

SCHOTTKY & SIMENDINGER.

Lamp.

No. 111,481.

Patented Jan. 31, 1871.

Fig. 1.

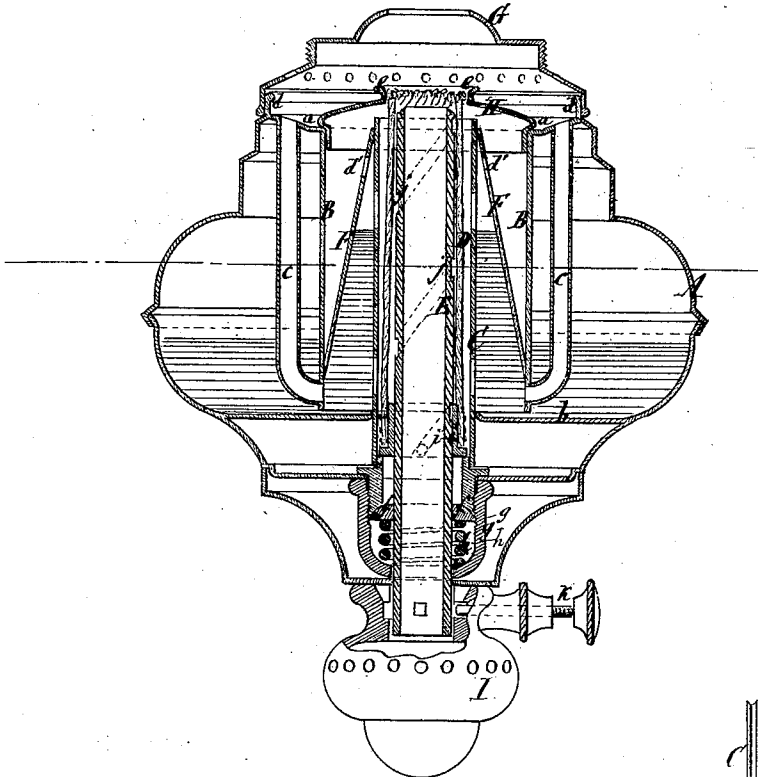


Fig. 2.

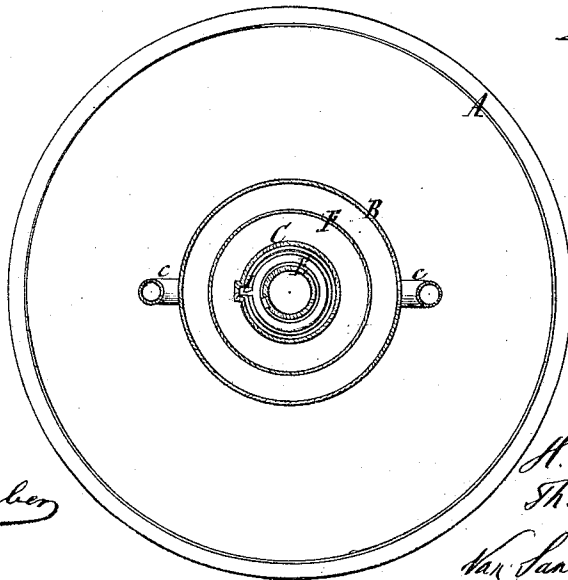
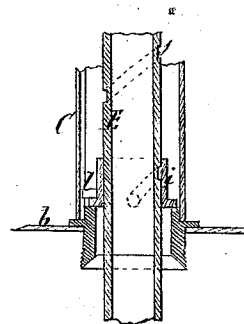


Fig. 3.



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Letters Patent No. 111,481, dated January 31, 1871.

IMPROVEMENT IN LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, HERMANN ALEXANDER SCHOTTKY, of Stapleton, in the county of Richmond and State of New York, and THEODORE SIMENDINGER, of the city, county, and State of New York, have invented a new and useful Improvement in Lamps; and we do hereby declare the following to a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a vertical central section of this invention.

Figure 2 is a horizontal section of the same.

Figure 3 is a vertical central section of the wick-tube, with its sleeve and jacket detached.

Similar letters indicate corresponding parts.

