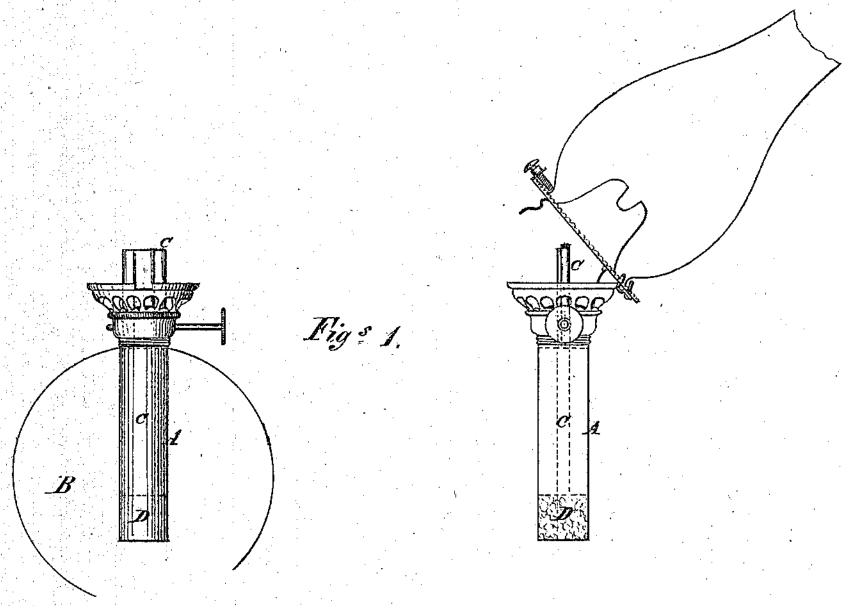
F. YEISER & S. W. HEDGER.

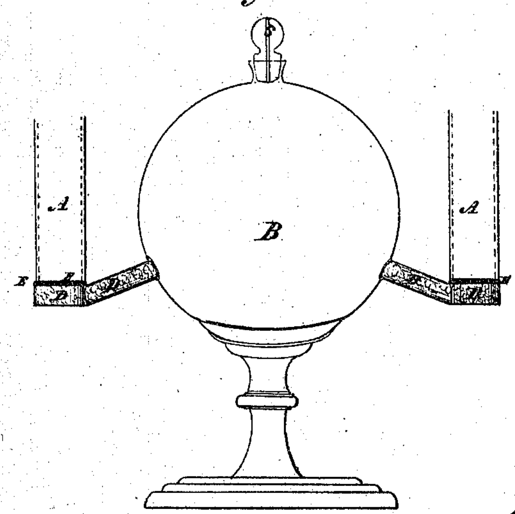
Improvement in Lamps.

No. 115,262. Patented May 23, 1871.



Figs. 1.

Fig. 2.



Witnesses.

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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

United States Patent Office.

FREDERICK YEISER AND STEPHEN WILLIAM HEDGER, OF LANCASTER, KENTUCKY; SAID HEDGER ASSIGNOR TO SAID YEISER.

Letters Patent No. 115,262, dated May 23, 1871; antedated May 11, 1871.

IMPROVEMENT IN LAMPS.

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

We, FREDERICK YEISER and STEPHEN WILLIAM HEDGER, of the town of Lancaster, in the county of Garrard and State of Kentucky, have invented certain Improvements in Lamp-Burners, of which the following is a specification.

Our invention consists in providing a receptacle or reservoir for the oil for combustion in a globular form, and a chamber filled with cotton or other like porous substance, through which such oil must pass before reaching the wick-tube, so that a communication of flame from the wick-tube to the oil in the globe shall be rendered impossible; and in combination with such globular receptacle and chamber providing a wick-tube to contain the wick, and incasing the wick-tube in a long tube of so much larger diameter as to leave space sufficient between the outer surface of the wick-tube and the inner surface of such larger tube for a sufficient packing of asbestus or other good non-conductor of heat, and packing such space with such non-conducting substance as a means of preventing the communication of heat from the wick-tube to the surrounding oil.

By the last-mentioned devices the vaporization of the oil is prevented, and as a consequence no odor will be given out during combustion, and there will be no waste of the oil itself.

In the accompanying drawing—

Figure 1 represents a side view of the long tube A, in which the wick-tube *c* is inclosed.

The wick-tube *c* extends down to the chamber D in the lower end of the long tube A, which chamber is filled with a packing of cotton, through which the oil from the bowl or globe B must pass before reaching the wick inclosed by the tube *c*.

I make no claim herein for any perforated plate, or for the form of the wick-tube, or the means of attaching a lamp-chimney.

The space between the wick-tube *c* and the interior of the tube A, inclosing it, is filled with asbestus or any other good non-conductor of heat, so that the wick in burning shall not communicate heat to the oil surrounding the tube A, and thus cause it to waste by evaporation, and to form a gas which might prove dangerous, and therefore such packing in the tube A in the form of lamp shown in Figure 2 should extend a little above the top of the bowl, so that neither it nor the oil therein shall become heated.

It is obvious, upon examining the drawing, that flame could not be communicated from the wick-tube *c* through the packing of cotton D to the oil in the globe B, and it is equally obvious that so long as the globe is kept even half full of oil that a sufficiency thereof for combustion will be forced up through the cotton D and carried up by the aid of capillary attraction to the upper end of the wick-tube.

In fig. 2 is shown a modified form of lamp in which our burner may be used.

The tubes A A may be fastened upon the elbowed arms *d d* by means of male and female screws, thicknesses of gutta-percha or India rubber being interposed in the joints to prevent leakage.

The cotton packing, of course, fills the arms D D, and may be confined in its place by any simple mechanical means.

If the admission of air be necessary in the body B, it may be admitted at the stopper S in the form of lamp shown in fig. 2, or at the point where the tube is passed into the globe when the form is that shown in fig. 1.

Another good result of the use of our improvements will be that while the lamp is burning there will be scarcely any odor of burning oil emitted, because all of the oil is allowed to remain cool except that in the wick-tube.

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

The globe B and chamber D filled with cotton or other porous substance, in combination with the long tube A and wick-tube *c*, when the space between the two is filled with asbestus or other good non-conductor of heat, when each and all are constructed and arranged substantially as described, and for the purposes set forth.

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Witnesses:
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