R. S. MERRILL.

Lamp-Burners.

No. 145,438. Patented Dec. 9, 1873.

Fig. 1.

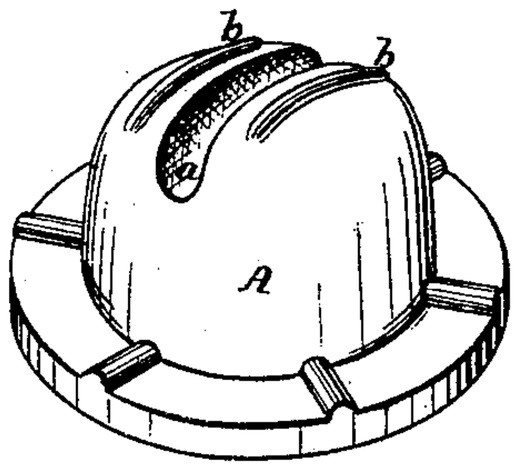


Fig. 2.

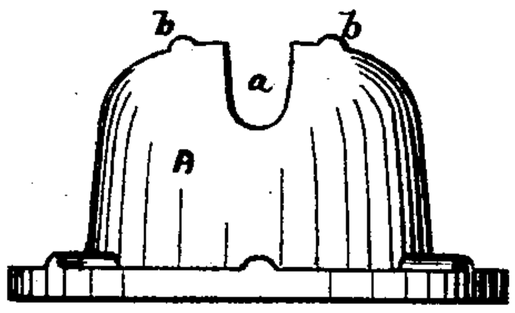
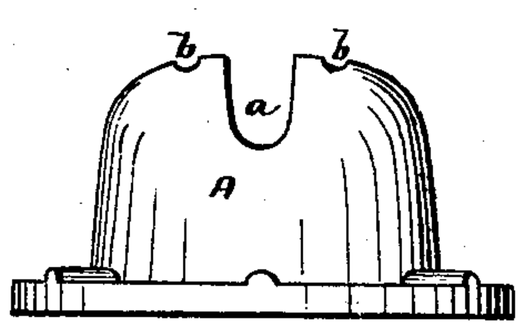


Fig. 3.



Witnesses.

John S. Buckley

Wm. H. Allen

Inventor.

Rufus S. Merrill

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UNITED STATES PATENT OFFICE.

RUFUS S. MERRILL, OF HYDE PARK, ASSIGNOR TO HIMSELF, WILLIAM B. MERRILL, AND JOSHUA MERRILL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. **145,438**, dated December 9, 1873; application filed August 25, 1873.

To all whom it may concern:

Be it known that I, RUFUS S. MERRILL, of Hyde Park, Massachusetts, have invented certain new and useful Improvements in Lamp-Burners, of which the following is a specification:

My invention relates to that part of a lamp-burner called the "deflector"—*i. e.*, the oblong-slotted sheet-metal dome or cap placed above the wick-tube, and through which the flame passes. The light-giving quality of the flame is dependent in great measure upon the form and proportions of the slot through which it passes, and once the proper form and proportions of the slot are ascertained, it is important they should, at all times, be preserved; otherwise the deflector will become powerless to produce a good flame, and consequently the burner will be unfitted for use. It frequently happens, however, that in handling or cleaning the burner, when in use, or in shipping or transporting numbers of them, the metal on the concavo-convex top of the dome and along the longer edges of the oblong flame-slot becomes jammed or bent out of shape, with the consequent disadvantages above alluded to, and when once thus jammed or bent, it is difficult, if not impossible, to bring it back accurately to its original shape.

It is my object to remove, if possible, this difficulty by stiffening the metal on the rounded top of the dome and along the longer edges of the slot, so as to practically remove all liability of its breaking down or becoming jammed under any ordinary conditions of use; and to this end I form the deflector with a rib or corrugation struck up in the metal of which the deflector is formed, one on each side of the flame-slot, extending parallel with and in close proximity to the longer edges of the same. This construction of the deflector is shown in the drawing, in which—

Figure 1 is a perspective view of a deflector thus made, A being the sheet-metal deflector, *a* the flame-slot, and *b* the stiffening ribs or corrugations on top of the dome, one on each side of the slot, parallel with and in proximity to the longer edges of the same. In practice, they are formed at the same time the deflector is struck up, the dies used in the manufacture having a suitable configuration for this purpose. Fig. 2 is a side elevation of the deflector shown in Fig. 1. Fig. 3 represents the stiffening ribs or corrugations formed so as to constitute depressions on the exterior of the deflector instead of being raised thereon. This construction, however, is the same in effect as that represented in the preceding figures.

I am aware that deflectors have been made of corrugated metal; but such corrugations have been spread over the whole surface of the cap or raised portion of the deflector, and have been located differently from the corrugations *b*, and with the design of directing currents of air into the flame. They have not been arranged to stiffen the deflector in a line parallel with and near to the slot, and experience has demonstrated that they have no such action, and that their effect, so far as this feature is concerned, is rather to weaken the metal at this point.

The corrugations in my deflector have no effect upon the air-currents. They are simply and solely to stiffen the deflector at the point where experience has shown that some such additional resistant power is essential to the durability and continued effectiveness of the deflector.

I claim as my invention—

An oblong-slotted sheet-metal deflector for lamp-burners, formed on top of the dome and on each side of the slot, with a rib or corrugation extending parallel with and near to the longer edges of said slot, as and for the purposes shown and set forth.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

RUFUS S. MERRILL.

Witnesses:

JOHN BUCKLEY,

EDWARD E. ALLEN.