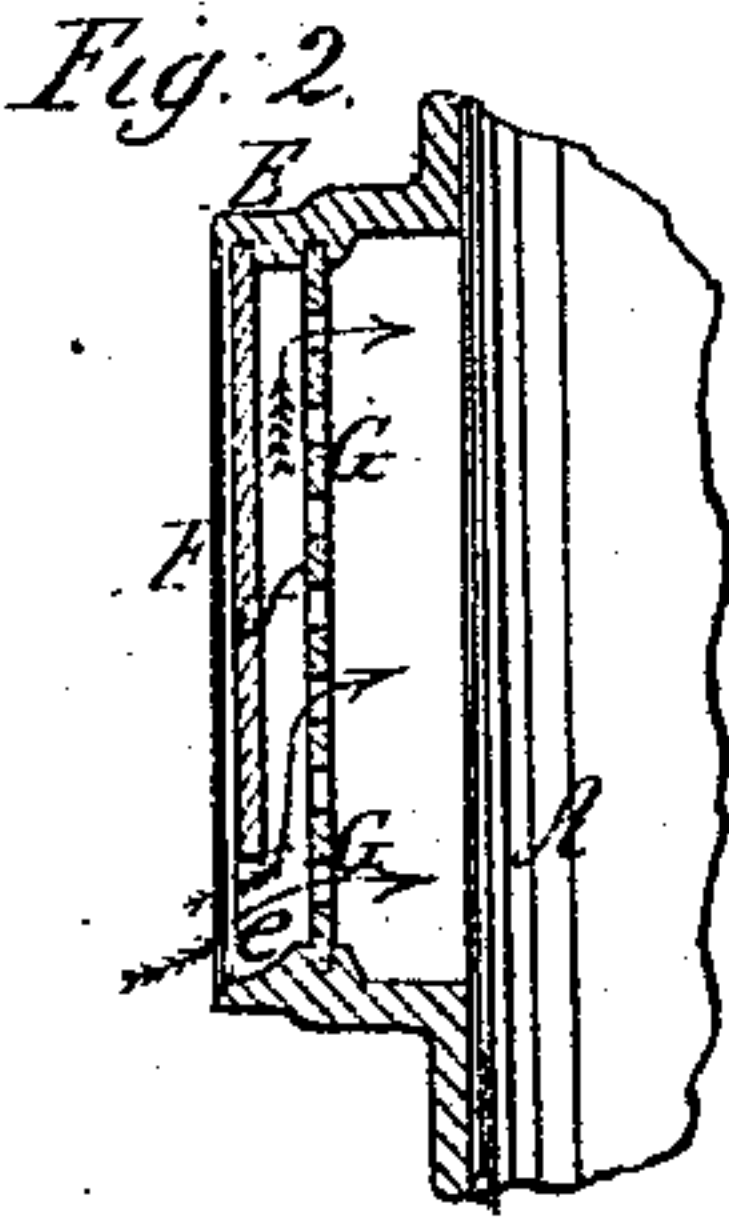


Heating Stove.

Patented Sept. 29, 1868.



Twenty;
St. J. Redwing
By Knight Bros Attys.

UNITED STATES PATENT OFFICE.

ALBERT J. REDWAY, OF CINCINNATI, OHIO.

IMPROVEMENT IN COAL-STOVES.

Specification forming part of Letters Patent No. 82,637, dated September 29, 1868.

To all whom it may concern:

Be it known that I, ALBERT J. REDWAY, of Cincinnati, of Hamilton county, Ohio, have invented certain new and useful Improvements in Cannon-Stoves; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a smoke-consuming device for heating-stoves; and it consists of a reverberating plate or crown suspended centrally over the fire in such a manner as to arrest the central current of the smoke, and to leave an annular space therefor between said plate and the sides of the stove, and in connection therewith an annular canopy or cowl which deflects the flame to the center of the stove and protects the Russia-iron drum or casing from extreme heat; and my invention further consists in making said crown-plate adjustable in distance from the cowl, so as to widen or contract the smoke-throat to suit particular drafts or different kinds of fuel.

In the accompanying drawings, Figure 1 is a sectional view, partly in elevation, of a cannon-stove embodying my improvements. Fig. 2 is a vertical section, on an enlarged scale, of my improved fire-door.

A is the fire-chamber, and B the customary Russia-iron drum. C is a cast-iron crown or hood resting upon lugs *c*, within the mouth of the fire-box A, as shown, and slotted to receive the bars *d d'* of the pendent reverberating plate D. The plate D is preferably slightly concave on the under side, and its supports *d d'* are perforated in several places and provided with links or pins *d''*, for the purpose of adjustment vertically, in order that the smoke-throat may be widened or contracted to suit the various requirements of fuel, &c. The plate D is of heavy cast-iron or of fire-tile capable of retaining heat and igniting the pro-

duct of fresh fuel before it escapes into the drum B. The form and position of this plate also causes the smoke to reverberate, the tendency of the plate being to collect the gases at its center before allowing them to escape at its periphery. The issue at the top of the crown C is much smaller in diameter than the drum B, and the flame is thus kept from too close contact with the Russia-iron of the drum B.

While preferring to make the central crown-plate adjustable in height, I reserve the right to fix it permanently within the stove, if desired.

The door E, through which fuel is introduced to the fire-chamber A, is furnished with the customary mica or other transparent front, F, and this sheet F extends entirely across the door from side to side, but it does not quite reach the bottom of the same, a space, *e*, being left between them. Placed in the rear of the mica F is a perforated metallic plate, G, a space, *f*, being left between them, so as to admit of a current of air passing between the two. When a fire is started in the stove a constant current of air passes through the spaces *e* and *f*, and also through the apertures in the plate G, as indicated by the blue arrows in Fig. 2, by which means the smoke and heat are diverted away from the mica, and the latter is thus prevented from becoming smoked and cracked.

I claim herein as new and of my invention—

The central crown-plate, D, having perforated bars *d d'*, by which it is adjusted relatively to the annular cowl C, substantially as shown and described.

In testimony of which invention I hereunto set my hand.

ALBERT J. REDWAY.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.