

(No Model.)

I. W. SHALER.

ATTACHMENT TO BURNERS FOR GAS, &c.

No. 267,466.

Patented Nov. 14, 1882.

Fig. 1.

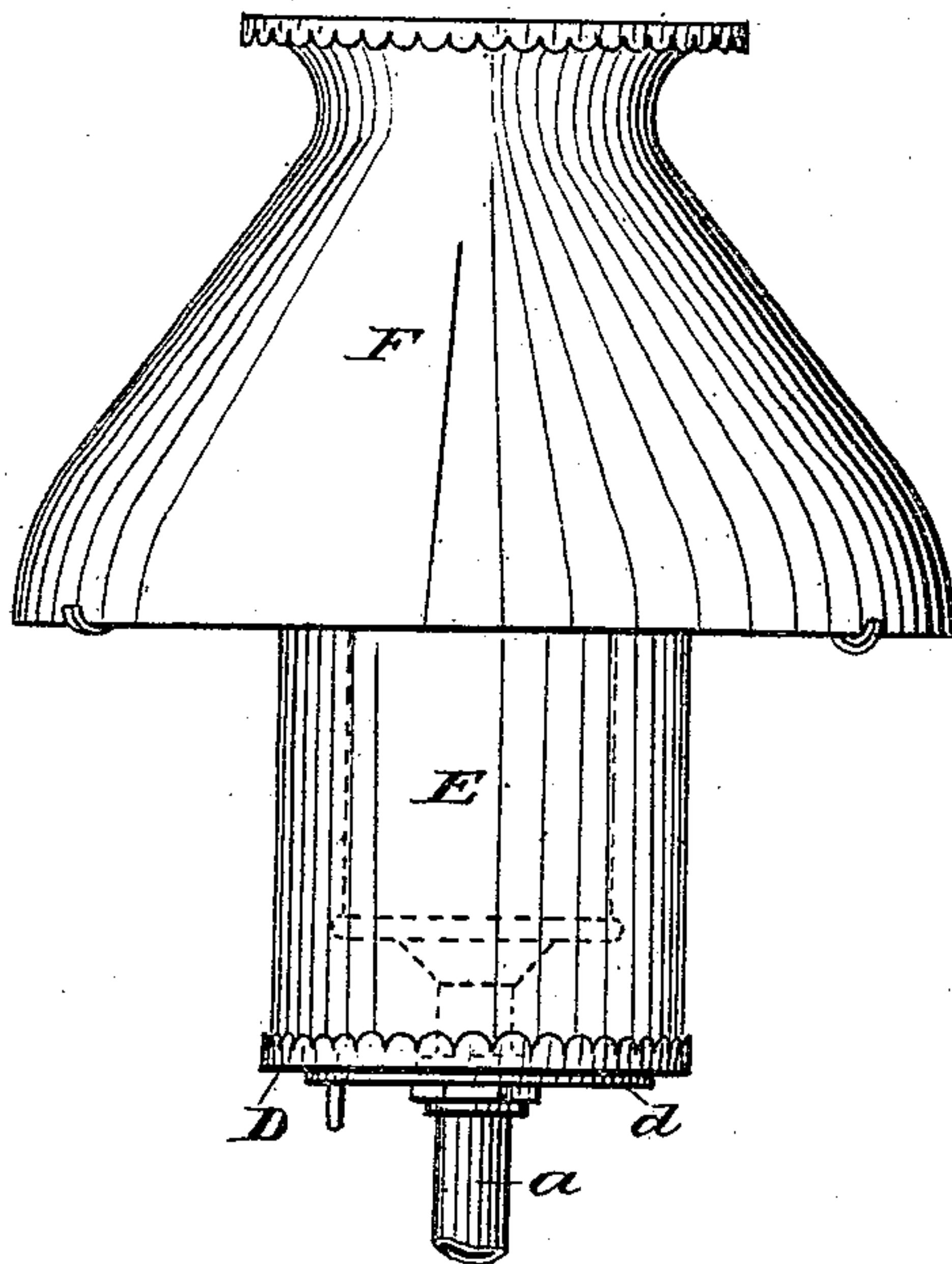


Fig. 3.

