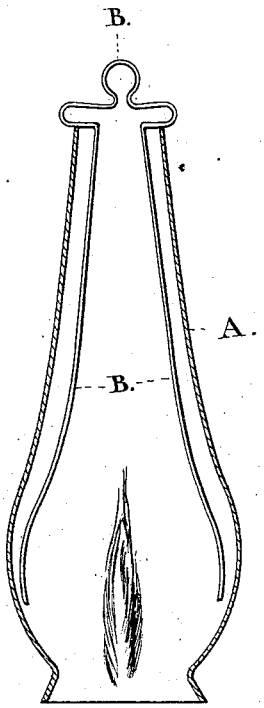
E. W. BLACKHALL.

Lamp-Chimney.

No. 196,328. Patented Oct. 23, 1877.




Witnesses:

L. Whitehead.

H. H. Warren.

Inventor:

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# UNITED STATES PATENT OFFICE.

EDWARD W. BLACKHALL, OF TORONTO, ONTARIO, CANADA.

## IMPROVEMENT IN LAMP-CHIMNEYS.

Specification forming part of Letters Patent No. **196,328**, dated October 23, 1877; application filed June 27, 1877.

*To all whom it may concern:*

Be it known that I, EDWARD WAKEFIELD BLACKHALL, of the city of Toronto, in the county of York and Province of Ontario, Canada, manufacturer, have invented a certain new and useful instrument for preventing household-lamp chimneys from breaking by sudden atmospheric changes, which improvement is fully set forth in the following specification and accompanying drawing.

The object of the invention is to prevent the breakage of lamp-glasses from sudden atmospheric changes, by maintaining, at certain portions of the glass, a high and even temperature, not susceptible to the sudden variation to which other portions of the glass are subject, and thereby forming what may be termed "expansion-joints," whose elasticity relieves any less elastic portion of the glass when subjected to contraction from a blast of cold air. The said effect is produced by a light metallic wire suspended or otherwise supported within or without the glass to be protected, and shaped so as to follow the contour of the said glass, fitting to, though not necessarily touching, it.

The figure represents my glass-protector suspended within an ordinary lamp-chimney.

It is well known that lamp glasses or chimneys are often broken by a draft of cold air striking a portion of the glass, and causing it to contract suddenly.

My object has been to secure a compensating force for this action, and the instrument herein illustrated produces the desired effect.

A is an ordinary lamp-chimney, and B a wire, of copper or any other suitable material. This wire is bent to follow the contour of the glass A, and is formed with a T-shaped head, which rests upon the top of the glass, as shown, supporting the wire in the desired position. When the lamp is lighted this wire becomes heated to a high temperature, and being contained within the glass is protected from any sudden atmospheric change. The wire being a good radiator, as well as a good conductor, a line of the glass running parallel and corresponding with it is maintained at an equivalent temperature, the radiation from the metal being sufficient to compensate for any sudden atmospheric change which affects other portions of the glass remote from the metal radiator, and therefore the said lines, when the lamp is lighted, are always elastic, and form between the two sections of the glass an expansion-joint, which compensates for any undue or sudden contraction at other parts of the glass.

I do not confine myself to any peculiar shape for the wire radiator, or to the manner illustrated for supporting it on the glass, or for the wire placed within or without the glass; but

What I do claim as my invention is—

A wire conductor, B, placed within or without a lamp glass or chimney, A, for the purpose of retaining heat produced therein, and by radiation affecting a line of the glass running parallel and corresponding with each leg of the said wire, which line is thus maintained at an even temperature, not susceptible to any sudden atmospheric change, and thereby forming between the two sections of the glass A an expansion-joint, which compensates for any undue or sudden contraction at other parts of the said glass.

EWD. W. BLACKHALL.

Witnesses:
GEO. A. AIRD,
W. BLACKHALL.