

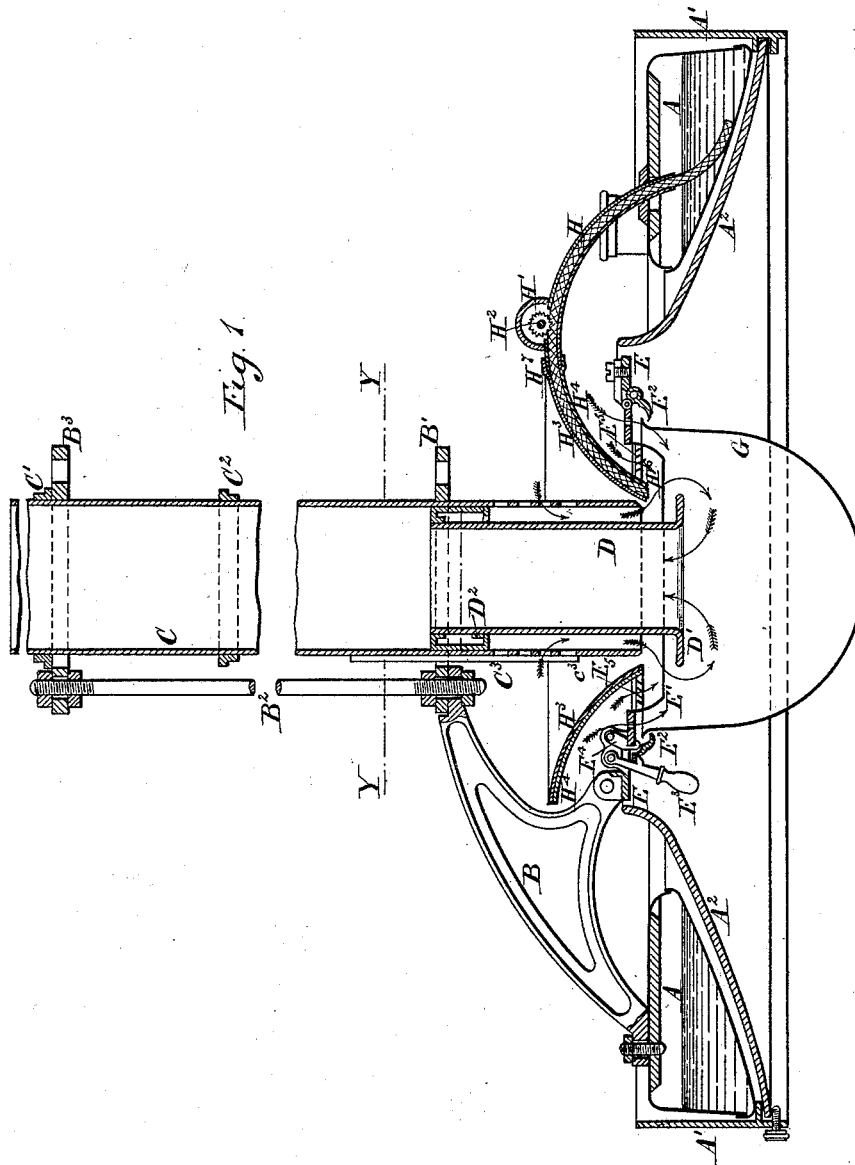
(No Model.)

3 Sheets—Sheet 1.

J. H. ROSS & E. E. ATKINS.  
OVERHEAD OIL LAMP.

No. 422,837.

Patented Mar. 4, 1890.



Witnesses:  
J. A. Rutherford.  
Lucy B. Hills.

Inventors:  
John Howard Ross.  
Edward Elijah Atkins.  
B. James C. Norris,  
attorney

(No Model.)

