T. WALTON.

Globe for Lamps, &c.

No. 201,072. Patented March 5, 1878.

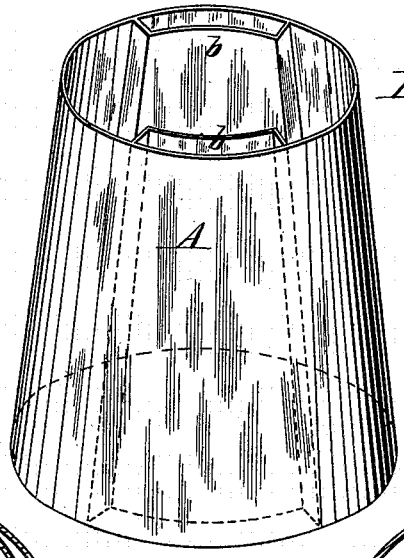


Fig. 1.

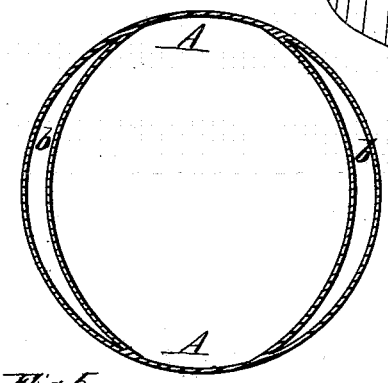


Fig. 3

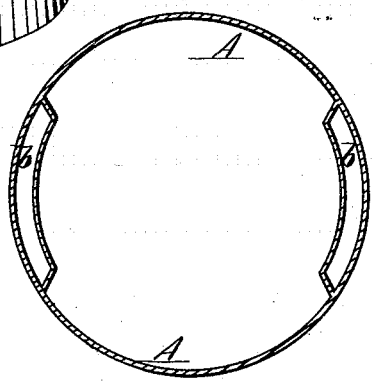


Fig. 4.

Fig. 2.

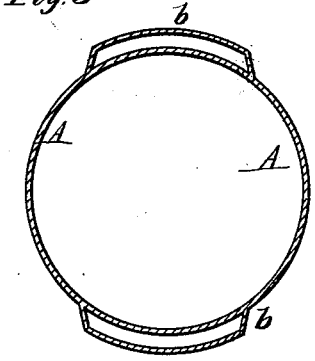


Fig. 5

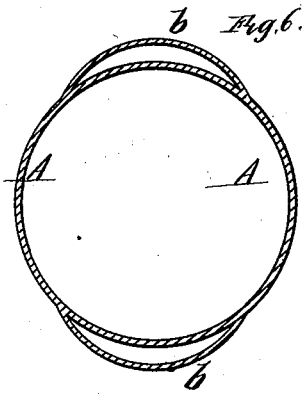
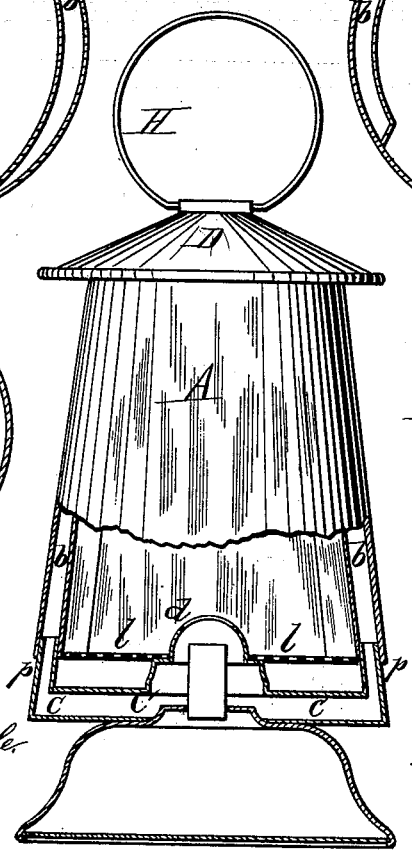


Fig. 6.



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UNITED STATES PATENT OFFICE.

THOMAS WALTON, OF WHEELING, WEST VIRGINIA.

IMPROVEMENT IN GLOBES FOR LAMPS, &c.

Specification forming part of Letters Patent No. **201,072**, dated March 5, 1878; application filed November 8, 1877.

