W. CARLETON.

Lamp-Chimney Holder.

No. 80,909. Patented Aug. 11, 1868.

Fig. 1

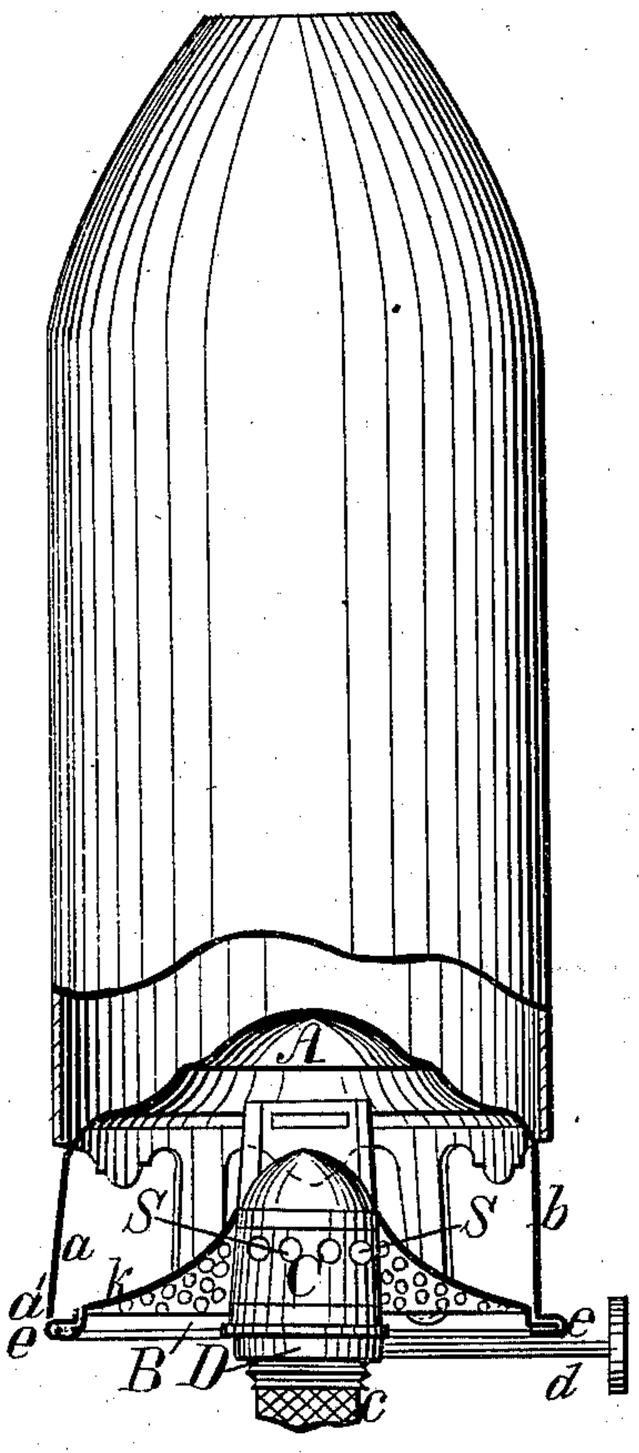
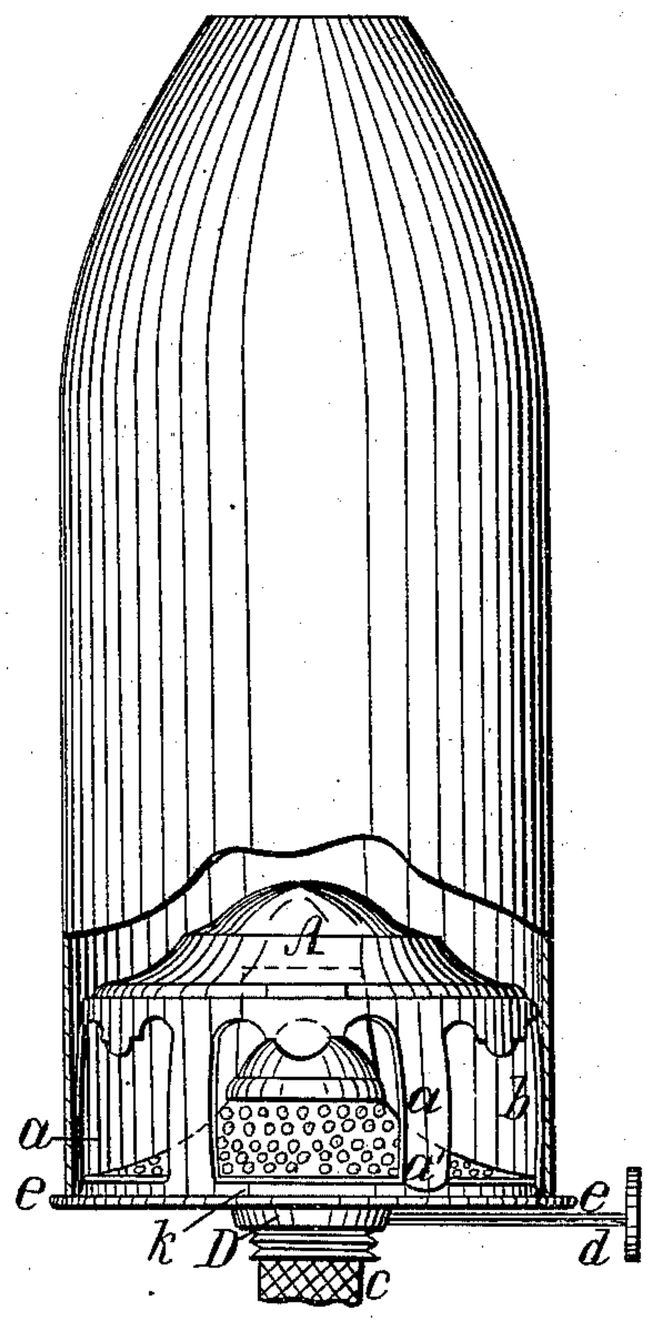