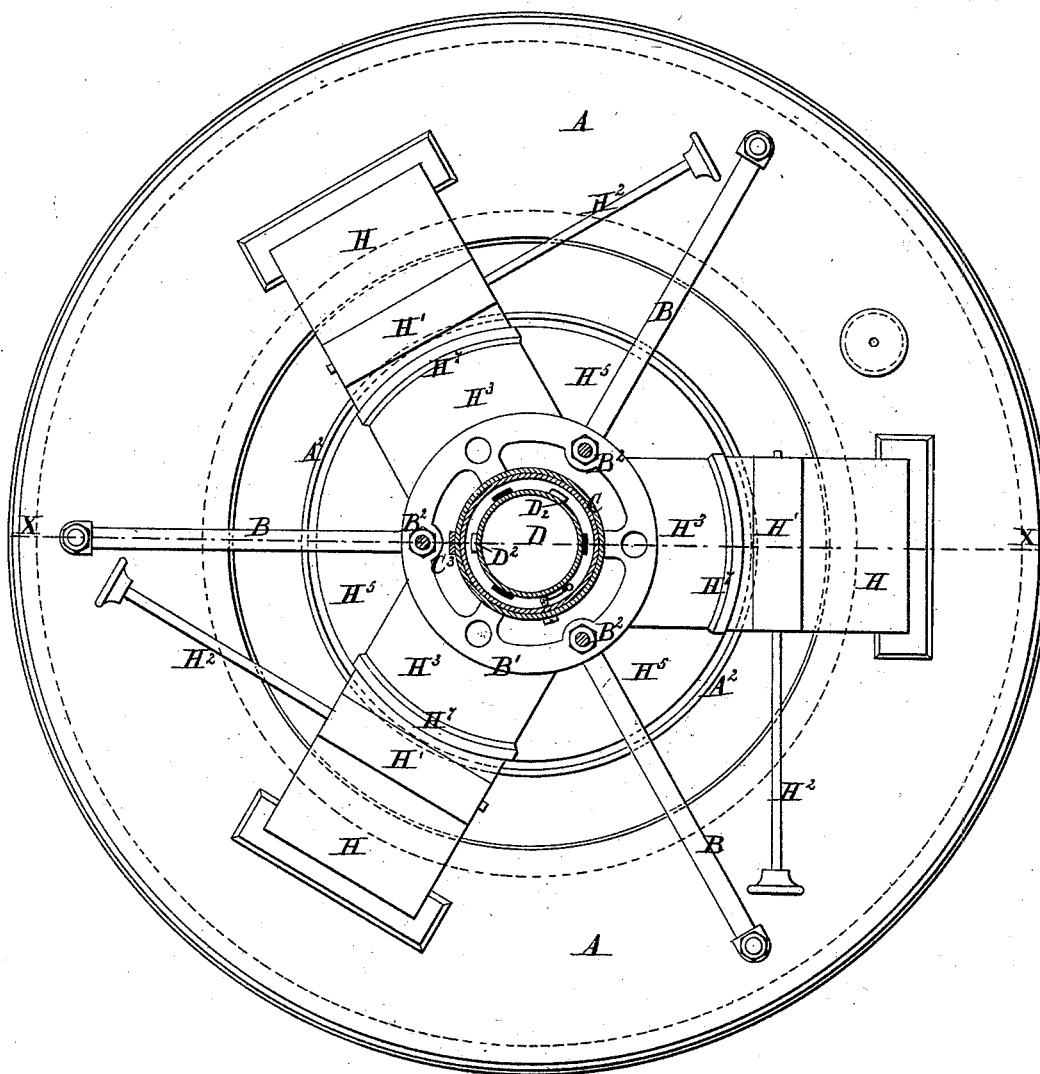
3 Sheets—Sheet 2.

J. H. ROSS & E. E. ATKINS.  
OVERHEAD OIL LAMP.

No. 422,837.

Patented Mar. 4, 1890.

Fig. 2.



Witnesses:  
J. A. Rutherford  
Lucy B. Hills

Inventors:  
John Howard Ross.  
Edward Elijah Atkins.  
By James L. Norris.  
Attorney.

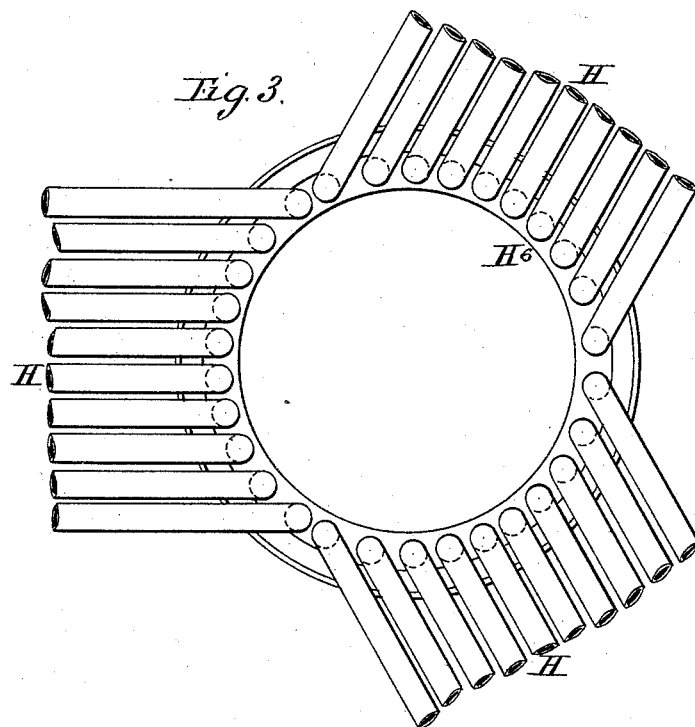
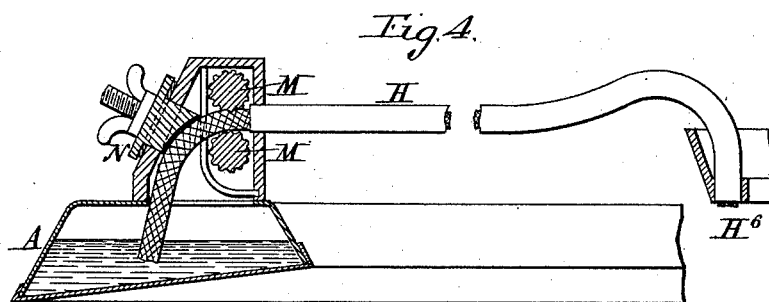
(No Model.)