This invention relates to a lamp, the oil-reservoir of which is provided with an internal cylinder, into which is fitted a cone, and from the bottom of which rise two or more air-pressure pipes in such a manner that, as the air in the interior of the cone is rarefied by the heat, the pressure of the external air, acting through said air-pipes on the oil, causes the oil to rise in the interior of the cone, and thereby a steady and uniform flame is sustained until all the oil contained in the reservoir is consumed.

The internal cylinder is closed at the top by a cap which projects over the wick-tube, and by the action of which all the oil drawn up by the wick is consumed.

The wick-tube projects through the bottom of the oil-reservoir, and it is provided with a valve, which is forced up in a seat at the bottom end of the wick-jacket by a spring in such a manner that the wick-jacket is hermetically closed, and at the same time the wick-tube can be revolved for the purpose of regulating the flame.

In the drawing—

The letter A designates the oil-reservoir of our lamp, which is made of sheet metal or any other suitable material.

From the top *a* of this reservoir projects a cylinder, B, downward, nearly to the bottom *b*, from which rises a tube, C, which surrounds the wick D and the wick-tube E, and which we term the wick-jacket.

In the annular space between the cylinder B and the wick-jacket, is secured a cone, F, which hugs the wick-jacket near the top, and closes up on the inner surface of the cylinder B, at a small distance above its bottom edge, as shown in fig. 1.

From the bottom part of the cylinder rise two or more pipes, *c*, which extend through the top *a* of the reservoir.

From this top rises a flange, *d*, over which is fitted the cone G, and in the top of the cylinder B is fitted a cap, H.

When the flame is burning the air in the interior of the cone F is rarefied by the heat, and it is reduced, and consequently the pressure of the external air acting on the oil through the pipes serves to force the oil up into the internal cone F, so that the wick obtains a uniform supply of oil, until all the oil contained in the reservoir A is consumed.

The internal cone F is provided with holes *d'* near its top to allow the air to escape, and, as the flame has a tendency to draw up the air contained in the space below it, said air is rarefied and the oil rises in the internal cone without obstruction.

The cap H, which fits into the top of the cylinder B, is provided with a flaring mouth, *e*, surrounding the flame, and it serves to compress the flame, so as to enable the same to consume all the oil drawn up by the wick.

The wick-jacket C projects through the bottom of the oil-reservoir, being soldered to the same, and it is open at the bottom, and forms the seat for a valve, *f*, secured to the wick-tube E.

Over the bottom end of the wick-jacket screws a cap, *g*, which contains a spring, *h*, that presses the valve *f* up in its seat, so that the same will close tight, and at the same time the wick-tube is free to revolve.

The wick is secured to a sleeve, *i*, which fits over the wick-tube, and from the inner surface of which projects a tooth to catch in a spiral groove, *j*, on the outer surface of the wick-tube, so that, by revolving the wick-tube, the wick is raised or lowered and the flame is regulated.

To the bottom end of the wick-tube is secured a drip-cup, I, which can be readily detached, being fastened by a spring-catch, *k*, and, by taking hold of this drip-cup, the wick-tube can be revolved in either direction.

From the outer surface of the sleeve *i* projects a tooth, *l*, into a vertical slot in the wick-jacket, (see fig. 3,) so that, when the wick-tube is revolved, the sleeve together with the wick are prevented from revolving, and no other motion will be imparted to the wick, except up or down.

By this arrangement the wick is less liable to become detached from its sleeve than it is if said sleeve and wick receive an up-and-down and also a revolving motion, and the flame can be easier regulated.

This lamp is intended more particularly for burning sperm-oil, but it can also be used with advantage for burning petroleum or other oils, and its principal advantages may be summed up as follows:

First, the flame is fed with a uniform supply of oil,

until all the oil, or nearly so, contained in the reservoir is consumed.

Second, the cap H, fitting in the top of the cylinder B, serves to consume all the oil raised by the wick.

Third, the wick is not liable to become detached from its sleeve, and the flame can be readily regulated.

What we claim as new, and desire to secure by Letters Patent, is—

1. The cap H, fitting in the top of the cylinder B, in combination with the cone F and with tube E, substantially as described.

2. The internal cone F and air-pipes c, in combination with the cylinder B and oil-reservoir A, substantially as set forth.

3. The spring-valve f, secured to the wick-tube and fitting in a seat in the bottom end of the wick-jacket, substantially as described.

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