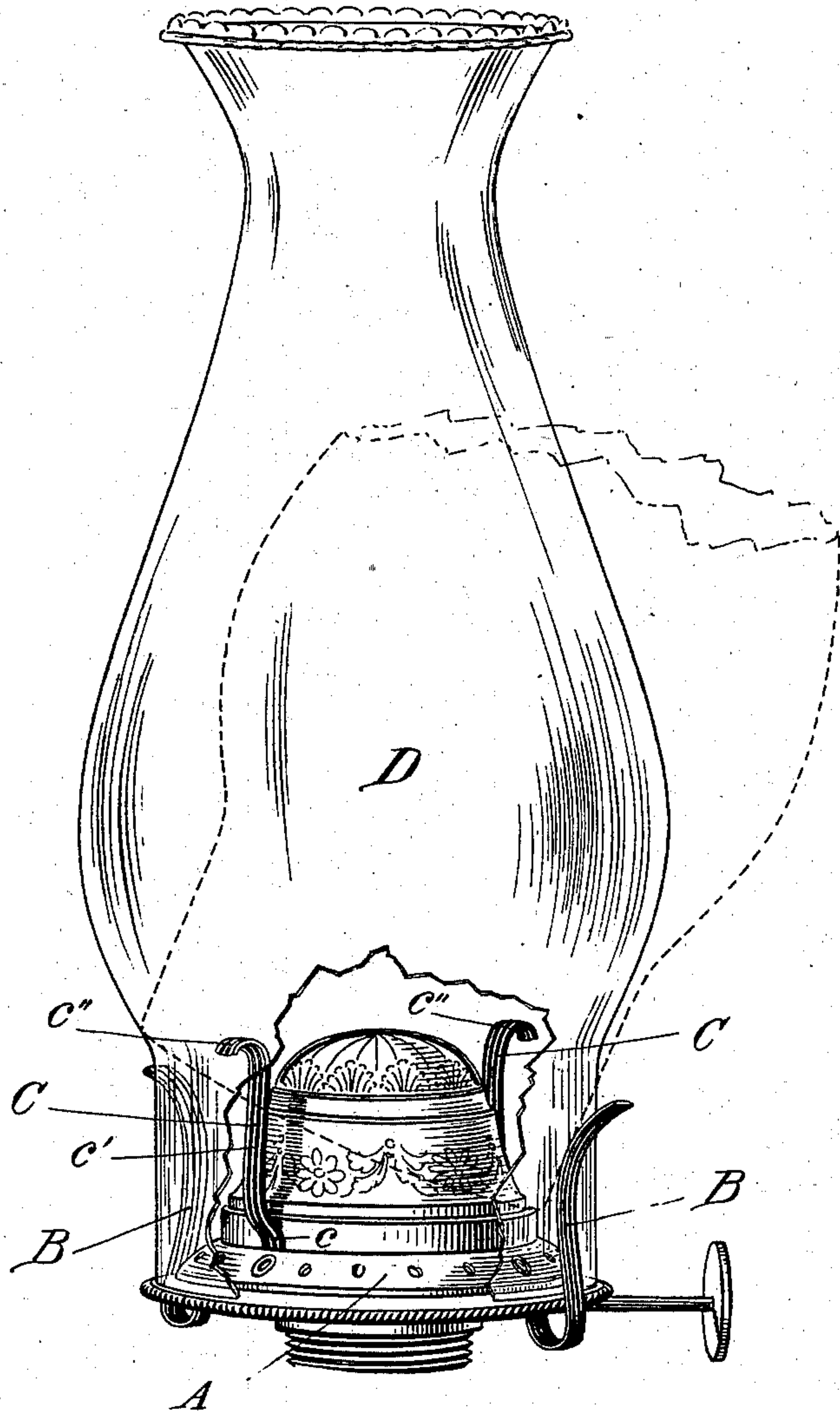


(No Model.)

F. T. WILLIAMS.  
LAMP BURNER.

No. 559,069.

Patented Apr. 28, 1896.



