

M. H. COLLINS.

Improvement in Lamp-Shades.

No. 114,766.

Patented May 16, 1871.

Fig 1.

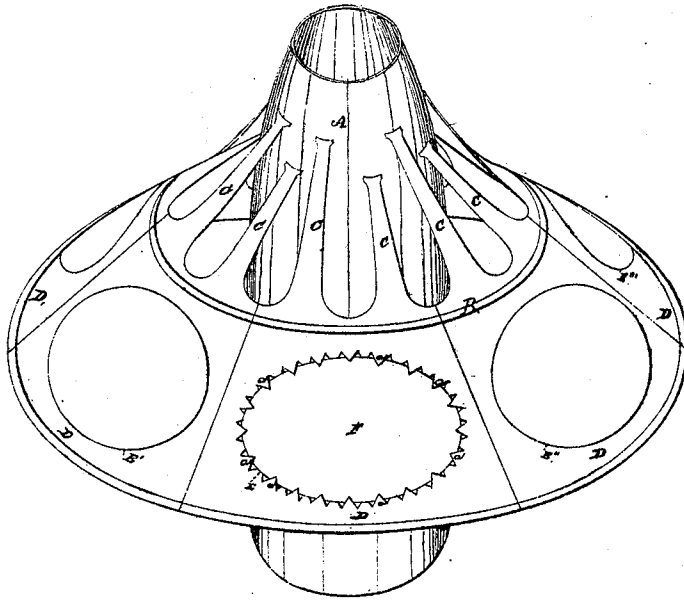
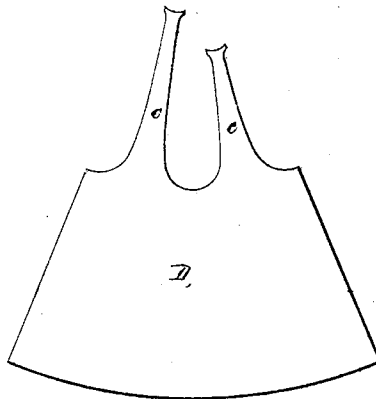


Fig 2.



Witnesses.

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Letters Patent No. 114,766, dated May 16, 1871.

IMPROVEMENT IN LAMP-SHADES.

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

To all to whom these presents may come:

Be it known that I, MICHAEL H. COLLINS, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Lamp-Shades; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a perspective view of a shade as made in accordance with my invention.

My invention has reference to that class of metallic shades whose upper parts are provided with a series of radial arms or springs which embrace and bear against the external surface of a lamp, or Argand-burner chimney with a force sufficient to support the shade thereon.

The first part of my invention consists in forming the shade of a series of segments of thin sheet metal, each of which has its base and springs formed of a single piece, the said segments being brought together and rigidly secured by soldering, seaming, or riveting, so as to form the frustum of a cone or pyramid, which is practically neither collapsible, expansible, or contractible, but firmly maintains its normal status under all circumstances, while the said springs are of such construction and tension as to render the shade applicable to all ordinary lamp-chimneys;

Second, in providing the shade with a series of alternating longer and shorter arms to bear upon the chimney at different altitudes above their base, whereby the shade is better maintained upon the chimney than when the arms are of a uniform length, and a part embraces the chimney above and a part below their base; and

Third, in a peculiar method of forming the openings in the shade, and securing the ornamentation or transparencies thereto or therein.

In fig. 1 of the drawing—

A denotes an ordinary lamp-chimney to which the shade is applied.

B is the body of the shade, from the upper part of which a series of radial arms or springs, C C, &c., extends.

The said shade is composed of a series of segments, D D, &c., each having its base and springs stamped from a single piece of thin metal, as shown in Figure 2, the said segments being firmly and rigidly united together by seaming and soldering, or otherwise, so as to produce the frustum of a cone or pyramid.

The said springs C C, &c., are formed concave on their outer extremities in order to conform to and fit the curved surface of the chimney, and thereby secure

the greatest amount of bearing surface to aid in sustaining the shade.

I would remark that I am aware that clasps for shades have been made with two sets of springs, one of which had its bearings above and the other below its base.

This arrangement of the springs is objectionable on several accounts:

First, the lower series is brought so near the flame as to soon lose its elastic power;

Second, with certain styles of chimneys (especially those bulging near their centers) such arrangement was impracticable; and

Third, such arrangement of the springs rendered the application of the shade to the chimney difficult.

By my arrangement of the springs these difficulties are avoided, as the entire series of springs have their bearings above their bases and near the top of the chimney, and thus are so far removed from the source of heat as to better maintain their normal elastic condition; besides, my arrangement of the springs gives a more equable support to the shade, as well as renders it applicable to all styles of chimneys and with great facility.

For the purpose of reducing the weight of the shade, as well as to ornament the same, I make a series of openings or perforations, E E, &c., in the body thereof, in which tablets, pictures, or transparencies, F, are inserted.

This part of my invention I will now describe.

The holes to receive the tablets (which may be of paper, porcelain, or any other suitable material,) are to be stamped in the body of the segments, before they are united, by means of a die of the desired form and size.

In the drawing, fig. 1, the periphery of the perforation E is shown as made with a series of serrations, *a a*, to constitute a bezel to hold the tablet or picture. To accomplish this each alternate tooth, or any number of alternate teeth, are to be pressed either upward or downward, as may be desirable, by means of a press, and at a right angle to the plane of the shade.

The tablet or transparency is next laid upon the face of the unbent teeth, and the bent teeth are forced back into their normal position and down upon the edge of the tablet, whereby the latter will be firmly secured to the shade; or a small number of the teeth may be formed on the periphery and then bent at right angles to the shade and the tablet laid upon the same, so as to puncture it; or holes may be made in the tablet, through which the teeth may pass and be turned over upon the same, so as to securely fix it in place.

A modification of this part of my invention, or an

other mode of affixing the ornamental tablet or transparency, is to form the periphery of the openings plain, or without serrations, and punch or strike up a series of teeth or pins at a short distance from and around the periphery; then lay the tablet within the encircling row of teeth, and next press the teeth over and upon the tablet.

I do not claim a shade having its base and springs made up of a series of segments hinged or united as shown in Letters Patent No. 86,987 or 100,150, as my invention differs therefrom in having all the segments composing the shade rigidly and firmly secured together, the springs being of such length and elastic force as to render the shade adapted to all the ordinary-sized lamp-chimneys in use.

Having described my invention,

What I claim is as follows:

1. A shade, for a lamp or Argand burner, made of sheet metal, with flexible springs, constructed in segments which are so shaped and firmly and rigidly united by seaming or riveting as to form the frustum

of a cone or pyramid which is neither collapsible, expandable, or contractible, the springs and base of each segment being made of a single piece of metal, and the springs of such length and elastic force as to render the shade applicable to all ordinary lamp-chimneys, substantially as set forth.

2. A shade for a lamp or Argand burner provided with an alternating series of flexible metallic arms or springs of different lengths, when arranged as described, and operating as set forth.

3. In a shade made of thin sheet metal and formed with one or more perforations to receive tablets or transparencies, forming such openings with a serrated bezel, or with a series of teeth, by which such tablets, &c., may be securely affixed to the shade, in manner as set forth.

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Witnesses:

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