(Model.)

J. G. SMITH.

Fire Place.

No. 236,370. Patented Jan. 4, 1881.

Fig. 1.

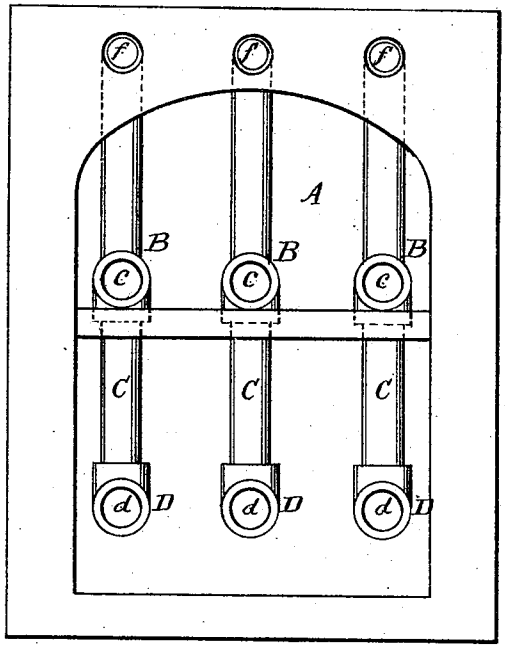


Fig. 2.

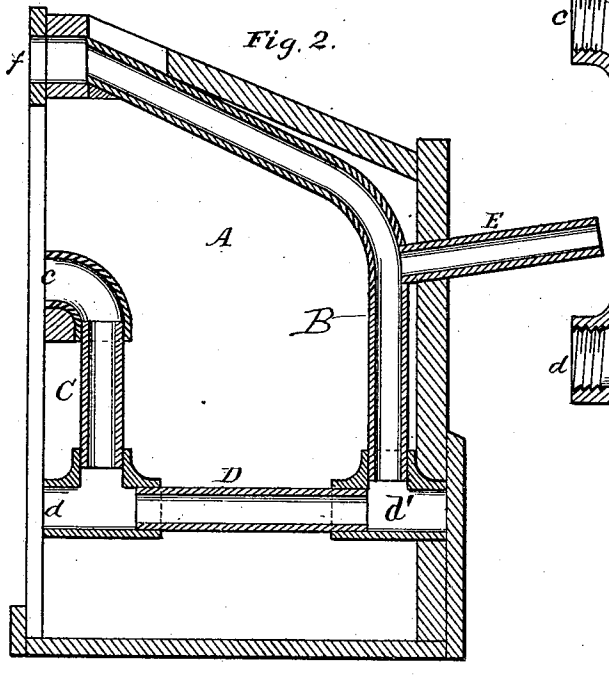
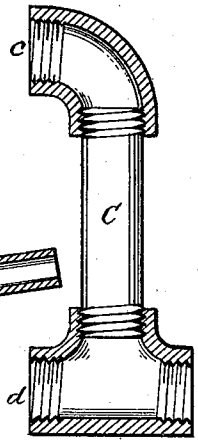


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES G. SMITH, OF ALLIANCE, OHIO.

FIRE-PLACE.

SPECIFICATION forming part of Letters Patent No. 236,370, dated January 4, 1881.

Application filed October 23, 1880. (Model.)

To all whom it may concern:

Be it known that I, JAMES G. SMITH, of Alliance, in the county of Stark and State of Ohio, have invented a new and valuable Improvement in Open Stoves and Fire-Places; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front view of this invention. Fig. 2 is a vertical central section, and Fig. 3 is a detail.

This invention relates to open stoves and fire-places; and it consists in constructing the grate and hot-air flues of sectional tubes and couplings, whereby the air entering the open tubes may be heated and discharged into the same and an adjacent room, as may be desired, as will be hereinafter fully described, and particularly pointed out in the claim.

Referring by letter to the accompanying drawings, A designates the fire-place, of any well-known construction; and B B B, curved tubes rising from couplings *d'* at the rear of the hollow grate-bars D, and following the conformation of the back wall and top of the fire-place, as shown. These flues or tubes B have discharge-openings *f* at their upper ends, which may be controlled by dampers, if desired.

E designates a discharge-tube leading from each of the tubes or flues B, through the back wall, or at any other suitable point, into an adjacent room to that in which the fire-place is located.

A coupling, *d*, is employed at the front end of each of the hollow grate-bars D, and rising therefrom is a vertical tube or hot-air flue, C, having at its upper end a curved flue or discharge, *c*. The coupling *d* is open at its outer end for the admission of cold air to the tube or hollow grate-bar D.

Any desired number of flues, tubes, and grate-bars may be employed. I have shown three only.

The tubes D and couplings *d d'* and tubes C form the grate.

The cold air enters at *d*, passes through the tubes D, B, and C, and is heated during its passage, and discharged into the same or the adjoining room.

Dampers or valves may be employed to control the discharge ends of the flues; but this is a matter of course, and does not require illustration herein.

I am aware that conducting and distributing pipes are not broadly new in furnaces and the like, that hollow grate-bars are old, and that grates have been constructed of both solid and hollow bars, and I desire only to claim herein the construction shown and described.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In an open stove or fire-place, the combination of the flues or tubes B, E, and C, having discharge-openings, as shown, and the hollow grate-bars D and couplings *d d'*, the couplings *d* forming the inlet-openings for the admission of cold air to the grate and tubes or flues, as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES G. SMITH.

Witnesses:
JUDSON D. LEWIS,
A. A. GILES.