Fig. 2



Witnesses;

Wm. Seiler

Wm. H. McKale

Inventor;

William Carleton

by A. Pollok

his atty.

United States Patent Office.

WILLIAM CARLETON, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 80,909, *dated August* 11, 1868.

IMPROVEMENT IN LAMP-BURNERS.

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

TO WHOM IT MAY CONCERN:

Be it known that I, WILLIAM CARLETON, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Lamp-Burners; and I 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 a vertical central section, and

Figure 2 an elevation of my improved burner.

My invention relates to that class of burners in which the chimney, resting upon a seat formed below the elevated deflector, is sustained in position by means of springs bearing outwardly against its inner surface, and it has reference principally to the method of supporting the deflector in its elevated position, and of forming the chimney-holding springs.

The improvements which are made the subject of this patent may be stated to consist—

First, in connecting the elevated deflector to the air-distributer or chimney-rest by means of standards extending from the periphery of the deflector to the periphery, or thereabouts, of the air-distributer. By this means I am enabled to form the deflector and standards, or deflector, standards, and chimney-holding springs from one continuous piece of sheet metal.

Second, in attaching the standards, springs, and deflector to the air-distributer or chimney-rest by means of a ring bent over and around the outer edge or periphery of the air-distributer. This ring may be either formed on one piece with the standards, or it may be a separate piece bent over so as to embrace both the edge of the air-distributer and a flange or holding-piece formed with the standards.

Third, in the hereinafter-described formation of the springs, and their combination with the air-distributer, so as to prevent the tipping of the chimney.

Fourth, in the alternate arrangement of the standards and chimney-holding spring, and in other minor features relating to the same, which need not now be specified.

Fifth, in the construction and combination, with the other parts of the burner, of the sleeve which fits upon the neck-tube and over the base, and holds the deflector and air-distributer in position.

To enable those skilled in the art to understand and use my invention, I will proceed to describe the manner in which the same is or may be carried into effect, by reference to the accompanying drawings.

The burner shown in illustration of my invention is one in which the upper section, consisting of the deflector A, chimney-holding-springs *a*, standards *b*, and air-distributer or chimney-rest B, is supported by means of the sleeve C upon the lower section, composed of the base, D, wick-tube *c*, and wick-adjusting devices *d*.

The sleeve C fits upon the wick-tube, and its sides are so formed as to leave between them and each side of the wick-tube, passage through which air is fed directly to the ignited wick.

The lower and expanded end of the sleeve fits over the covered base of the burner, and in order to obtain the necessary supply of air, as just indicated, a series of holes or perforations is formed in the sleeve, below the point where the air-distributer is attached, and above the point where the sleeve rests upon the base.