3 Sheets—Sheet 3.

J. H. ROSS & E. E. ATKINS.  
OVERHEAD OIL LAMP.

No. 422,837.

Patented Mar. 4, 1890.



Witnesses:  
J. A. Rutherford.  
Levy B. Hills.

Inventors:  
John Howard Ross  
Edward Elijah Atkins  
By James E. Norris.  
Attorney.

# UNITED STATES PATENT OFFICE.

JOHN HOWARD ROSS AND EDWARD ELIJAH ATKINS, OF BIRMINGHAM,  
COUNTY OF WARWICK, ENGLAND.

## OVERHEAD OIL-LAMP.

SPECIFICATION forming part of Letters Patent No. 422,837, dated March 4, 1890.

Application filed October 3, 1889. Serial No. 325,901. (No model.) Patented in England February 5, 1889, No. 2,019; in France September 23, 1889, No. 200,917; in Belgium September 23, 1889, No. 87,824, and in Italy October 12, 1889, LI, 355.

### *To all whom it may concern:*

Be it known that we, JOHN HOWARD ROSS and EDWARD ELIJAH ATKINS, citizens of England, both residing at 171 Hockley Hill, Birmingham, in the county of Warwick, England, have invented new and useful Improvements in Overhead Oil-Lamps, (for which we have obtained patents in France, dated September 23, 1889, No. 200,917; in Belgium, dated September 23, 1889, No. 87,824; in Italy, dated October 12, 1889, Vol. LI, No. 355, and in Great Britain by an application for patent, which patent when granted will bear date February 5, 1889, No. 2,019,) of which the following is a specification.

In the specification accompanying an application for Letters Patent of even date with the present, said application being Serial No. 325,900, we have described a construction of oil-lamp in such a manner that its flame being directed downward from the body of the lamp without any part of the structure, except glass, below it, there is no shadow cast beneath. Such lamps are therefore especially adapted for pendent lights for ceilings of apartments or carriages. In the said specification we described an arrangement of three or more curved tubes containing flat wicks converging from an annular oil-reservoir toward the base of a central chimney, where the wicks join into one circular wick, presenting its end downward.

Our present application relates to a modification of such a lamp, having instead of flat wicks several groups of round wicks converging so as to present their ends downward in a circular row around the base of the chimney.

In order that this construction may be more clearly understood, we shall here repeat the description of the lamp with flat wicks, and then further describe the modification according to which round wicks are substituted for the flat wicks.

Figure 1 is a vertical section on the line X X of Fig. 2, which is a plan on Y Y of Fig. 1. Fig. 3 is a part plan, and Fig. 4 a part section, showing the arrangement of a number of round wicks in three groups.

A is the annular oil-reservoir, which is con-

cealed within a ring A', that may be ornamented as desired, and a reflector A<sup>2</sup>. There is free passage for air around the reservoir A, so as to keep its contents cool. To the top of the reservoir A are fixed three brackets B, which carry a ring B', and from this ring three bolts B<sup>2</sup> extend upward and carry an upper ring B<sup>3</sup>.

C is the chimney, which is a metal tube having fixed on it two rings C' C<sup>2</sup>, and a projecting bar C<sup>3</sup>. In use the ring C' of the chimney rests on B<sup>3</sup>; but the chimney can be raised by hand as far as is permitted by the ring C<sup>2</sup> meeting B<sup>3</sup>. When it is so raised, the projecting bar C<sup>3</sup> slides through a notch of the ring B', and when the chimney is raised so far that the lower end c<sup>3</sup> of the bar C<sup>3</sup> is just above the ring B', on turning the chimney partly round, the end c<sup>3</sup>, resting on the ring B', supports the chimney in its raised position until, on turning the chimney backward so that c<sup>3</sup> enters the notch of B', the chimney can be lowered to the position shown in Fig. 1.

Within the lower part of the chimney, which is perforated, is fitted a cylinder D, of ceramic or such like refractory material, preferably having at its lower end a projecting lip or flange D', and having near its upper end three projecting studs D<sup>2</sup>.