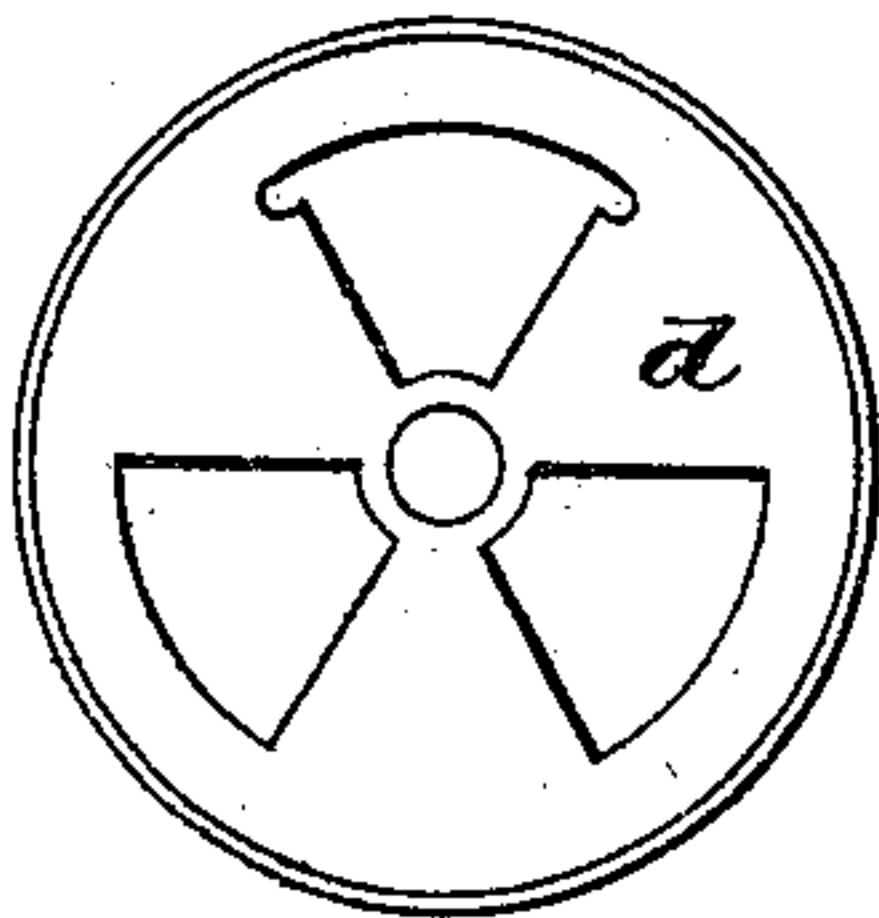


Fig. 4.

