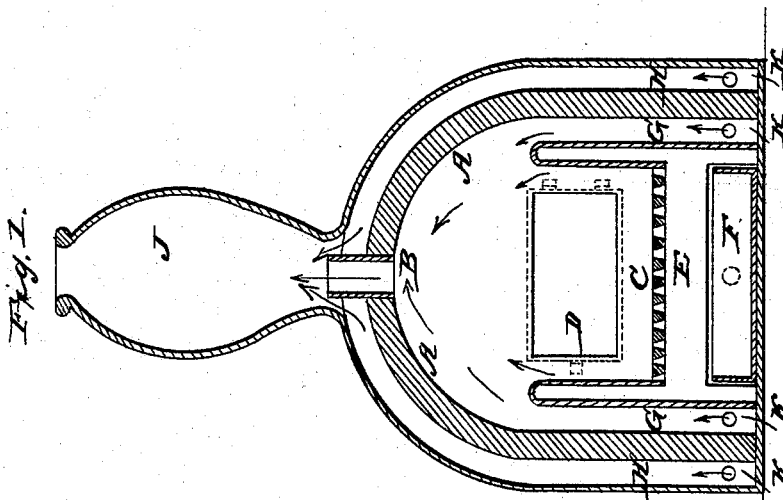
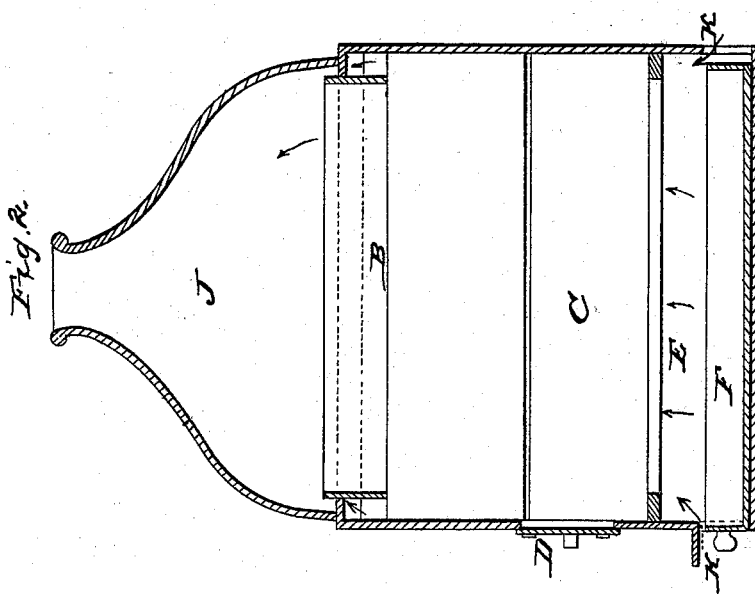


G. W. FAIR.
Smoke Consuming Heater.

No. 54,705.

Patented May 15, 1866.



Witnesses:
Aug M Bacon
J. A. Davis

Inventor:
George W. Fair
By his atty
J. Franklin Peigart

UNITED STATES PATENT OFFICE.

GEORGE W. FAIR, OF DAYTON, OHIO.

SMOKE-CONSUMING HEATER.

Specification forming part of Letters Patent No. 54,705, dated May 15, 1866.

To all whom it may concern:

Be it known that I, GEORGE W. FAIR, of Dayton, Montgomery county, State of Ohio, have invented a new and useful Smoke-Consuming Arched Heater, to be placed inside of a stove, range, or furnace; and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in a fire-clay arch slotted at top, with a sheet-iron smoke-consumer above and drafts or flues on each side of the arch.

Figure 1 represents a vertical section in line at right angles with Fig. 2; Fig. 2 a section in line at right angles with Fig. 1.

A represents the arch, made of fire-clay or fire-brick, with a long, narrow aperture, B, at top; C, the fire-place. D is the door of fire-place; E, the grate beneath the fire-place; F, the ash-pan. G G are flues formed between the sides of the fire-place C and the arch A. H is another flue, that extends around the whole and outside of the arch A to the top of the arch. J is a dome on top curved upward to a point, the apex being a round or square aperture of three or four inches in diameter. K K K K are small round apertures through which cold air passes into each flue G and H both at the front and back of the stove.

As the air passes into the flue G it comes in contact with the fire and heats the smoke as it passes from the aperture B, with the flame of the fire, into the dome J at top; and as the air passes through K into the flue H it also becomes heated, passing over the arch, and, rushing into the dome at top, sets the smoke into a whirl, while the cold air passing down into the apex and aperture of the dome prevents the smoke from rising, and the flame from the top of the arch consumes it completely, and no smoke passes off from the stove or top of the dome. Thus do I dispense with the use of a stove-pipe or chimney and have a comfortable stove located in the center or any part of a room or parlor. I have had one in use for several weeks in my parlor and found it to answer and perform accordingly.

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

1. The fire-clay arch A, with its long aperture B at top, as arranged and combined with its fire-place C and inside flue, G, as herein described.

2. The outside flue, H, constructed of sheet iron or metal, around the arch, as arranged and combined with the dome J, as herein described, and for the purposes set forth.

GEORGE W. FAIR.

Witnesses:

J. FRANKLIN REIGART,
JOHN S. HOLLINGSHEAD.