(No Model.)

S. MAXIM.

OIL LAMP.

No. 284,876. Patented Sept. 11, 1883.

Fig. 1.

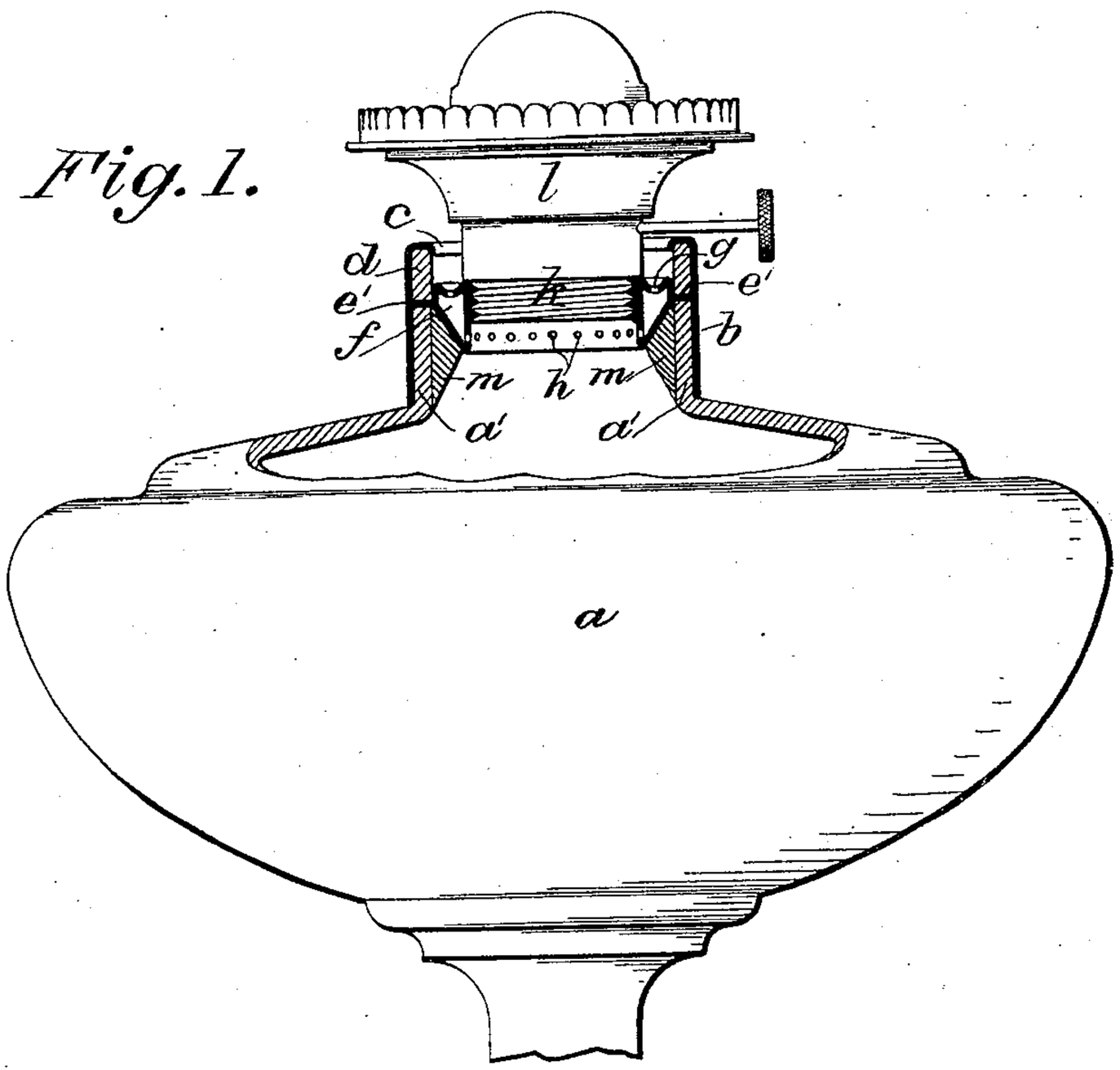


Fig. 2.

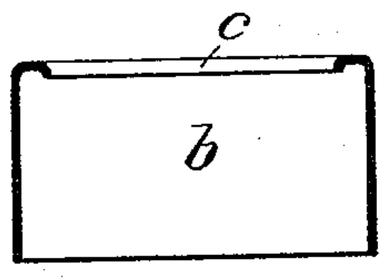


Fig. 3

Fig. 4.

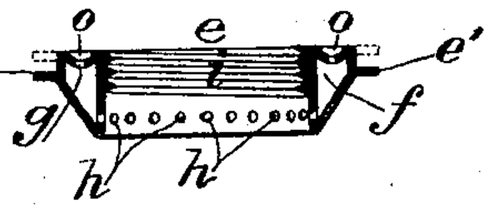
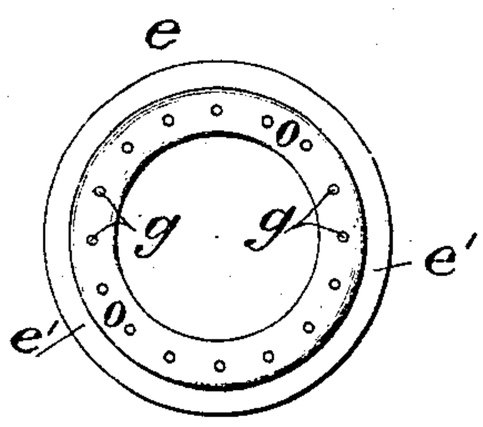


Fig. 5.



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UNITED STATES PATENT OFFICE.