WITNESSES:

*W. B. Allen*  
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# UNITED STATES PATENT OFFICE.

FRANK THEODORE WILLIAMS, OF MERIDEN, CONNECTICUT, ASSIGNOR TO  
THE EDWARD MILLER & COMPANY, OF SAME PLACE.

## LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 559,069, dated April 28, 1896.

Application filed May 24, 1895. Serial No. 550,497. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK THEODORE WILLIAMS, a citizen of the United States, residing at Meriden, New Haven county, Connecticut, have invented a new and useful Improvement in Lamp-Burners, of which the following is a specification.

My invention relates to that class of burners adapted to be used with a chimney having a substantially cylindrical portion at its lower end and a portion of increased diameter above this straight portion. It is intended to secure such chimneys firmly to the burner, so as to prevent accidental displacement.

In the accompanying drawing, which represents in perspective a lamp-burner embodying my invention, the letter A is used to designate the burner; B B, external chimney-holding springs; C C, internal chimney-holding springs, consisting of outturned portion *c*, vertical portion *c'*, and hook or reverted portion *c''*; D, a chimney.

In the example of my invention illustrated in the drawing, the burner A is of the ordinary "Sun" type, and is provided at its lower end with a screw-thread adapted to engage with a lamp-collar. Secured to the burner A, at diametrically opposite points, are two chimney-holding springs B, adapted to bear against the exterior of the chimney D. These are the ordinary external springs used in the vast majority of burners of this type, and too well known to require further description. Midway of the springs B are two opposed springs C, adapted to bear internally against opposite sides of the chimney D. As shown, these are secured in the ordinary manner to the under side of the deck of the burner, pass through the deck near the dome, and are formed with an outwardly-turned portion *c*, a straight nearly vertical portion *c'*, and a hook or reverted portion *c''*, adapted to engage with the inner surface of the chimney just above its straight portion or "slip"—i.e., just within the swelled portion or "bulb" of the chimney.

To most easily place the chimney on the burner, the operator, holding the chimney at an angle, as shown in dotted lines in the drawing, engages one edge with the outer side of

a spring C. As the chimney is brought to a perpendicular position the external springs B act to guide it over the second internal spring C and the chimney readily slips to its seat on the deck of the burner. Although the hooks *c''* of the springs C engage in the bulb of the chimney a very short distance above the top of the slip or straight portion, it is found experimentally that the burner may be violently shaken or quickly inverted without displacing the chimney from its seat.

It is obvious that the particular shape of the springs C is non-essential to my invention. It is only necessary that there shall be two oppositely-placed chimney-holding springs, adapted to engage with the inner surface of the chimney within its bulb or swelled portion, and midway of these two springs adapted to engage with the outer surface of the chimney in the usual manner. It is also clear that the application of my device is in no wise limited to a particular form of burner—as, for instance, the "screw-on" form shown—but that my chimney-holding springs would be equally useful in an Argand or any other form of burner used with a chimney of the shape described.

I am aware that burners have heretofore been made with a plurality of springs all adapted to bear against the inner side of the chimney. It is found in practice that it is very inconvenient to place the chimney over these springs. I am also aware that a burner has been made with a plurality of springs, each of which was secured to the deck of the burner at its middle point and acted to grip the chimney by bearing against both its interior and exterior surfaces. My device is much less expensive and more convenient to operate than anything of this sort.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is as follows:

1. A lamp-burner provided with a plurality of exterior chimney-holding springs and a plurality of interior chimney-holding springs adapted to bear against the bulb or swelled portion of a chimney above its lower straight cylindrical portion, substantially as described.

2. A lamp-burner provided with a plurality of exterior chimney-holding springs and a plurality of interior chimney-holding springs each of said interior springs being formed with  
5 a substantially vertical portion and a hook or reverted portion at the upper end of said vertical portion, said hook being adapted to bear

against the bulb or swelled portion of a chimney above its lower straight cylindrical portion, substantially as described.

FRANK THEODORE WILLIAMS.

Witnesses:

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