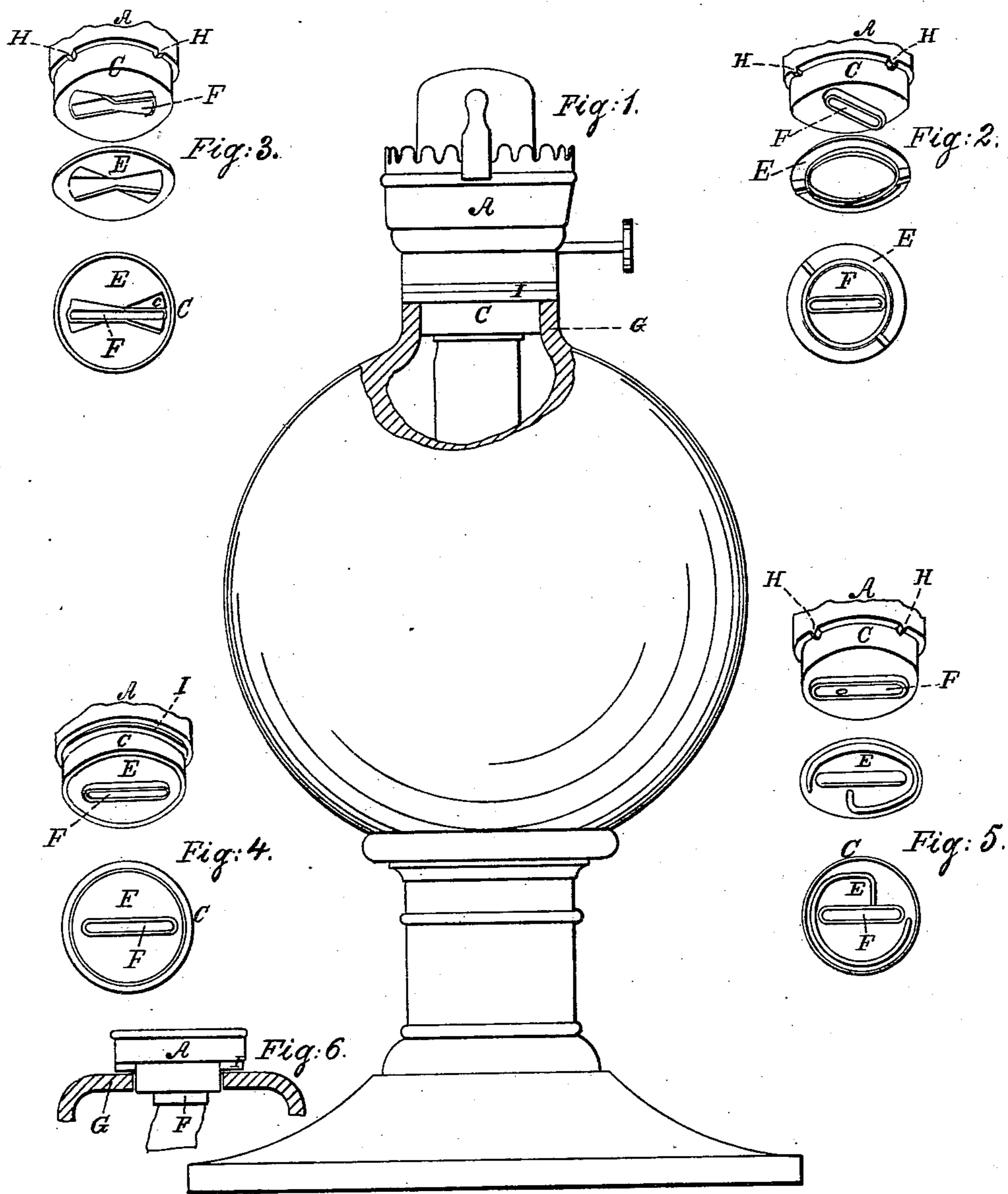


A. G. SMITH.
Lamp Burner.

No. 84,775.

Patented Dec. 8, 1868.



Witnesses:
D. B. [Signature]
L. N. [Signature]

Inventor:
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By his atty
R. D. [Signature]
451 Seventh

United States Patent Office.

A. G. SMITH, OF JERSEY CITY, NEW JERSEY.

Letters Patent No. 84,775, dated December 8, 1868; antedated November 27, 1868.

IMPROVEMENT IN LAMP-BURNERS.

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

To all whom it may concern:

Be it known that I, A. G. SMITH, of Jersey City, in the county of Hudson, and State of New Jersey, have invented a new and useful Improvement in Lamp-Burners; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents an ordinary lamp and burner, with my improvement attached.

Figures 2, 3, 4, and 5 exhibit modifications of my improvement, with methods of securing and attaching the same.

Figure 6 shows the manner of using the insulator when attached to a lamp for burning in lanterns.

