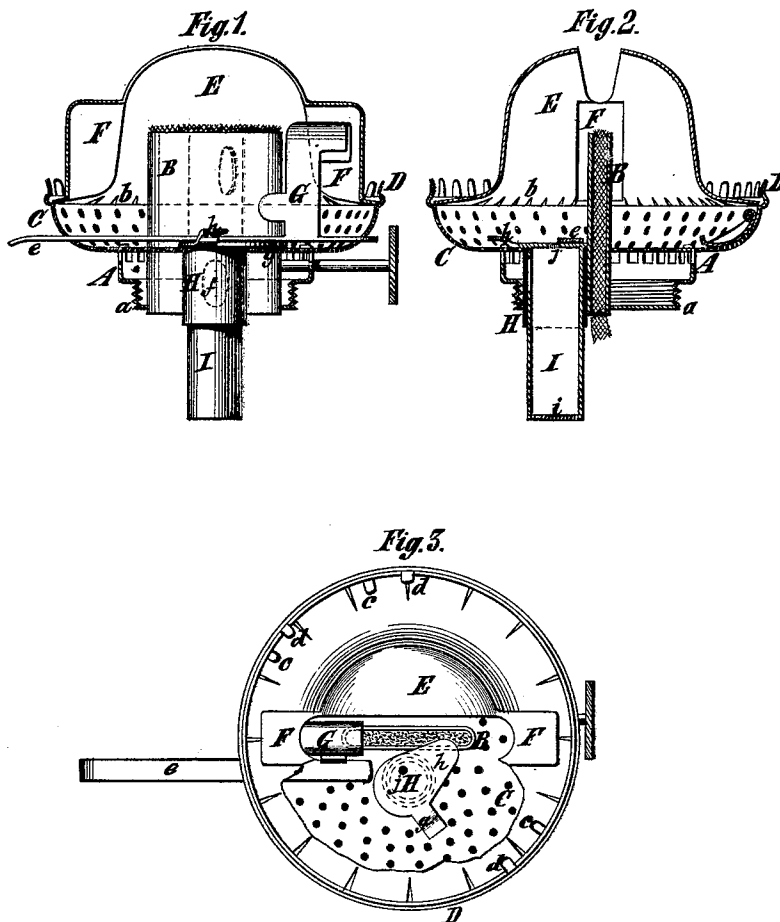


H. A. CHAPIN.

LAMP-BURNER.

No. 180,753.

Patented Aug. 8, 1876.



Witnesses.

Thomas E. Birch.

E. Hugentobler

Henry A. Chapin
by his Atty.

Vanderhorst & Brown

UNITED STATES PATENT OFFICE.

HENRY A. CHAPIN, OF NEW YORK, N. Y.

IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. **180,753**, dated August 8, 1876; application filed May 6, 1876.

To all whom it may concern :

Be it known that I, HENRY A. CHAPIN, of New York, in the county and State of New York, have invented certain new and useful Improvements in Lamp-Burners, of which the following is a description:

One feature of this invention relates to one of my former inventions, the object of which was to insure the extinguishment of the light before the filling mouth, orifice, or tube of the lamp could be uncovered and the lamp replenished. This feature consists in the combination, in a lamp-burner, of an extinguisher and a telescopic filling-tube, made of two or more sections, one of which is a fixture in the burner, and another of which is capable of being elevated above the former, and is provided with an opening in its side, through which, when properly elevated, the lamp may be replenished without necessitating the tilting of the filling-can so as to endanger the spilling of the oil, and yet the desired result is obtained in a very reliable manner.

The invention also consists in the combination, with a lamp-burner, of a telescopic filling-tube, the upper part or section of which is preferably provided with a vent-hole.

It also consists in the combination, with the upper section of such filling-tube and the wick-tube, of a catch whereby the upper section may be supported on the tip of the wick-tube while the lamp is being replenished.

It also consists in the combination, with the upper section of such wick-tube, of a handle whereby it may be conveniently manipulated.

It also consists in the combination, with an extinguisher adapted to move across the tip of the wick from corner to corner, of a conoidal deflector provided with hoods or extensions permitting the movement of such extinguisher.

It also consists in a conoidal deflector provided with hoods or extensions opposite the corners of the tip of the wick, whereby the flame is spread laterally.

It also consists in a deflector provided at the outer edge with a series of slits, whereby its bending or shaping is facilitated and provision is afforded for the upward passage of the cool air along the interior of the chimney. Hence a more uniform degree of heat is main-

tained on both sides of the chimney, and the liability of cracking it is obviated.

It also consists in other details, which will be hereafter set forth.

In the accompanying drawing, Figure 1 is a transverse section of a lamp-burner embodying my invention. Fig. 2 is a transverse section of the same, taken at right angles to the former; and Fig. 3 is a top view of the burner, its deflector being broken away to reveal the parts below it.

