## H. M. HARTSHORN.

Lamp Shade.

No. 110,651.

Patented Jan. 3, 1871.

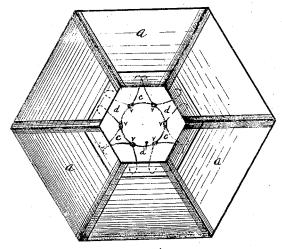
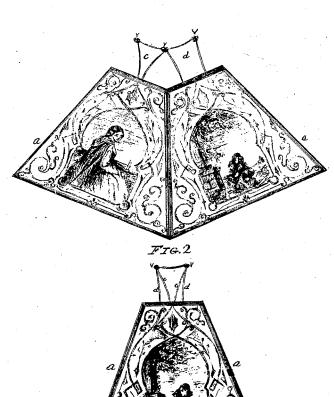


FIG. 1.



Witness Grard Males Joseph Millett.

Inventor
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## United States Patent

## HENRY M HARTSHORN, OF MALDEN, MASSACHUSETTS.

Letters Patent No. 110,651, dated January 3, 1871; antedated December 30, 1870.

## IMPROVEMENT IN FOLDING LAMP-SHADES.

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

To all whom it may concern:

Be it known that I, HENRY M. HARTSHORN, of Malden, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in the Construction of a certain Folding Lamp-Shade, of which the following, when taken in connection with the accompanying drawing, is a full and exact specification.

The nature of my invention consists in making a flexible connection between the supporters of a certain folding lamp-shade, for which I obtained a patent March 10, 1868, by means of a metallic ring, or its equivalent, and in the combination of the said ring with the peculiarly-shaped supporters, for the purposes set forth below.

In the accompanying drawing-

Figure 1 is a view of the under side of a folding

lamp-shade embodying my invention.

Figure 2 is a view of two sections of the shade, showing two supporters, their shape, and mode of con-

Figure 3 is a view of the shade when folded and closed.

a a are sections of the folding-shade, supported and held in position by wire-supporters, c d, which rest upon all sides of the lamp-chimney.

Each supporter, c d, is connected with the one on either side of it by means of a metallic ring, v, thus making a complete circuit and connection around the tops of the supporters c d.

The objects and effects of attaching this ring v are

as follows:

First, by making a complete circuit and connection around the chimney, it effectually prevents the shade from any possibility of slipping down the chimney, as a consequence of the bending outward of the supporters c d.

Second, by preventing the supporters od from bending outward, it precludes all liability of scorching the shade, on account of the too close proximity of any section or sections to the chimney.

Third, by preventing the supporters from "spreading" it effectually prevents the sections from tearing or ripping apart. As a proof of this remark I will state that a folding-shade, similar to that shown in the drawing, provided with the rings v, has been cut between its sections a distance of two-thirds the length of the sections, commencing at the top, and, upon using it, it has been found to retain its shape upon the chimney, without any liability to rip or tear whatever.

Fourth, as each supporter (and indirectly each section) is dependent upon the rest, instead of being each independent in itself, the shade, as a whole, pre-serves its general shape much better than that represented in patent of March 10, 1868.

It will be noticed that the supporters c d are divided into two classes; one class, c, having the arms of its supporters bent nearer together; and the other clase, d, having them bent further apart.

By this means I keep the rings v from slipping down too far toward the body of the shade when

closed, (see fig. 3.)

If the supporters c d corresponded exactly to each other the rings would slip and create a difficulty in opening the shade.

Having thus fully described my invention,

What I claim, and desire to secure by Letters Patent, is-

1. Connecting the supporters c d by means of the wire rings v, or their equivalents, for the purposes specified.

2. The combination and arrangement of the rings v with the two classes of supporters c d, or their equivalents, arranged substantially as specified.

HENRY M. HARTSHORN.

Witnesses:

JOSEPH WILLETT, HENRY W. WILLIAMS.