This invention relates to a method of attaching the burner of a kerosene or other volatile-oil lamp to the oil-pot, so as to dispense with the use of a screw-collar, and to insulate the burner, so that its heat will not be communicated to the oil-reservoir, or to the oil itself, and also in the mode of securing the insulating-material to the burner.

The necessity of a screw to retain the burner upon the oil-pot is always objectionable, for the reason that they are to be detached and attached, as a general rule, by persons who are not skilled, and much time and trouble are expended in unscrewing and screwing on again whenever the lamp is to be filled.

When the oil-pot is constructed of glass, it is necessary that the screw-collar should be attached to the same, generally by the use of plaster of Paris, and such are constantly liable to become loose and detached, because of the imperfect shape of the neck of the oil-pot, or the saturation of the plaster with oil.

It is frequently the case, also, that the threads of the screws are not accurately entered, and the threads of the screws, in the effort to screw them together, are spoiled, or they stick together, so that the burner cannot be removed without the application of considerable force, which wrenches its parts, and soon spoils it.

The formation of gas within the oil-pot of a volatile-oil lamp is an acknowledged source of danger, and this danger is greatly increased by the use of a metallic reservoir in metallic connection with the burner, the whole lamp then becoming sometimes very warm.

The object of my invention is to insulate the burner, and at the same time attach it without a screw, using the insulating-material as the means of attachment also, and to secure the insulating-material in such a way that it may be easily removed, when damaged, to be replaced by other which is perfect.

A is the burner, which, except in appliance for attachment to the oil-pot, may be like any other burner designed for volatile oil.

At the base, instead of a screw-shank, I employ a ring or cylinder, C, of some elastic substance.

This substance may be cork, leather, vulcanized or prepared gum, &c. It may be secured to the burner in some suitable way, and may be conveniently secured

by a plate of metal, E, lying against its lower side, and soldered to the lower end of the wick-tube F, or it may preferably be secured by the plate E, made detachable, and secured in place by means of a screw-thread, cut on the edges of the wick-tube F, and a corresponding female thread cut on the plate E, as represented in fig. 2.

A cheaper mode of securing the plate E is shown in fig. 3, where opposite parts of the end of the wick-tube are turned over, forming lips, under which the edges of the slot, through the plate E, may be slipped.

The lips may be slightly hooking, and depressions may be made in the surface of the plate, into which the edges of the lips will be forced by the elasticity of the insulating-material.

Another and effective method of securing the plate E is by means of a spring-catch, as shown in fig. 5, in which a wire spring is soldered to the lower side of said plate, the free end penetrating a hole made in the side of the wick-tube, and preventing the plate E from being removed.

The mode of securing the plate by means of a screw, as shown in fig. 2, is preferable, because that mode of fastening will not be affected by any variation in the thickness of the elastic material used as an insulator.

The thickness of the ring or cylinder C is intended to be such as will secure, by its elasticity, the plate E and its retaining-device always in operative condition.

If this burner should be used with a metallic oil-pot, and the upper edge of the neck G should come in contact with the base of the burner, the purpose of insulation would be, in a measure, defeated, and I therefore form upon the under side of the base of this burner three or more ribs or projections, H H, which effectually prevent contact between the edge of the neck G and the base of the burner, except at three points, or I form a flange, I, on the upper part of the cylinder C, as shown in fig. 1, which interposes between the surfaces, and prevents all surface contact.

When the burner is used with a glass oil-pot, these ribs or projections are not so much needed, because the walls of the reservoir are there much thicker, and composed of a poor transmitter of heat.

For use in lanterns, where it is desirable that the oil-pot should be shallow, and where it is convenient to secure the burner by other means, such, for instance, as are shown in my lanterns for which Letters Patent were granted, the cylinder C may be dispensed with, and the insulating-substance simply interposed between the base of the burner and the upper surface of the oil-pot, as shown in fig. 6. It will not then be required as a means of attachment, but simply as a packing, to secure a close joint and act as an insulator.

In large lamps with which chimneys are used, it may be deemed necessary to employ some locking-device, to render an accidental displacement of the burner impossible, and this will be easy of accomplishment, either by the method shown in figs. 3 and 5, or otherwise.

Having thus particularly described my invention,
What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination with the burner A and the cylinder C, the ribs or projections H H, substantially as and for the purpose set forth.
2. The insulating-ring C, constructed with the flange I, substantially as and for the purpose set forth.
3. In combination with the burner A and elastic ring C, the detachable plate E, or its equivalent, for the purpose of rendering the ring C easily removable.

4. The plate E, secured to the wick-tube F by a detachable device, substantially as set forth.

5. Keeping the plate E always in contact with its detachable fastenings, by means of the elasticity of the material of the ring C, as set forth.

A. G. SMITH.

Witnesses:

R. D. O. SMITH,
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