SAMUEL MAXIM, OF WAYNE, MAINE.

OIL-LAMP.

SPECIFICATION forming part of Letters Patent No. 284,876, dated September 11, 1883.

Application filed June 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL MAXIM, of Wayne, in the county of Kennebec and State of Maine, have invented a new and Improved Oil-Lamp, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple and efficient device for preventing the escape or overflow of oil to the outside of the lamp fount or stand, meanwhile providing for free inlet of air to and outlet of gases from the fount, and guarding against a quick outflow of the oil at the lamp-collar should the lamp be accidentally overturned.

The invention consists of a special construction of the lamp-collar, by which a support is afforded for a glass or porcelain ring, which ring constitutes an oil-guard by its smooth inner surface, the collar being also made with a chamber back of the screw-thread which receives the threaded nipple of the burner, and the top and inner walls of the chamber being perforated for air and oil passages to and from the fount of the lamp, all as hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation, partly in section, of a lamp fount and burner with my improvements applied. Fig. 2 is a cross-sectional elevation of the lamp-collar before the glass or porcelain oil-guard ring is set therein. Fig. 3 is a cross-sectional elevation of the oil-guard ring. Fig. 4 is a like view of the guard-ring holder and air and oil chamber as disconnected from the collar, and Fig. 5 is a plan view of the collar socket-piece.

To the lamp-fount *a*, which may be of any desired size and style, and over the usual glass or metal flange, *a'*, thereof I fit the metal collar *b*, which may be a plain ring; but I prefer to make it with the inwardly-projecting flange or rim *c* at the top for a shoulder against which the glass or porcelain oil-guard ring *d* may be held by the flange *e'* of the burner-socket *e*, as in Fig. 1, the flange *e'* being secured to collar *b* by a soldered joint, or a driving fit of the joint, as preferred. The main body of the socket *e* is built up of thin metal rings jointed together in suitable form; or it may be cast or shaped in suitable dies, so as to form within the socket the oil and air chamber *f*, which communicates with the outer air by a series of perforations, *g*, in the top or upper wall, which is preferably grooved or concaved at *o* to better catch the oil, and with the interior of the oil-fount *a* by a series of perforations, *h*, cut in the inner wall of the socket, in which inner wall is formed the screw-thread *i* for receiving the nipple *k* of the lamp-burner *l*, as in Fig. 1.

I prefer to give the chamber *f* a triangular form in cross-section by inclining the outer wall from the flange *e'*, or thereabout, inward and downward to the inner vertical wall of the chamber which it joins below the apertures *h*, as shown, which construction affords facilities for the application of a substantial body, *m*, of the usual plaster or cement, which thus serves not only to secure the socket *e* to the lamp-fount, but gives a solid backing or re-enforce to the entire collar and socket *b e* when in place; but the particular form of the parts may vary within the scope of my invention—as, for instance, the flange *e'* may project from the extreme top edge of the chamber *f*, as in dotted lines in Fig. 4, and the orifices *g h* may be round or square holes or curved slots; but the numerous small perforations shown are preferred, as they afford ample inlet of air to the lamp-fount for promoting a free feed of the oil to the wick, and in case of accidental overturning of the lamp, and the fount *a* remaining intact, the escape of oil from the fount through the perforations would be slower, making the lamp safer in use.

To assemble the parts, the glass or porcelain oil-guard *d* is placed within the collar *b*, and the socket *e* placed and secured by its flange *e'* against the lower edge of guard *d*. The collar *b* may now be slipped over the flange *a'* of the fount *a* and secured in place by the cement *m*, or otherwise. By securing flange *e'* below the top edge of socket *e*, a recess is formed therein to better support the guard-ring *d* jointly with the upper flange, *c*, of collar *b*, or when said flange *c* is dispensed with; and I would also state that apertures *h* may be formed in either the inner or outer walls of chamber *f*, or at their point of junction with each other, their arrangement depending on the shape of

the socket *e* and the manner of securing it to the fount *a*, any lower end construction of socket *e* which will afford free communication between chamber *f* and the interior of the fount being permissible.

The operation of the device is as follows: Any oil carried up the wick and escaping at the outside of burner *l* will fall upon socket *e*, and through perforations *g* to chamber *f*, and from thence through perforations *h* to the fount *a*, and the glass or porcelain guard *d*, rising above socket *e*, presents a smooth face, up which the escaped oil cannot climb or flow, thereby insuring its downward flow within the fount, and the cleanliness of the outer surface of the fount and lamp-base, avoiding pungent odors, and making the lamp more agreeable in use; and by making the apertures *g h* below the burner, free exit of gases from the fount is secured without dangerously overheating said gases, as when they pass through the burner and near the flame.

I wish it to be understood that the guard-ring *d* would act as well were the chamber *f* dispensed with—that is to say, if the upper apertures, *g*, were alone provided through the socket *e;* but the construction shown is preferred, for reasons above stated.

My improvements may also be applied to lanterns, if desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In an oil-lamp, the combination, with a collar, *b*, having the inwardly-projected rim *c* at the top, of the burner-socket flange *e'*, arranged below the top edge of the socket, and secured to the collar to hold a guard-ring in place, as described.

2. The socket *e*, constructed with the flange *e'*, chamber *f*, and apertures *g h*, and screw-threaded internally to receive the burner, substantially as shown and described.

3. The socket *e*, constructed with flange *e'*, grooved or concaved upper wall apertured at *g*, a vertical inner wall apertured at *h*, and screw-threaded to receive the burner, and an outer wall inclined downward and inward, in combination with the collar *b*, fount *a*, and cement *m*, substantially as shown and described.

SAMUEL MAXIM.

Witnesses:
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