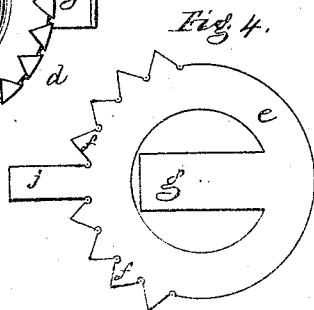
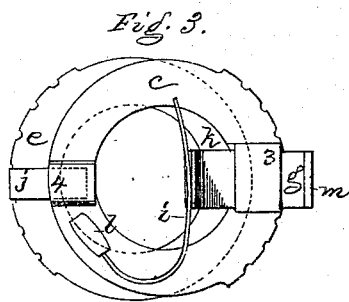
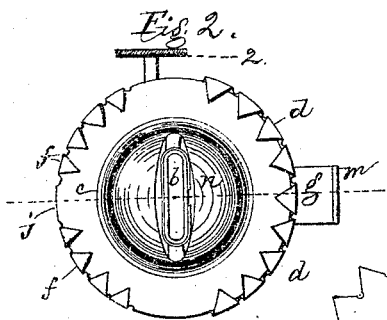
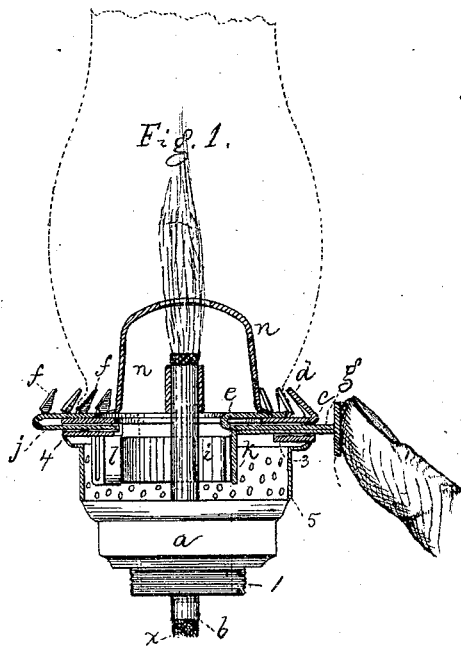


W. H. SANBORN.

LAMP-BURNER.

No. 184,110.

Patented Nov. 7, 1876.



Witnesses.

L. H. Latimer,

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Inventor.

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per Crosby & Gregory  
Attys.

# UNITED STATES PATENT OFFICE.

WILLIAM H. SANBORN, OF CAMBRIDGE, ASSIGNOR TO CHARLES S. CHAFFEE, OF SOMERVILLE, MASSACHUSETTS.

## IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. 184,110, dated November 7, 1876; application filed June 30, 1876.

*To all whom it may concern:*

Be it known that I, WILLIAM H. SANBORN, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented an Improved Lamp-Burner, of which the following is a specification:

This invention relates to lamp-burners; and has for its object the improvement of burners, as to the devices for holding the chimney in position.

The invention consists in the combination, with the base of the burner adapted to be screwed or otherwise fastened into or on the lamp, of plates provided each with an annular series of chimney-holding prongs or devices adapted to bear on the lower end of the chimney, and to move toward or from each other, under the action of a suitable spring, to permit the insertion of the base of the chimney between the prongs, or its removal therefrom; also, in a removable thimble, provided with a clasping-piece adapted to embrace the wick-tube, whereby the thimble may be readily removed to trim the wick.

In chimney-holders as commonly constructed, two prongs and a screw are employed to embrace the flanged portion of the chimney, or else long spring-prongs provided with notches are made to receive the chimney-flange. In practice it is found that these devices, if made to fit the base of the chimney sufficiently close to hold it firmly, and to prevent it from rattling or falling off when the lamp is being moved or used in cars or other vehicles or boats of travel, hold the chimney too close when the chimney expands under the action of the flame, and the chimney is consequently broken, or else is held too loosely.