To all whom it may concern:

Be it known that I, THOMAS WALTON, of Wheeling, county of Ohio and State of West Virginia, have invented certain new and useful Improvements in Globes for Lamps, Lanterns, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a perspective view of my improved globe or chimney, unconnected with any portion of the lamp or lamp-top. Fig. 2 is a partial section and elevation, illustrating one method of applying the improved chimney to an ordinary hand-lantern. Figs. 3 and 4 are horizontal sections, showing the air-conducting pipes constructed so as to lie within the body; and Figs. 5 and 6 are similar views, illustrating different forms of tubes connected with the body of the chimney, but on the outside thereof.

Like letters in all the figures indicate corresponding parts.

The object of my invention is to provide a simple and cheap globe or chimney for lamps, lanterns, and all manner of illuminating devices, which globe shall embody suitable means for conveying a portion of the heated air from within it back and down to the burner, in order to supply a quantity of heated air for the support of the flame, upon the same general principles as govern the operation of the well-known tubular lanterns and analogous illuminators.

To accomplish this the invention consists in forming the hot-air conduits upon or as a part of the globe itself, as will be hereinafter fully described.

In the tubular lanterns above mentioned it has been customary to conduct the desirable supply of heated air from a dome or canopy over the globe down through metallic tubes to an air-chamber connecting with the interior of the cone upon the burner. These tubes, being made of metal, add considerably to the expense of the lantern, and they are otherwise disadvantageous, not only for the reason that they cast an objectionable shadow, but also because they are liable to become damaged or displaced in the ordinary handling of the lantern.

To obviate these several objections I propose to form the globe or chimney and the air-conducting tubes in one piece of glass, substantially as shown in the drawing.

A is the glass globe or chimney, intended for use in connection with any style of illuminator, and *b b* are the air-conducting tubes formed with and as a part of said globe. The manner of forming the improved globe is a feature not necessary to be detailed herein, in asmuch as the process to be adopted will at once be apparent to those accustomed to working with glass. The tubes and the globe being in one piece, it is obvious that the displacement of either with respect to the other will be impossible without actual destruction of the device, and, the whole being transparent, no shadow will be cast by any material between the dome and the lamp.

There are further advantages to be derived from the construction indicated, among the most important of which are the following: The globe may be conveniently hinged or otherwise attached to the lamp, so that the latter may be easily and quickly accessible for purposes of lighting and trimming, thus avoiding the employment of springs and catches above the globe, and the inconvenience of removing it from between the projecting tubes; and the heated-air conducting tubes being in close contact with the globe, they are not so liable to become cooled by the external air, and thus destroy their efficiency.

The mere form or shape of the chimney and of the air-tubes is immaterial. So, also, is their location with respect to the interior and exterior of the improved device. It is preferred to locate the tubes *b b* within the chimney, as indicated at Figs. 1, 2, 3, and 4. This construction is preferred because the tubes will be better protected, and the symmetrical appearance of the exterior of the chimney will be preserved; but for all essential purposes of the invention the tubes might be located without the chimney, as plainly shown at Figs. 5 and 6.

The form of the dome to be placed over the globe, and the form and arrangement of the lamp, together with the means of connecting the several parts, are no part of my present invention; but in order to explain how the said in-

vention may be applied and used, I have chosen a hand-lantern, as at Fig. 2, which will serve as one and a sufficient illustration.

D is the dome of the lantern, to which the handle H is connected. This dome of course permits the escape of some of the heated air and products of combustion, but is constructed—as such domes usually are—to force a portion of the heated air down the tubes *b b*. From these tubes the heated air is conducted to a chamber, C, which communicates with the burner-dome *d*. Free access for external air is afforded between the two connecting-pipes *p*. This air passes up through the foraminated plate *l* in the usual manner.

As previously intimated, the invention is applicable to ordinary lamps, to gas-burners, street-lanterns, and all styles of illuminators wherein a chimney or globe is employed; but it is especially applicable for use in connection with hand-lanterns. It is designed, should occasion require it, to silver any particular portion of the improved globe after the manner adopted in connection with numerous styles of globes and chimneys.

The invention is to be distinguished from that class of chimneys wherein the air-tubes are disconnected from the body, as well as from that class wherein one chimney is located within another, either for preventing the exterior glass from cracking, as in street-lamps, or for any other purpose. In the latter form the requisite durability and ease of manipulation are not afforded, as in the present invention.

When constructed in accordance with the above description, the chimney or globe may be used without calling into play the functions of the additional tubes, and it will be found to admirably answer the several purposes, as previously stated. Its durability might be enhanced by making the article of tempered glass, which is contemplated, though not essential.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The herein-described glass globe or chimney for illuminating apparatus, the same consisting of a body and air-ducts attached to and forming a part thereof, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

THOS. WALTON.

Witnesses:

CHAS. R. SEARLE,

GEO. F. GRAHAM.