

C. E. WILLIS.  
Lamp-Chimney or Globe-Protector.

No. 212,776.

Patented Feb. 25, 1879.

Fig. 1.

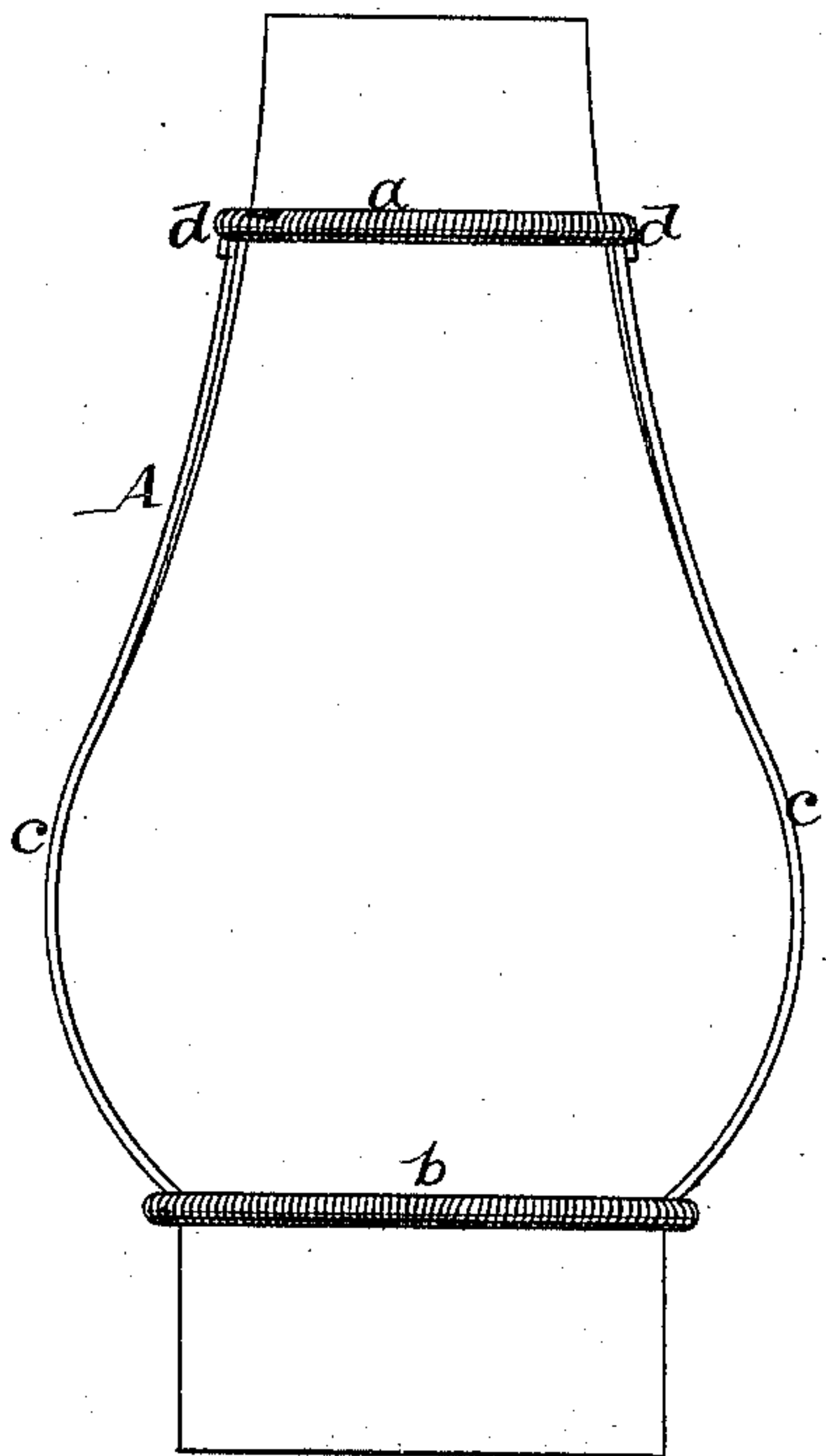
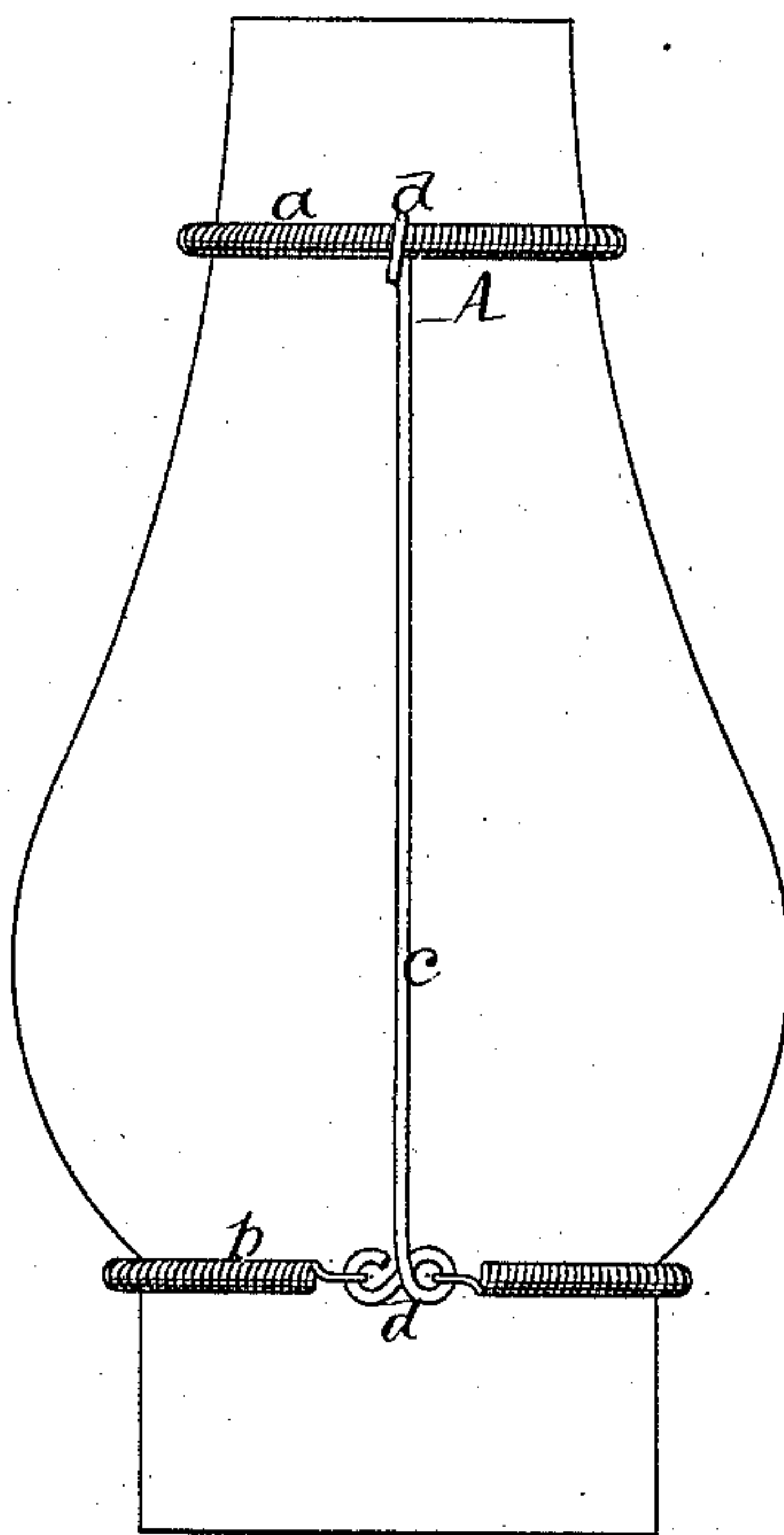


