T. B. ATTERBURY.

Lamps.

No. 140,988. Patented July 22, 1873.

Fig. 1.

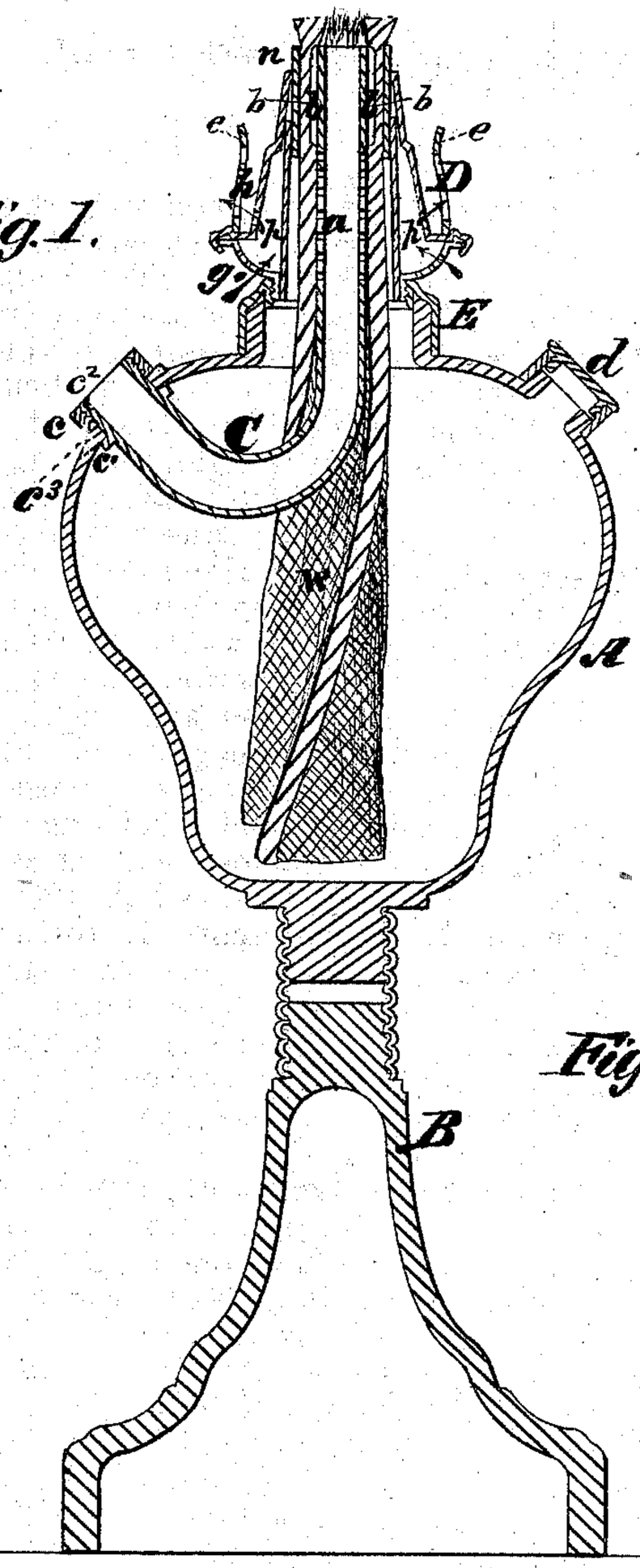


Fig. 2.

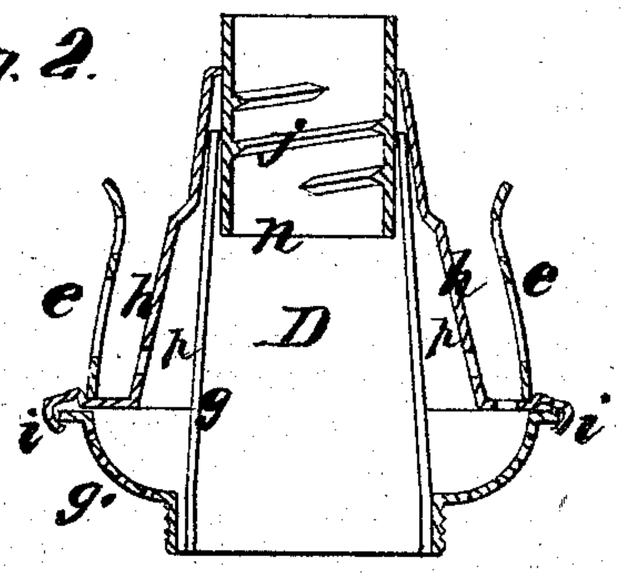
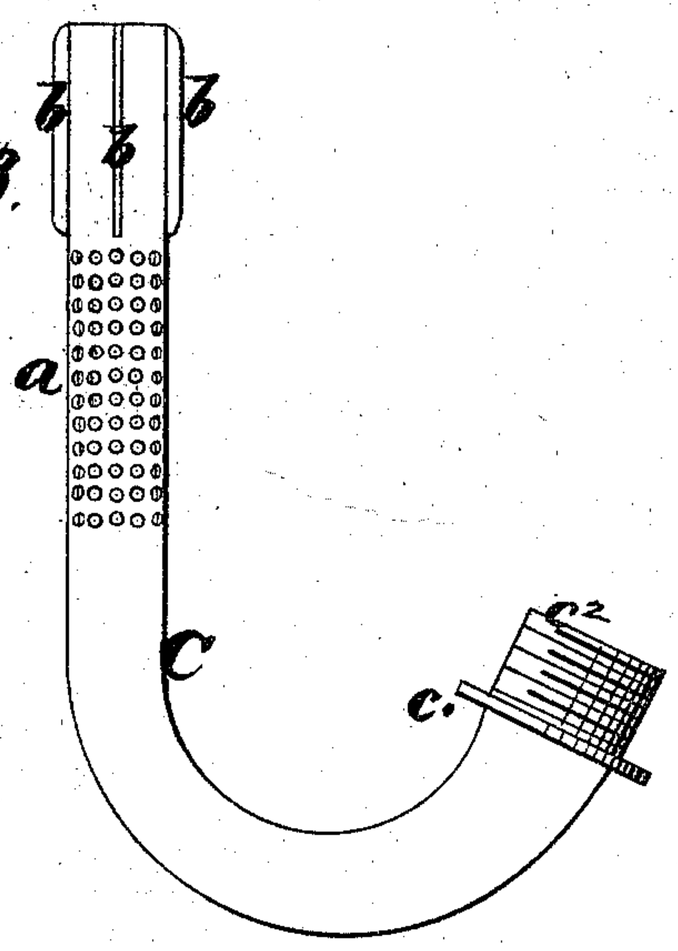