Similar letters of reference designate corresponding parts in all three figures.

A designates the body of the burner, which is of ordinary form, and provided, as usual, with a screw-threaded hub, *a*, for attachment to a reservoir or fount. B designates a wick-tube of ordinary form. C designates an air-distributor, preferably made of convex form, so as to afford provision for the passage through it of an abundant supply of air. D designates the chimney-gallery. E designates a deflector of conoidal form, provided with the usual opening for the flame, and at opposite ends thereof with hoods or extensions F. These hoods or extensions afford nearly the same space around the edges or corners of the wick-tube as is ordinarily provided around its sides. Hence the flame is allowed to spread out laterally, which is desirable, because it then burns very steadily and gives more light. The hoods or extensions also permit the use, in connection with a conoidal deflector, of a very desirable combined extinguisher and flame-reducer, which forms one feature of a former invention of mine. The base or lower edge of this deflector is provided with a number of notches or slots, *b*, which, like the holes ordinarily used, afford access to cold air close to the inner wall of the chimney, thereby maintaining a nearly uniform temperature on both sides of said chimney, and therefore reducing its liability to crack from unequal expansion. These notches or slots, however, have an additional function: they facilitate the forming of a conoidal deflector, which hitherto has been attended with difficulty. The deflector E is also provided with a series of notches, *c*, and the chimney-gallery with a corresponding series of inwardly-extending catches, *d*, forming a simple fastening for

retaining the deflector in place. When applied, its notches *c* are slipped over the catches *d*, and, on being turned slightly around, its solid portions are shifted under the said catches, and it is firmly held against displacement. The reverse operation liberates the deflector. *G* designates the extinguisher. It consists of a piece of sheet metal affixed to a movable rod, *e*, and bent so that when properly actuated it will move partly or wholly over the tip of the wick, and extinguish part or all of the flame. *H I* designate a telescopic or extensible filling-tube, composed of two parts or sections, one of which, *H*, is a fixture in the body of the burner, and the other of which, *I*, is capable of being raised or elevated above the former, and is provided with a mouth or orifice, preferably with a mouth or orifice, *f*, in its side. A handle, *g*, affords convenience in manipulating the section *I*, and a catch, *h*, capable of resting on the tip of the wick-tube, when the said section *I* is raised, affords a convenient support for it while the lamp is being replenished.

The advantages of this filling-tube are that the mouth or orifice may be raised above the surrounding parts of the burner, so that the can used in replenishing the lamp need not be tipped so as to endanger the spilling of the oil, and also that when the extensible section is down in its normal position the filling mouth or orifice is securely closed. I prefer to provide the upper or extensible section *I* with a bottom of foraminated or reticulated material, *i*, to preclude the passage of fire into the reservoir. I also prefer to provide a vent-hole, *j*, in the said section *I*, to adapt it to serve as a gas tube.

It will be seen that the extinguisher-rod *e* passes over the top of the extensible section *I*. Thus the latter is prevented from being raised and opened until after the extinguisher has been moved out of the way and put out the flame. The extinguisher also is prevented from being moved back to its normal position to permit the lighting of the wick until the filling mouth or orifice has been closed by the

lowering of the said extensible section of the filling-tube.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a lamp-burner, of an extinguisher adapted to move across the tip of the wick and a vertically-arranged telescopic filling-tube, one section of which is a fixture in the burner and another adapted to be elevated above the former and provided with a filling-orifice in its side, substantially as and for the purpose herein set forth.

2. The combination, with a lamp-burner, of a vertically-extensible telescopic filling-tube, provided with a filling mouth or orifice in its upmost section, substantially as and for the purpose herein set forth.

3. The combination, with a fixed section of a filling-tube, of an upwardly-extensible section, having a filling orifice in its side, a foraminated or reticulated bottom, and a vent at the top, substantially as herein described, whereby the filling-tube is made to serve the purpose of a gas-tube.

4. The combination, with the wick-tube of a lamp-burner and an upwardly-extensible section of a filling-tube, of a catch, substantially as described, whereby the said section may be supported on the tip of the wick-tube while the lamp is replenished.

5. The combination, with an upwardly-extensible section of a filling-tube, of a handle, whereby it may be conveniently manipulated, substantially as set forth.

6. The combination, with an extinguisher capable of being moved across and off the tip of the wick, of a conoidal deflector, provided with hoods or extensions, substantially as herein set forth.

7. A conoidal deflector, provided with hoods or extensions adapted to occupy positions opposite the corners of the wick-tube, substantially as and for the purposes herein set forth.

HENRY A. CHAPIN.

Witnesses:

P. L. VAN DER VEER,
THOMAS E. BIRCH.