Fig. 2.



Witnesses.

Chas. Wahlers.  
William Miller.

Inventor.

Charles E. Willis  
by his attys.  
Van Santvoord & Haupp

# UNITED STATES PATENT OFFICE.

CHARLES E. WILLIS, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN LAMP CHIMNEY OR GLOBE PROTECTORS.

Specification forming part of Letters Patent No. **212,776**, dated February 25, 1879; application filed January 16, 1879.

*To all whom it may concern:*

Be it known that I, CHARLES E. WILLIS, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Lamp Chimney or Globe Protector, which invention is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view. Fig. 2 is a front view.

Similar letters indicate corresponding parts.

This invention consists in a lamp chimney or globe protector composed of two or more bars adapted to lie snugly against the outer surface of the chimney or globe, in combination with one or more elastic metallic collars adapted to fit around the chimney or globe and hold the said bars in position.

It is a well-known fact that lamp chimneys and globes, which are usually made of glass, are liable to crack, because those parts of the chimney or globe which are opposite to the edges of the flame are exposed to a greater heat than the other parts.

The object of my invention is to equalize the heat throughout the chimney or globe, so that the same, when exposed to a cold draft, is not liable to crack. This object I have attained by my chimney and globe protector A, which consists in the example I have here shown of my invention of two or more bars, *c*, connected by collars *a b*, formed of spirally-coiled wires, so as to hold the bars against the glass. The collars as well as the bars must be made of a good conductor of heat, and I use by preference wire of brass or other metal for the bars and collars, and the collars *a b* are preferably made in the form of spiral springs, so as to make them elastic and flexible; but they may be made in any other form suitable for the purpose.

The diameter of the collar *a* is so adjusted that the same will hug the chimney B near its top, while the collar *b* fits the chimney below its bulb, as shown in the drawings.

The bars *c* may be made of metal wire or of flat metal bands, and they are secured to the collars by hooks *d*, formed at their ends or by any other suitable means, said collars being so adjusted that they retain said bars securely in position. At the same time it is desirable that the bars shall be flexible, so that they are enabled to adapt themselves to the curvatures of the outer surface of the chimney or globe, or that they be so shaped and arranged as to lie against the sides thereof.

In the example represented by the drawings only two bars are shown; but the number of these bars may be increased if it should become desirable.

When my protector is secured to a chimney or globe, care must be taken to adjust the chimney or globe on the burner in such a position, if a flat wick is used, that the conducting-bars *c* shall be opposite the edges of the flame, and it will be readily seen that by the action of the metallic conducting-bars *c* the heat of the chimney or globe is equalized, and the danger that the same will crack when exposed to a cold draft of air or to any similar cooling influences is materially reduced.

My invention is applicable to chimneys and globes on gas-burners as well as on lamps.

What I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, a lamp chimney or globe protector composed of two or more bars, *c*, adapted to lie snugly against the outer surface of the chimney or globe, in combination with elastic metallic collars *a b*, one or more, as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 14th day of January, 1879.

CHAS. E. WILLIS. [L. S.]

Witnesses:

J. VAN SANTVOORD,  
E. F. KASTENHUBER.