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NON-BREAKABLE SAFETY LAMP GLASS.
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Fig. 1.

Fig. 2.

Fig. 3.

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NON-BREAKABLE SAFETY LAMP-Glass.


To all whom it may concern:

Be it known that I, EDWARD OSGER McLAUGHLIN, a citizen of the United States, residing at Masontown, in the county of Fayette and State of Pennsylvania, have invented new and useful Improvements in Non-Breakable Safety Lamp-Glass, of which the following is a specification.

This invention relates to lamp chimneys; and it has for its object the provision of a metallic conductor forming a permanent part of the chimney and primarily designed to prevent the sudden absorption of the heat by the walls of the chimney and the radiation of the heat to the external surfaces of the chimney whereby the heat will be gradually collected by the conductor and distributed to the external surfaces of the chimney in such manner as will prevent breakage of the chimney under expansion, and further the provision of a conductor which will serve to reinforce or strengthen the chimney to prevent breakage thereof under ordinary handling.

A further object of the invention is to provide a chimney wherein the metallic conductor thereof will embody an element having internal partly exposed convolutions, external partly exposed convolutions and internal wholly embedded convolutions, the latter serving the purpose of a main strengthening element, while the exposed convolutions are relatively associated whereby to immediately conduct the heat from a particular interior portion of the chimney to an immediate exterior portion thereof.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings: Figure 1 is a vertical section through a portion of the chimney, showing the application of the invention thereto; Fig. 2 is a similar view, showing a slightly modified form of the invention; Fig. 3 is a section on line 3—3 of Fig. 1; and Fig. 4 is a side view of the chimney, showing another modification thereof.

The chimney 1 as shown in Figs. 1 and 3 of the drawings, is substantially of oval configuration whereby to maximize the light permeating surface thereof. The metallic conductor of the chimney is preferably constructed from a single length of wire having innermost windings 2, which are partly embedded in the glass whereby surfaces 3 of said windings project into the flame space of the chimney and immediately on the inner walls thereof. Similar outermost windings 4 are also partly embedded in the glass and as illustrated portions 5 of the latter windings are exposed exteriorly of the walls of the chimney while they are connected with the internal absorbing surfaces 3 and wholly embedded windings 6 of the wire, the latter serving to strengthen or reinforce the walls of the chimney both longitudinally and laterally whereby to prevent breakage thereof under ordinary handling. The surfaces 3 and 5 of the windings 2 and 4, respectively, also serve to strengthen the chimney longitudinally and laterally but they are primarily intended to prevent the sudden radiation of the heat through the walls of the chimney to prevent any sudden expansion of the glass. The surfaces 3 of the innermost windings 2 are preferably equi-distantly arranged while they are relatively associated with the outermost windings 4 whereby on the sudden application of heat to a particular portion of the chimney, the surface 3 at the immediate point of application of the heat will serve to absorb the latter and then gradually conduct the same to the adjacent external surfaces 5 of the windings 4.

In the modified form of the invention shown in Fig. 2, the chimney 7 is substantially of the same configuration as the one described in the preferred embodiment of the invention, the differences being in the provision of a metallic conductor 8, which is wholly embedded in the walls of the chimney. The conductor 8 is provided with circumferential windings 9 and longitudinal bowed connecting strands 10.

In the modified form of the invention shown in Fig. 4, the chimney 11 is provided with a conductor and reinforcing element 12 of suitable wire cloth having relatively large meshes 13, as shown.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may...
be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as claimed.

Having thus described my invention, what I claim is:

A lamp chimney having a metallic heat conductor and provided with internal conducting windings exposed to the flame space of the chimney, external windings exposed to the atmosphere, and internal windings connecting the first and second named windings together and embedded in the walls of the chimney.

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

EDWARD OSHER McLAUGHLIN.

Witnesses:
E. K. WELLS,
WM. McLAUGHLIN.