Through these holes the air passes up between the wick-tube and sleeve to the ignited wick, and, supplying the flame with oxygen, perceptibly increases its brilliancy.

The deflector A is held in position by means of the standards *b*, which extend from its periphery to or near the periphery of the air-distributer B.

In order both to lessen the number of operations required to complete the standards and deflector, and to produce a more perfect and at the same time less expensive burner than would otherwise be practicable, I strike up the deflector and standards from one continuous sheet of metal, and for a like reason I form the chimney-holding springs in the same manner.

The metal from which these parts are made is struck up so as to form the deflector, the outer portion being bent down at about right angles to the deflector, and cut out so as to remove the metal between the standards, leaving at the lower end a continuous ring or annulus, *e*, which connects the standards.

The springs are formed by detaching or separating the lower end of every other standard from the ring *e*, as shown at *a'*, and the strip thus freed is bent so as to form a spring, as shown in fig. 1, its greatest springiness being at its end or lowest point, for the purpose hereinafter referred to.

It will be seen that the springs and standards are thus arranged upon the periphery of the deflector in alternate order.

In securing the deflector, with its springs and standards, to the air-distributer, the ring *e* is swaged or bent over and around the rim of the distributer, as shown in fig. 1, constituting not only the means for uniting said parts, but also the rest or seat for the chimney.

The ring *e* need not be in one piece with the standards, for the latter may be provided with a flange extending entirely around and connecting them together, which flange can be held to the distributer by means of a separate annulus, bent over both the flange and the rim of the distributer-plate, or other means which will readily suggest themselves can be employed for the purpose.

The method above described of connecting the deflector and air-distributer by means of standards extending from the periphery of the one to or near that of the other, and of forming the springs and standards, and of attaching them to the air-distributer, is productive of many advantages. The deflector is held firmly in position, and will always be maintained in its proper relation to the wick-tube, while, by striking up all the parts, with the exception of the air-distributer, from one piece of metal, a great saving of labor and expense is effected, and a neater article is produced than has heretofore been practicable.

The springs *a* are so formed and combined with the other parts of the burner that the chimney cannot tip over, thus remedying a great defect in burners of this class. Each spring is formed as shown in section at *a* in fig. 1, slightly bulging in the centre, and with its greatest springiness at its end or lowest point.

Each spring extends from the periphery of the deflector to, or almost to, the chimney-seat or rest, in a nearly vertical direction, projecting just far enough, as shown in the drawings, to cause the chimney, when placed in its seat, to compress it slightly, leaving a small space between the periphery of the deflector and the chimney for the passage of air. Thus, when the chimney tends to tip, it will bear against the bulging or least elastic portion of the nearly vertical spring-arm, and if this pressure of the chimney be increased, the lower end of the spring will be forced against shoulder K on the air-distributer, which prevents the further yielding of the spring, and consequently the further tilting of the chimney. It is in fact impossible, even without the shoulder K, for the chimney to be tipped over by accident, and any attempt to separate it from the burner by tilting it can only result in its breaking.

Having now described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. Forming the elevated deflector and the supporting-standards upon its periphery in one continuous piece of metal, substantially as and for the purposes set forth.

2. Forming the elevated deflector, its supporting-standards, and the chimney-holding springs in one continuous piece, substantially as herein shown and set forth.

3. The arrangement of the standards and chimney-supporting springs in alternate order upon the periphery of the deflector, in the manner shown and described,

4. The combination, with the air-distributer and the elevated deflector, with its chimney-holding springs and standards, of a bent-over ring for holding the deflector to the air-distributer, whether the said ring be formed in one piece with said standards, or separately therefrom, as and for the purposes set forth.

5. The combination of the elevated deflector and its downwardly-extending peripheral springs with the chimney and chimney-seat, and shoulder formed on said seat or the air-distributer, to prevent the excessive yielding of said springs, as herein shown and set forth.

6. The combination, with the base and wick-tube, of a sleeve for supporting the deflector and air-distributer held upon the base and wick-tube, in the manner described, and provided, near its lower end, with perforations or openings for the supply of air directly to the flame, as set forth.

In witness whereof, I have signed this specification in presence of two subscribing witnesses.

WM. CARLETON.

Witnesses:
A. POLLOK,
E. E. CADNE.