Fig. 3.



Witnesses.
R. J. Campbell,
J. N. Campbell.

Inventor.
Thos. B. Atterbury
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UNITED STATES PATENT OFFICE.

THOMAS B. ATTERBURY, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JAMES S. ATTERBURY, OF SAME PLACE.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **140,988**, dated July 22, 1873; application filed May 14, 1873.

To all whom it may concern:

Be it known that I, THOMAS B. ATTERBURY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Lamps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a section taken diametrically through my improved lamp. Fig. 2 is a diametrical section through the shell of the burner without the air-tube. Fig. 3 is a side view of the air-tube.

Similar letters of reference indicate corresponding parts in the several figures.

Heretofore metal lamps have been made with a straight air-tube, extending from the bottom to the top of the lamp, which tube was soldered into the lamp so as to render it perfectly tight at the point where it was soldered to the bowl. But a difficulty has always attended the use of such tubes in metal lamps, owing to the fact that the acid in the oil eats away the solder, causing the lamps to leak, and thus rendering them worthless. And while this objection has appertained to the use of air-tubes in metal lamps, it has at the same time been considered impracticable to apply such tubes to glass lamps.

By the invention which I am about to explain I am enabled to successfully apply an air-tube to a glass lamp, the air being conducted through the glass bowl of the lamp and through the tube to the center of the frame.

The following description will enable others skilled in the art to understand it.

In the accompanying drawings, A represents the bowl of a lamp, which is of transparent glass, for the purpose of allowing a person filling it with fluid to see clearly when it is full. B represents the base or pedestal of the bowl, which may be connected to the peg of this bowl, either by means of the metallic screw-coupling shown in Fig. 1, or by any other suitable means. On top of the bowl is permanently secured a collar, E, into which is screwed the burner-shell D. This shell consists of an external perforated conical portion, *h*, having a chimney-gallery, *e*, secured to it, and an external perforated base, *g'*. The conical portion *h* and perforated base *g'* are connected together by a circular lapped joint at *i*, which allows the said cone *h* to be rotated when it is desired to adjust the wick *w*. Inside of the cone *h* is a cone, *g*, which is rigidly secured to the base *g'*, so as to turn with it, and above this cone *g* is a cylindrical tube, *n*, which is rigidly secured to the upper end of the cone *h*, and which extends slightly above the same, so as to form the external wall of the wick-tube. The outer cone *h* is perforated near its lower end for the purpose of allowing air to circulate through it, and through the chamber *p* and perforated base *g'*, for the purpose of keeping the burner cool, and admitting currents of air into the chimney and external surface of the circular frame, as indicated by arrows in Fig. 1. C represents an air-tube, which is curved somewhat like the capital letter J. The end of the shortest limb of this tube C has a flange, c^1, and a screw-thread, c^2, formed on it, the threaded portion of which passes through the wall of the glass bowl, and receives a screw-ring, *c*, on it. This screw-ring is set up closely against a ground elevation, c^3, which is formed around the hole through the bowl, thus making a tight joint, without the use of solder, and one which will not be affected by the acid in the oil. The longest limb of the tube C extends up through the cone *g* and tube *n*, and terminates level with the upper end of this tube *n*, leaving a space between it and the latter for receiving the wick *w*. This longest limb of tube C is finely perforated at *a*, and above this perforated portion the tube has a number of vertical flanges, *b*, formed on it. The perforations are for the purpose of allowing all gas which is generated inside of the lamp to be carried up to the flame and consumed, and the flanges or thin ribs *b* are for the purpose of guiding the wick, and at the same time keeping in close contact with a helical screw-thread, *j*, on the inner side of tube, and preventing it from being twisted in the act of adjusting it up or down.

The lamp-bowl may be supplied with oil through a filling-hole, *d*, or in any other well-known manner.

It will thus be seen that I improve glass lamps by supplying air to the center of a circular flame through a tube which extends through the bowl of the lamp.

I do not claim a turned tube with both of its ends passing through the burner-cap, as shown in G. R. Lyon's patent of July 5, 1870; but

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

A bent or curved air-tube, C, passed through and secured to one side of a glass bowl near its top, and extended up through the center of the burner, substantially as described.

THOS. B. ATTERBURY.

Witnesses:

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