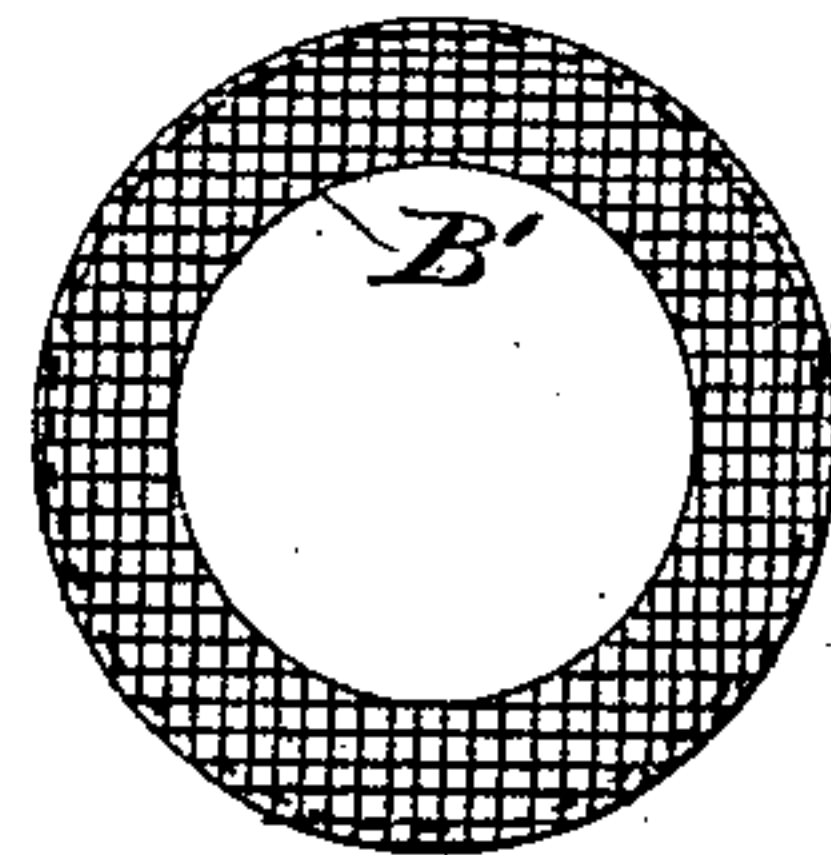
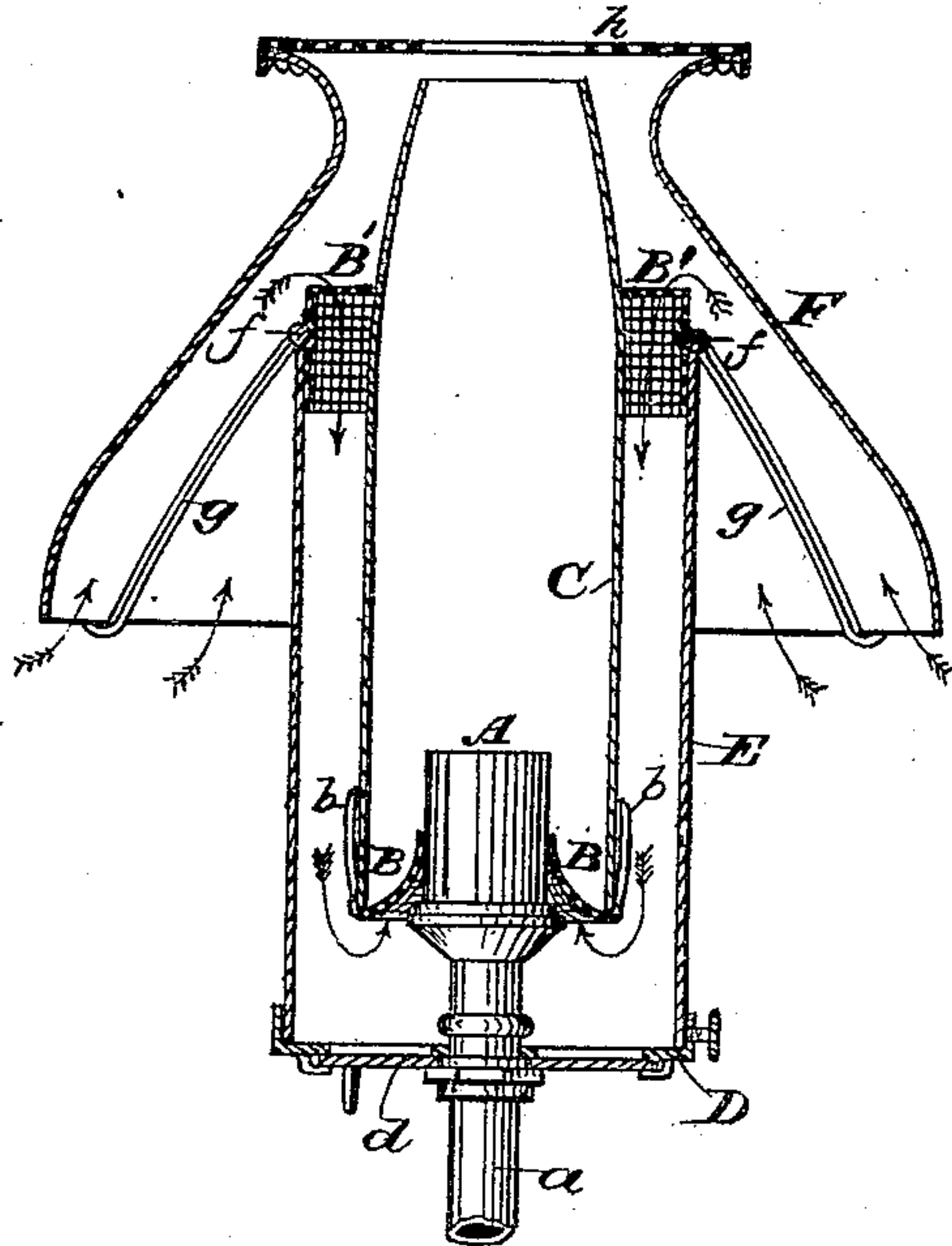


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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ATTACHMENT TO BURNERS FOR GAS, &c.

