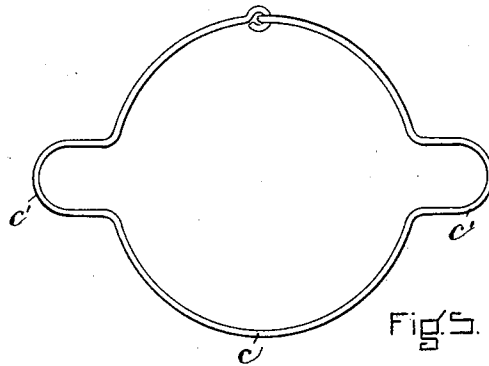
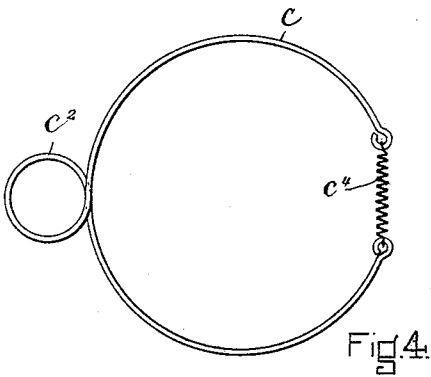
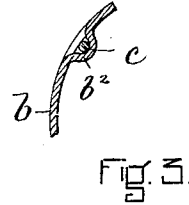
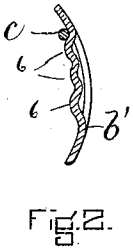
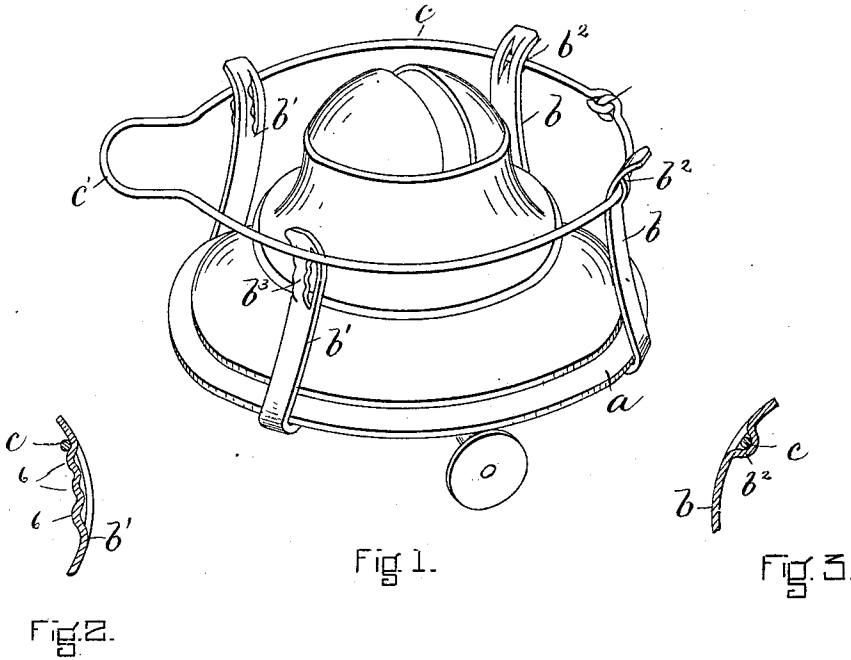


(No Model.)

B. P. LUCE.
LAMP BURNER.

No. 481,729.

Patented Aug. 30, 1892.



WITNESSES.

W. W. Jackson
A. D. Harrison.

INVENTOR.

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UNITED STATES PATENT OFFICE.

BARTLETT P. LUCE, OF BOSTON, MASSACHUSETTS.

LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 481,729, dated August 30, 1892.

Application filed February 27, 1892. Serial No. 422,970. (No model.)

To all whom it may concern:

Be it known that I, BARTLETT P. LUCE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Lamp-Burners, of which the following is a specification.

This invention relates to lamp-burners adapted to hold a lamp-chimney with a cylindrical base and provided with a series of independent elastic arms projecting upwardly from the chimney-supporting base or flange of the burner and bearing with yielding pressure upon the exterior of the chimney-base. Heretofore the elasticity of said arms has been relied upon wholly to hold the chimney, and as the arms easily lose their elasticity and become inoperative to a large extent the chimney is very liable to fall accidentally from the burner.

The present invention has for its object to provide means for reinforcing or imparting additional inward pressure to said arms and preventing liability of the accidental separation of the chimney from the burner.

To this end the invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming part of this specification, Figure 1 represents a perspective view of a lamp-burner provided with my improvements. Figs. 2 and 3 represent vertical sections of two of the chimney-holding arms. Figs. 4 and 5 represent top views of different forms of the arm-binding or reinforcing-band.

The same letters and numerals of reference indicate the same parts in all the figures.

