(No Model.)

J. WARRY.

INCANDESCENT GAS BURNER.

No. 590,693. Patented Sept. 28, 1897.

Fig 1

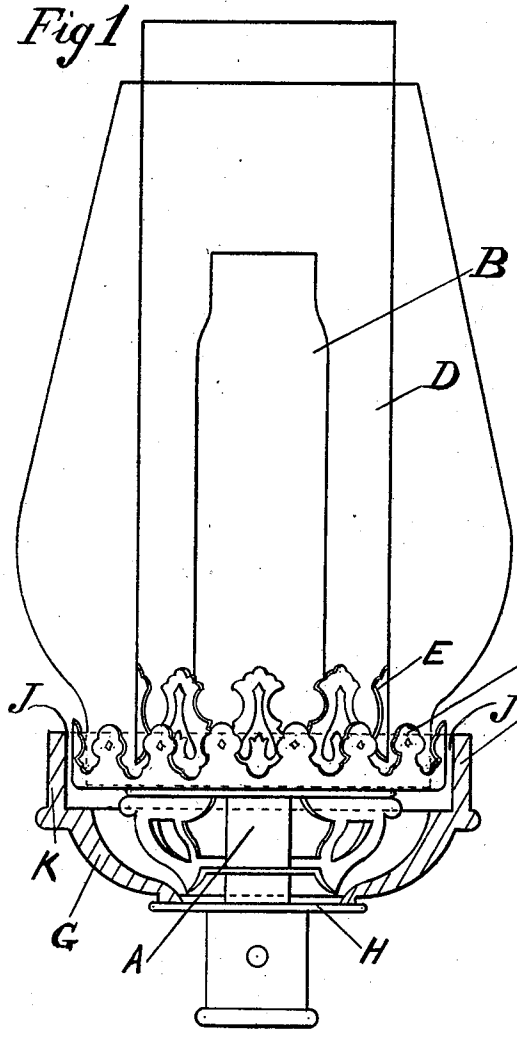


Fig 3.

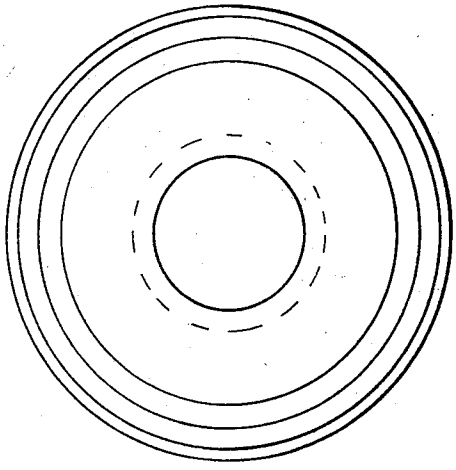
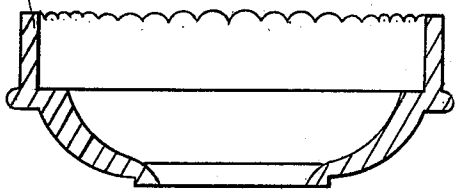


Fig 2.



WITNESSES:

Frank I. Gregny

C. C. Kennaugh.

INVENTOR.

Joseph Warry

BY Herbert W. T. Jenner.

ATTORNEY.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH WARRY, OF BIRMINGHAM, ENGLAND.

INCANDESCENT GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 590,693, dated September 28, 1897.

Application filed December 5, 1896. Serial No. 614,549. (No model.) Patented in England January 29, 1896, No. 2,075.

To all whom it may concern:

Be it known that I, JOSEPH WARRY, a subject of the Queen of Great Britain and Ireland, residing at the Etna Works, 295 Broad Street, city of Birmingham, in the county of Warwick, England, have invented certain new and useful Improvements in or Addition to Incandescent Gas-Burners, (for which I have obtained a patent in Great Britain, No. 2,075, dated January 29, 1896;) 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.

This invention relates to improvements in or addition to incandescent gas-burners, and has for its object to provide a simple and efficient means whereby the breakage of the glasses or chimneys of such burners is prevented. In incandescent gas-burners of ordinary construction the glasses or chimneys are constantly breaking, such breakage being caused by a current of cold air passing up the said chimney after the gas has been extinguished.

When the mantle, which constitutes an important part of the burner, becomes defective, one side or portion of the glass or chimney is heated to a greater extend than the other side or portion, thereby practically disannealing the glass or chimney, and the passage of cold air up the chimney causes cooling to take place much too rapidly, hence the breakage of the chimney by unequal contraction in the glass. This is especially the case in positions exposed to strong drafts. By my invention this disadvantage is overcome by controlling the passage of cold air to the interior of the chimney in such a way as to obviate to a great extent its too rapid cooling, this being effected by a device which checks the rush of air and also causes it to be more or less warmed.

In carrying my invention into practice I make (preferably of glass, though I may use metal or other suitable material) a cup or bulbous shaped attachment, which I fit at or near the lower end of the chimney aforesaid, or I may fix the said attachment to any convenient part of the burner in such a manner as to control the passage of cold air passing up the interior of the chimney, thus allowing it to cool gradually when the gas is extinguished. I will describe my invention by reference to the accompanying drawings, which illustrate the general principle that determines the shape and position to be given to my device.

Figure 1 represents in elevation an ordinary incandescent gas-burner with my improved attachment shown in section connected thereto. Other shapes and sizes of incandescent gas-burners may be employed. Fig. 2 shows a vertical section, and Fig. 3 a plan, of the attachment disconnected from the burner.

In Fig. 1, A represents the burner; B, the mantle; D, the chimney; E, the chimney-holder, and F a holder for holding the globe or shade.

Below the burner is a metal plate H, known as the "lighting back plate," which is supplied with incandescent gas-burners and upon which by preference I rest my improved attachment G, though I may, if desirable, rest the said attachment on any other part of the said burner. The attachment G is shaped like a cup and its upper edge K is arranged in close proximity to the heated parts of the lamp, such as the shade-holder F, leaving a narrow annular space J, through which all the air must enter before it passes upward through the chimney or between the chimney and its shade.

When the attachment is applied to an incandescent gas-burner, as shown in Fig. 1, the air passes down the space J between the globe or shade holder F and the upper edge K of the cup G. This upper edge being somewhat higher than the lower end of the chimney it will be seen that the air which first passes into the chimney on the gas being turned out enters through the passage J and is warmed by contact with the heated portions of the lamp. This, combined with the constricting effect of the constricting passage J, allows the chimney to cool so gradually as to reduce the risk of breakage to a minimum. Even when the upper edge of the attachment is slightly below the lower end of the chimney this gradual cooling effect is produced. The attachment covers the greater portion of the metal fittings and when made in glass causes no perceptible shadow. The hot air between

the chimney and its shade prevents the chimney from being cracked by the surrounding cold air of the room.

What I claim is—

The combination, with a lamp provided with a lamp-chimney, of a cup-shaped attachment secured to the lamp below the chimney and forming with portions of the lamp an annular orifice through which all the air must pass and thereby be brought in contact with the heated portions of the lamp before entering the said chimney, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH WARRY.

Witnesses:

WILLIAM H. BARACLOUGH,

HEBER E. HOWARD.