SPECIFICATION forming part of Letters Patent No. 267,466, dated November 14, 1882.

Application filed April 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, IRA W. SHALER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Attachments to Burners for Gas, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in attachments for gas-burners, especially for such as are employed in producing gas-light from gasoline and other similar hydrocarbon oils; and the object thereof is to counteract the sensitiveness natural to every form of gas-light by protecting the flame thereof from the extinguishing, smoke-producing, and other deleterious effects of direct, lateral, or upward currents of air thereon, and by effecting a more perfect combustion of the gas to improve the character of the light produced, and to prevent the ordinary rapid vitiation of the atmosphere of closed rooms, caused by the escape of the unconsumed products of imperfect combustion.

My invention consists in providing gas-burners with an attachment in which an inner and outer globe or chimney (forming an air-chamber with a closed bottom) are connected by and used in combination with an annular screen of perforated metal, by means of which the air drawn through said air-chamber and upward through the lower screen is heated and rarefied to such a degree on its passage to the burner as to effect the proper commingling of the carbon in the gas with the oxygen in the atmosphere necessary for perfect combustion of the gases.

It also consists in arranging in the closed bottom or base of the device or construction of an adjustable valve, through which a match or other device can be introduced for the purpose of lighting the gas when desired, all of which will be more fully described hereinafter, reference being had to the accompanying drawings and the letters of reference marked thereon.

Like letters refer to like parts in the different figures of the drawings, in which—

Figure 1 is a side elevation of my improvement with a shade attached. Fig. 2 is a vertical cross-section of the same. Fig. 3 is a plan view of the bottom of the attachment, showing the valve. Fig. 4 is a plan view of the upper annular screen for the top.

In the drawings, A is an ordinary burner, secured to the pipe *a*, which may be for gas, gasoline, or carbon-oil vapors, or other similar illuminating agent. To the burner is secured an annular screen, B, of wire-gauze or perforated sheet metal, having supporting-arms *b*, between which the inner globe or chimney, C, is held. A short distance below the burner is arranged the bottom D, to which is attached a valve, *d*, which is always kept closed, and only opened for lighting the gas. The bottom has an annular flange, which supports the outer globe or chimney, E. Near the top of the inner and outer chimneys is arranged a screen, B', extending across the space between the chimneys, and it is held by a wire ring, *f*. To this ring are attached the arms *g*, upon the outer ends of which the shade F is supported; although it may be dispensed with, if desired. The shade F is preferably partly closed by a screen, *h*, over the top.

The advantages of my invention will be readily appreciated by those skilled in the art, and some of them are the following, viz: that the air in passing over the top of the outer chimney or globe through the screen, downward between the inner and outer chimneys, and upward through the lower screen, becomes so heated and rarefied during its passage through the air-chamber to the burner as to effect much more perfect combustion of the gases than can be effected by any other known device, while at the same time it protects the sensitive flame of all forms of gas-light perfectly from extinguishment or smoke-producing effects from sudden drafts of wind, thereby adapting it perfectly for use in railroad-cars, steamboats, &c. Moreover, the parts being very simple are not liable to get out of order, and the improvement can be readily applied and at small expense to burners using any form of gas.

I am aware that inner and outer chimneys or pipes in which a downward draft is produced between the two chimneys is old, and has been used in lanterns and gas-stoves, and

also that screens have been used in somewhat similar manner to mine, but not with a close bottom, and I therefore disclaim such.

I am also aware of the Patent No. 95,184, 5 granted to Beaufile and Rexworth, and also No. 32,161, granted to Coffin, and disclaim the construction shown therein; but,

Having thus described my invention, what I claim, and desire to secure by Letters Patent, 10 is—

The attachment for burners herein described, consisting of an inner chimney, C, and outer chimney, E, with annular screen B, arranged

between the inner chimney, C, and burner A, and annular screen B', arranged at the top 15 between the inner and outer chimneys, and the bottom D, provided with a valve, d, all constructed and arranged as shown, and for the purpose specified.

In testimony whereof I hereby affix my sig- 20 nature in presence of two witnesses.

IRA W. SHALER.

Witnesses:

H. C. COVERT,

A. M. FRANKLIN.