-thread at its upper end. The plane cylindrical part of the sleeve closely fits the bore of the body below its enlarged threaded portion, and at the end the sleeve is reduced in diameter to form a shoulder or seat for a packing-ring h . A follower h' is pressed against the packing-ring by a coiled spring h^2 , the lower end of which bears against a follower h^3 , that presses against a packing-ring h^4 , seated against a shoulder h^5 , formed in the bore of the body just above the aperture b^2 . The ring h^4 surrounds the lower end of the oil-pipe I, which is fitted within the bore of the sleeve G and soldered or otherwise rigidly secured thereto, and the lower end of which closely fits the bore below the shoulder h^5 and terminates just above the aperture b^2 through which the oil enters. The follower h^3 is of such external diameter and the follower h' of such internal diameter as to permit the free passage of air from the duct f to one or more (two being shown) longitudinal channels $c^3 c^3$ in the inner face of the sleeve G. These channels open at the top into an air-pipe J, seated in and soldered or otherwise secured to the enlarged head G' of the sleeve, and carrying at its top the burner proper provided with the discharge-nozzle X^3 . This part is secured to the pipe J by a screw-thread, and it may be set thereby so as to permit the requisite quantity of air passing between the oil-nozzle X' and its nozzle to properly spray the oil.

The valve on the end of the rod X may be seated to close the oil-nozzle by screwing the sleeve into the body and opened to the desired extent by unscrewing the sleeve. By means of a small screw C, passing through the standard and projecting into the air-duct c , the supply of air to the discharge-nozzle may be regulated. A band or collar K, surrounding the sleeve G between its enlarged head and the upper part of the body, may be clamped in any desired position by means of its projecting ends or ears, through which a clamping-screw passes. The extent of rotation of the sleeve to open the oil-valve is limited by the projecting ends of this collar coming against a pin K on the body, Figs. 3, 4, and 5.

In Figs. 3 and 4 I have shown a bracket-lamp. The body F is provided with a bracket extension Y, by which it may be secured to a wall. The pivotal joint is omitted. Tubular lateral projections Y' Y^2 on the body are respectively connected with oil and air supply pipes y' y^2 by ordinary couplings, in which are regulating and cut-off cocks $z z$. Otherwise the construction is the same as that already described and as indicated by corresponding reference-letters.

Fig. 5 shows the lamp suspended by the oil and air pipes y' y^2 , the burner being braced by a cross-strap Z embracing the air-pipe J and connected at each end with the air and oil supply pipes.

The pipes D in the oil-tank might be in

connection with the duct c and the compressed air would be supplied through b .

The bearing formed by the flange and groove may of course be different, (though I prefer the form shown.) For instance, the bearing-surface might be flat and the face of either the standard or body, or both, cut away to form the oil-chamber b' , or the face of one of the parts might be countersunk with the surrounding edge beveled and a corresponding beveled projection formed on the other. These are changes that will be obvious to any one.

I claim as my invention—

1. In an oil-spray lamp the combination with the standard having the opening therethrough, the bearing on its face concentric with the opening, the duct c , opening into the interior of said opening, and the duct b , opening in the face of the standard within said bearing, of the body having a hollow horizontal portion that passes through the opening in the standard and a hollow upright portion having on its face a bearing coinciding with the flange on the standard, the body having apertures or passages connecting the ducts c , b , with the interior of its upright portion.

2. In an oil-spray lamp, the combination with a hollow body, threaded at its upper end, having air and oil passages f , b^2 leading thereto and a stationary valve-rod therein, of the threaded sleeve, the air-pipe connected to the upper part of the sleeve, the oil-pipe extending through the sleeve, rigidly connected therewith and terminating above the oil-passage b^2 , packing devices between the sleeve and the body above the air-passage f , packing devices between the oil-pipe and the body located between the air and oil passages, the nozzle carried by the oil-pipe, and the discharge-nozzle carried by the air-pipe, the parts being so constructed as to provide for the passage of the air from the opening f to the air-pipe.

3. In an oil-spray lamp, the combination with the standard having the lateral opening therethrough, the air and oil ducts and an annular bearing, substantially as set forth, of the body having a hollow lateral portion occupying the opening in the standard, and a hollow upright portion having an annular bearing on its face, and air and oil passages therein as described, the valve-rod extending through the upright portion of the body, the sleeve seated in the top of the upright portion of the body, the air-pipe carried by the upper end of the sleeve, the oil-pipe extending through and connected with the sleeve, and the packing between the sleeve and the body and between the oil-pipe and the body, the parts being constructed to permit the passage of air through the sleeve up into the air-pipe, all substantially as and for the purpose set forth.

4. In an oil-spray lamp, the combination, substantially as set forth, of the body having the valve-rod fixed therein, the adjustable

sleeve secured in the body, the oil-pipe carried by the sleeve and having a nozzle forming a seat for the valve on the end of the valve-rod, the air-pipe and its nozzle on its upper end carried by the sleeve, an adjustable collar surrounding the sleeve above the body and a stop-pin on the body.

5. In an oil-spray lamp, the combination of a supporting-body, oil and air passages formed therein, oil and air supply conduits connected to said passages, the oil-valve rod fixed in the body, the adjustable oil-nozzle

forming a seat for the valve, the air and discharge nozzle fitted to move with the oil-nozzle, and means in the air-conduit for governing the supply of air to the air and discharge nozzle.

In testimony whereof I have hereunto subscribed my name.

ALFRED SHEDLOCK.

Witnesses:

FRANK S. OBER,
EDWARD C. DAVIDSON.