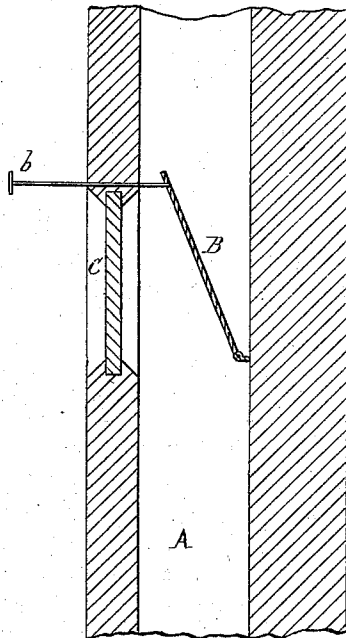


D. CURLE.

Chimney-Dampers and Transcalent Plates.

No. 150,402.

Patented May 5, 1874.



Witnesses.

J. L. Coombs
J. H. Coombs

Inventor.

D. Curle

UNITED STATES PATENT OFFICE.

DUDLEY CURLE, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN CHIMNEY-DAMPERS AND TRANSCALENT PLATES.

Specification forming part of Letters Patent No. **150,402**, dated May 5, 1874; application filed October 18, 1873.

To all whom it may concern:

Be it known that I, DUDLEY CURLE, of the city of Washington and District of Columbia, have invented Improvements in Chimneys and Flues for Utilizing Waste Heat, of which the following is a specification:

The object of this invention is to utilize a large portion of the heat which usually escapes up the chimney or flue of a fire-place, stove, or furnace, for warming a room or rooms above or adjoining, or even the same room in which the fire is located. My invention consists in placing in a chimney or flue, at any point above the fire-place, stove, or furnace, a reflecting-plate, and in the wall of said flue, between it and the room to be warmed, a transcalent plate, through which a large proportion of the rays of heat reflected from said reflecting plate will be transmitted into the room.

The accompanying drawing represents a section of a chimney or flue with my invention applied.

A is the flue; B, a reflecting-plate inserted therein, which should be of polished metal, porcelain, or some other good reflecting material. This plate, being hinged to the chimney-back, may be adjusted to any desired angle by means of an adjusting-rod, *b*. Opposite the reflect-

ing-plate I set in the wall a transcalent plate, C, through which a large portion of the heat reflected from plate B will be transmitted into the room. This plate may be made of rock-salt, (embedded in an iron frame,) plate-glass, or any other good transcalent material. Rock-salt will be found the most efficient material, as it will transmit about ninety per cent. of the incident rays of heat falling upon it, but, owing to its great affinity for water, is subject to slow disintegration or crumbling on its surface if exposed to dampness. It is, however, an inexpensive material, and when a plate becomes damaged or destroyed it may be cheaply replaced by a new one. Plate-glass will transmit about forty-two per cent. of the incident rays of heat, and is not liable to be damaged or destroyed, except by breaking.

What I claim as my invention, and desire to secure by Letters Patent, is—

In combination with the flue of a fire-place, stove, or furnace, the reflecting-plate B and transcalent plate C, arranged substantially as described.

DUDLEY CURLE.

Witnesses:

JOS. L. COOMBS,
J. J. COOMBS.