A chimney-holder constructed as herein described holds the base of the chimney so firmly that it cannot be thrown off, and so that it cannot rattle or vibrate, and as the chimney expands under the action of heat a portion of the holder moves with it, under the action of a spring, and yet holds the base firmly, and as the chimney becomes cooled the holder closes together as the glass contracts in size. This automatic adaptation of the chimney-holder with an annular series of prongs to the base, according to its changeable size under

the action of heat or cold, is the gist of this invention.

Figure 1 represents a burner provided with my invention, the upper portion thereof being in section, such figure also showing the chimney in dotted lines. Fig. 2 represents the burner in top view; Fig. 3, an under-side view of the plates of the chimney-holder removed; and Fig. 4, a top view of the upper plate before it is bent, as shown in Fig. 1.

The base *a*, provided with the screw-thread 1, to enter the screw-threaded upper portion of a lamp, and the wick-tube *b*, for the wick *x*, are of usual construction. The wick is raised and lowered by the thumb-nut 2, as usual. The lower plate *c* of the holder is provided at one side with an annular series of chimney-holding prongs, *d*, bent upward and inward, as shown at *d*, Fig. 1, to fit over the base or flanged lower end of the chimney, and is also provided, in this instance, in two places with sockets 3 4, for the reception of the arms *g j* of the upper plate *e* of the holder, they being bent downward and backward, as shown in Fig. 1, and fitted into the sockets 3 4 of the lower plate, this connection permitting the upper plate *e* of the holder to slide on the lower plate *c*, the latter being fixed or connected with the upper portion of the base *a*, above the air-receiving passages 5, Fig. 1. The upper plate *e* is also provided with an annular series of chimney-holding prongs, *f*, to fit the base or flanged lower end of the chimney, in opposition to the holding-prongs *d*. The under plate *c* has attached to it a pendant, *l*, to which is connected a spring, *i*, placed to bear upon an arm or projection, *k*, forming part of the upper plate *e*, the spring having a tendency to always hold the prongs *f* pressed toward the prongs *d*, so as to grasp and hold the chimney-base firmly, preventing it from falling off or rattling; and as the chimney becomes heated and expands, the upper plate *e* and prongs *f*, under the action of the expanding chimney, move away from prongs *d*, the spring permitting the plate so to move.

To easily insert or remove a chimney, the upper plate *e*, or its arm *g*, is provided with a thumb-piece, *o*, by which the upper plate and prongs *f* may be moved away from the wick-

tube or center of the burner, and against the action of the spring.

The thimble *n*, through which the flame of the lamp issues, is provided with a clasping-piece, *m*, that embraces the upper end of the wick-tube *b*, thereby retaining the thimble in position, and with its opening in line with the opening in the wick-tube.

To trim the wick evenly and quickly, the thimble and its clasping-piece may be removed.

It is obvious that the shape of the plates and the prongs may be adapted to chimneys of any well-known or proper shape, and the invention may also, with slight modifications, be employed to hold globes or shades of gas and other lamps firmly in position against movement by reason of moving the fixtures or lamps on cars, boats, &c.

The form of the spring *i* and its method of attachment may be changed without departing from this invention; and instead of the arms *j g* and sockets 3 4, a headed or other pin on one plate might enter a slot in the other plate, or one plate may be suitably connected with and so as to move over the other, as described.

I am aware that a single spring on a spring-governed plate has been adapted to operate through an opening in a chimney-holding rim; but in that case the spring does not provide for holding the chimney-base positively, as by an annular series of prongs on a plate adapted to move as the prongs are acted upon by the expanding or contracting chimney-base.

I claim—

1. In a chimney-holder, an upper and a lower plate, provided with an annular series of holding-prongs, in combination with a spring to retain the pronged plates pressed toward each other, to operate substantially as described.

2. The removable thimble, in combination with the clasping-piece adapted to fit the wick-tube, substantially as described.

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

WILLIAM H. SANBORN.

Witnesses:

R. L. ROBERTS,  
S. B. KIDDER.