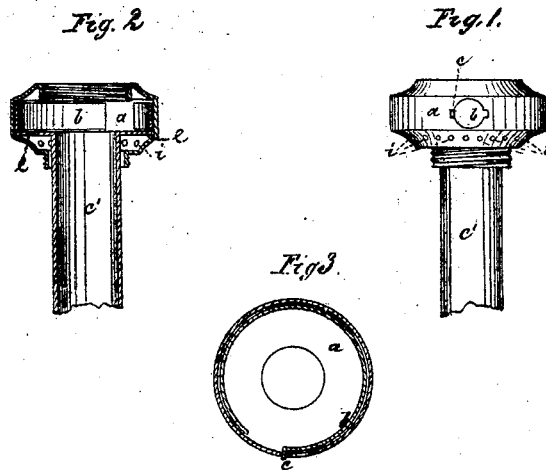


C. B. MANN & S. S. MANN.

Improvement in Lamps.

No. 114,954.

Patented May 16, 1871.



Witnesses:

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# United States Patent Office.

CHARLES B. MANN AND STEPHEN S. MANN, OF BALTIMORE, MARYLAND.

Letters-Patent No. 114,954, dated May 16, 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, CHARLES B. MANN and STEPHEN S. MANN, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and useful Improvement in Lamps; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation of the connecting-drum and wick-tube.

Figure 2 is a sectional elevation of the same.

Figure 3 is a transverse section of the drum.

The invention relates to an attachment for lamps for burning hydrocarbon oils, and consists in the construction and arrangement of a drum and wick and filling-tube, the said drum being designed to be interposed between the burner and lamp proper, and having an opening, closed by an inner slide, through which the lamp-reservoir may be replenished without removing the burner or chimney or extinguishing the light, and the wick-tube extending down nearly to the bottom of the lamp-reservoir or fount, and being separated from the screw-neck of the drum so as to form a passage leading up into an annular chamber formed in the lower part of the drum, and provided with outlets, as hereinafter more fully described.

Referring to the drawing—

*a* is the connecting-drum, provided with male and female screw, and interposed between the burner and collar of the lamp. In its longitudinal section said drum may be variously shaped, the object being to provide room for a sufficiently large opening to admit the feeder-nozzle and at same time avoid unnecessarily elevating the burner.

Fitted within this connecting-drum is a segmental slide, *b*, made of spring brass, which retains its place by pressing against the interior of the drum, and is actuated on the outside by a thumb-piece, *c*, and stop.

This slide is in the form of a divided ring, or a ring with a section cut out so as to leave an opening corresponding in width to the orifice in the side of the drum. The expansion of the ring slide, which is, in effect, a spring, holds it in close contact with the inner wall of the drum so as to effectually prevent the escape of oil when the same is closed.

By moving this slide one way the opening will admit the nozzle of the can, and by moving it in the opposite direction the opening is closed.

The slide is so shaped that while it retains its place by pressing against the inside of the drum but a small portion of its surface comes in contact with the inside of the drum; and in this way excessive friction, when the slide is moved in opening and closing, is avoided.

The advantage of this arrangement is that the lamp-reservoir may be refilled without unscrewing or removing the burner or chimney, and even while the lamp is lighted and burning at full flame.

An incidental advantage of this enlarged connecting-drum is that, being interposed between the burner and collar, it, by partially isolating the burner, acts as an intervening insulator, breaking the conduction of heat from the burner.

The wick-chamber *c* is a long tube extending down into the reservoir or fount to near the bottom, inclosing the wick in a gas-tight compartment. The wick-chamber is made preferably round, and large enough internally to easily admit the size of wick intended to be used, whether it be tubular or flat. The upper end of this wick-chamber is fitted within and secured to an annular plate or metallic diaphragm that is tightly secured within the drum *a*, just above the outlets or ventilating-holes hereinafter referred to.

When the lamp is constructed without the filling attachment the wick-chamber may be differently secured; in such case, the upper end of the long tube may be turned over outward, forming its edge into a flange, *e*, which is then made fast within the connecting-drum, which, in this case, will be of less diameter than when employed as a filling attachment.

The wick-chamber or tube then passes downward through the male screw, leaving an intervening space between.

A series of small ventilating-holes, *i*, large enough to afford escape for the vapor or gas generated within the reservoir, but too small to allow the inward passage of flame, is arranged in the connecting-drum.

These holes are under the annular plate, into which the end of the long tube is secured, or under the outward-turned flange at the top of the long tube.

The vapor or gas within the lamp-reservoir can pass up around the outside of the wick-chamber, through the intervening space, until it reaches these outlets, and thence escapes from the inside of the lamp to a distance sufficient to prevent ignition without endangering an explosion.

When filling the lamp these holes allow the air or gas within to escape, as the same is displaced by the oil that is turned in. The wick being inclosed, the supply of oil to feed the flame is always taken from the bottom of the reservoir, and no vapor or gas can surround the wick within, as the wick-chamber is always closed with oil at its lower end, and there being no other connection between its interior and the reservoir.

The long tube or chamber at its lower end is rounded on the edge, so that as the wick is raised the end depending below will not catch.

This may be applied to any lamp or burner.

Having thus described our invention,

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

1. The spring slide *b*, constructed and arranged in connection with the drum *a*, as herein shown and described.

2. The safety-filling attachment for lamps, formed of long wick and filling-tube *c'*, connected with the drum *a* by means of a horizontal flange forming the imperforate bottom thereof, said drum being provided with the lateral opening closed by the slide *b*, substantially as specified.

3. The long wick and filling-tube *c'* and connecting-drum *a*, constructed and arranged, as specified, to form an annular gas-chamber, which is provided with outlets *i* in the bottom, delivering the gas downward, as set forth.

4. The long wick and filling-tube *c'*, connected with the drum *a*, as specified, or so as to leave an annular space between the tube and the screw-neck of the drum.

5. As an article of manufacture, the lamp attachment, consisting of the long wick-tube *c'*, chamber or drum *a*, provided with the spring slide *b*, constructed and arranged to form the annular gas-chamber, provided with outlets *i* and an annular space for passage of gas or vapor, as described.

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Witnesses:

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