In introducing the cylinder D into the chimney C the studs D<sup>2</sup> pass through notches in a ring projecting inwardly from the chimney, and then on turning D partly round its studs D<sup>2</sup> rest on the chimney-ring, and thus the cylinder D is supported. In order to prevent D from turning accidentally back so as to bring its studs D<sup>2</sup> into coincidence with the notches and so allow D to drop, a small setting-screw is screwed through the wall of the chimney C to prevent movement of one of the studs D<sup>2</sup>. The brackets B carry a horizontal ring E, to which, at one side, are separately hinged a deflecting-ring E' and a bezel E<sup>2</sup> for carrying the glass globe G. At the side of the ring E, opposite to the hinges, there is pivoted on E a small handle E<sup>3</sup>, which, in the position shown in Fig. 1, holds up the bezel E<sup>2</sup>. On withdrawing E<sup>3</sup> the bezel E<sup>2</sup> and the glass G which it carries can be turned down, and then a catch E<sup>4</sup>, which holds up the deflector-ring

E', can be withdrawn, allowing E' also to be turned down. Thus free access can be got to the wicks for trimming.

Between the deflector-ring E' and the wick-holder, and secured to the conoidal disk H<sup>4</sup>, there are fixed several concentric rings E<sup>5</sup> of louver, from between which air can enter. The obliquity of these rings prevents the heat of the flame from radiating directly on the wick-holder. There are also through the upper part of the deflector E' a number of small holes or slits for admission of air into the interior of the glass G.

In our said application, Serial No. 325,900, three curved tubes H, of flat rectangular section, converge toward the center from the reservoir A, to which they are attached, each tube containing a wick, and having at H' toothed wheels on a spindle H<sup>2</sup>, which can be turned by hand for advancing or retracting the wick. At the point H' the wick-tube is united, by soldering or otherwise, to the edges of two conoidal disks H<sup>3</sup> and H<sup>4</sup>, which are stamped in dies to such shape that parts of them form continuations of the three wick-tubes H, while in the intermediate parts H<sup>5</sup> between these continuations the two thicknesses of metal are close together. At the inner edge H<sup>6</sup> of the two disks they present a complete annular opening occupied by the three wicks, which at this place meet each other, so that together they constitute a complete circular wick, presenting its end at H<sup>6</sup>. The wicks being adjusted and trimmed, the deflector E' and globe G being fixed up, the chimney C is drawn up as far as permitted by the ring C<sup>2</sup>, and thus free access from above is given to the wicks, which can then be lighted. When they are lighted, the chimney C is lowered to its working position, and then air entering through the perforations of E<sup>5</sup> and through those at the lower part of the chimney C supplies the flame, which is directed first downward past the flange D', then inward, and up the cylinder D, presenting below the appearance of a rosette of light. The cylinder D soon becomes highly heated, so that the air entering by the perforations of the chimney and impinging on D is heated before reaching the interior of the flame, which is thus made to burn with great brilliancy.

Such being the construction of lamp in which three converging flat wicks are em-

ployed, as in our said application, Serial No. 325,900, we shall now describe the modified construction shown by Figs. 3 and 4 of the annexed drawings, in which a group of round wicks is substituted for each of the flat wicks above described, it being understood that in other respects the construction and operation of the lamp remain the same. As shown in Figs. 3 and 4, there are three groups each of ten round wicks, each wick in its own tube, and all these wicks terminating in a circle at H<sup>6</sup>. The ten wicks of each group as they rise from the reservoir A pass between fluted rollers M within a casing, these rollers serving to advance or retract the wicks as they are turned in the one direction or the other. The back N of the casing is made removable for the purpose of introducing the wicks into their separate tubes, and the interior face of N is curved so as to guide the wicks downward when they are retracted. By the use of separate round wicks, instead of flat wicks, the character of the lamp-flame is somewhat altered, but the action of the lamp is otherwise the same, as aboved described.

Having thus described the nature of our invention and the best means we know for carrying the same into practical effect, we claim—

An overhead oil-lamp consisting of an annular oil-reservoir provided with converging brackets, a central chimney supported by said brackets, a refractory cylinder supported within the lower part of the chimney, three or more groups of curved wick-tubes supported by the oil-reservoir and converging from it toward and around the base of the chimney and containing round wicks, the ends of which form a circle outside the chimney, an air-deflector surrounding the circular row of wicks, and a globe suspended under the chimney, substantially as shown and described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

J. H. ROSS.  
E. E. ATKINS.

Witnesses:

OLIVER IMRAY,  
Patent Agent, 28 Southampton Buildings,  
London, W. C.

JNO. P. M. MILLARD,  
Clerk to Messrs. Abel & Imray, Consulting  
Engineers and Patent Agents, 28 Southampton Buildings, London, W. C.