In the drawings, *a* represents the base or flange of a lamp-burner, on which the lower end of the chimney rests, and *b b b'* represent the elastic arms, which are attached to and project upwardly from said base in position to bear upon the exterior of the cylindrical base of the chimney. Said arms are or may be of the usual general form now in use in burners of this class, and each is adapted to bear with a yielding pressure upon the exterior of the chimney.

In carrying out my invention I provide a spring-band *c*, adapted to encircle or inclose all the arms *b*, and to confine the same so that the liability heretofore existing of the out-

ward bending of the arms to the extent which will cause them to hold the chimney too loosely will be obviated. Said spring-band is engaged with the upper portions of the arms *b b'* and bears upon the outer surfaces thereof. The spring-band is preferably made of wire and constitutes a continuous hoop surrounding the chimney. I prefer to make the spring-band of such construction that it will automatically contract, and thus exert an inward pressure on all the arms *b b'* simultaneously, said pressure reinforcing the pressure of said arms due to their elasticity. This automatic action of the spring-band *c* may be secured in various ways—for example, by providing it with a loop or offset *c'*, as shown in Fig. 1, or with more than one of said loops or offsets, as shown in Fig. 5. The same result may be secured by forming a portion of the spring-band into a circular loop or coil *c²*, as shown in Fig. 4, and there may be more than one of said coils, if desired. In all cases I prefer to adjust the spring-band so that when contracted to its normal diameter it will exert sufficient inward pressure on the arms *b b'* to hold them with sufficient firmness against the chimney, the elasticity of the spring-band enabling the arms to yield sufficiently to permit the necessary expansion of the chimney.

The spring-band *c* may be engaged with the arms *b b'* in any suitable way. I prefer the manner of engagement shown in Fig. 1, the same being effected by forming loops *b³ b³* on the arms *b b*, said loops being integral with said arms and offset therefrom, so as to constitute eyes to receive the spring-band *c*, so that the spring-band is pivotally connected to the arms *b b* and is adapted to tilt or swing thereon. The arms *b' b'* are in this case provided with cam-shaped projections *b³ b³*, which are formed to engage the swinging portion of the spring-band *c* when the spring-band is swung upwardly, as indicated in Fig. 1. The movement of the swinging portion of the spring-band from a point below the projections *b³ b³* to a bearing on said projections causes the spring-band to co-operate with the projections in pressing the arms *b b'* inwardly in a manner which will be readily understood, the projections *b³* being formed so that the upward movement of the spring-band across their outer faces will cause the spring-band

to press the arms inwardly as it rises. I prefer to make each projection b^3 with a series of steps 6 6 6, each step being adapted to engage and hold the spring-band c , so that the inward movement of the arms $b b$ may be proportioned to the diameter of the chimney.

I do not limit myself to the described means of engagement of the spring-band c with the arms b and may connect the spring-band with all the arms, so that it will not have the tilting motion above described, its action in such case being due wholly to its inherent elasticity and its adaptability to automatically contract. In case the spring-band is not adapted to tilt, it may be secured to the arms $b' b'$ in the same manner that it is secured to the arms $b b$.

It is obvious that the spring-band may be pivotally connected to one or more of the arms and that one or more of the arms may have a cam-shaped projection. The spring-band may have a helical spring c^1 , arranged to aid it in contracting, this form of spring having the advantage of retaining its elasticity to a greater extent than the spring composed of the bent loop c' .

I claim—

1. A lamp-burner having a series of independent elastic chimney-holding arms projecting upwardly from its base and adapted to bear independently on a cylindrical chimney at their upper ends and having loops or offsets, and a reinforcing spring-band engaged with the said loops or offsets and adapted to exert an additional inward yielding pressure thereon, as set forth.

2. A lamp-burner having a series of independent elastic chimney-holding arms projecting upwardly from its base and adapted to bear independently on a cylindrical-chimney at their upper ends, one or more of said arms having a cam-shaped projection, combined

with a tilting spring-band hinged to one or more of the other arms and adapted to be engaged with said cam-shaped projections by an upward movement of the spring-band and thereby exert inward pressure on the arms, as set forth.

3. A lamp-burner having a series of independent elastic arms projecting upwardly from its base and adapted to bear independently on a cylindrical chimney at their upper ends, one or more of said arms having an eye or loop b^2 , while one or more of the other arms has a cam b^3 , said eye and cam being integral with the arms on which they are formed, combined with a spring-band passed through said eyes and adapted to be engaged with said cams by an upward movement of the spring-band, as set forth.

4. A lamp-burner having a series of independent elastic chimney-holding arms projecting upwardly from its base and adapted to bear independently on a cylindrical chimney at their upper ends, one or more of said arms having a cam-shaped projection consisting of a series of steps, combined with a tilting spring-band hinged to one or more of the other arms and adapted to engage either of said steps, as set forth.

5. A lamp-burner having elastic chimney-holding arms, and a reinforcing spring-band engaged with said arms and provided with a closing or contracting spring c^1 of helical form, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 15th day of February, A. D. 1892.

BARTLETT P. LUCE.

Witnesses:

C. F. BROWN,

A. D. HARRISON.