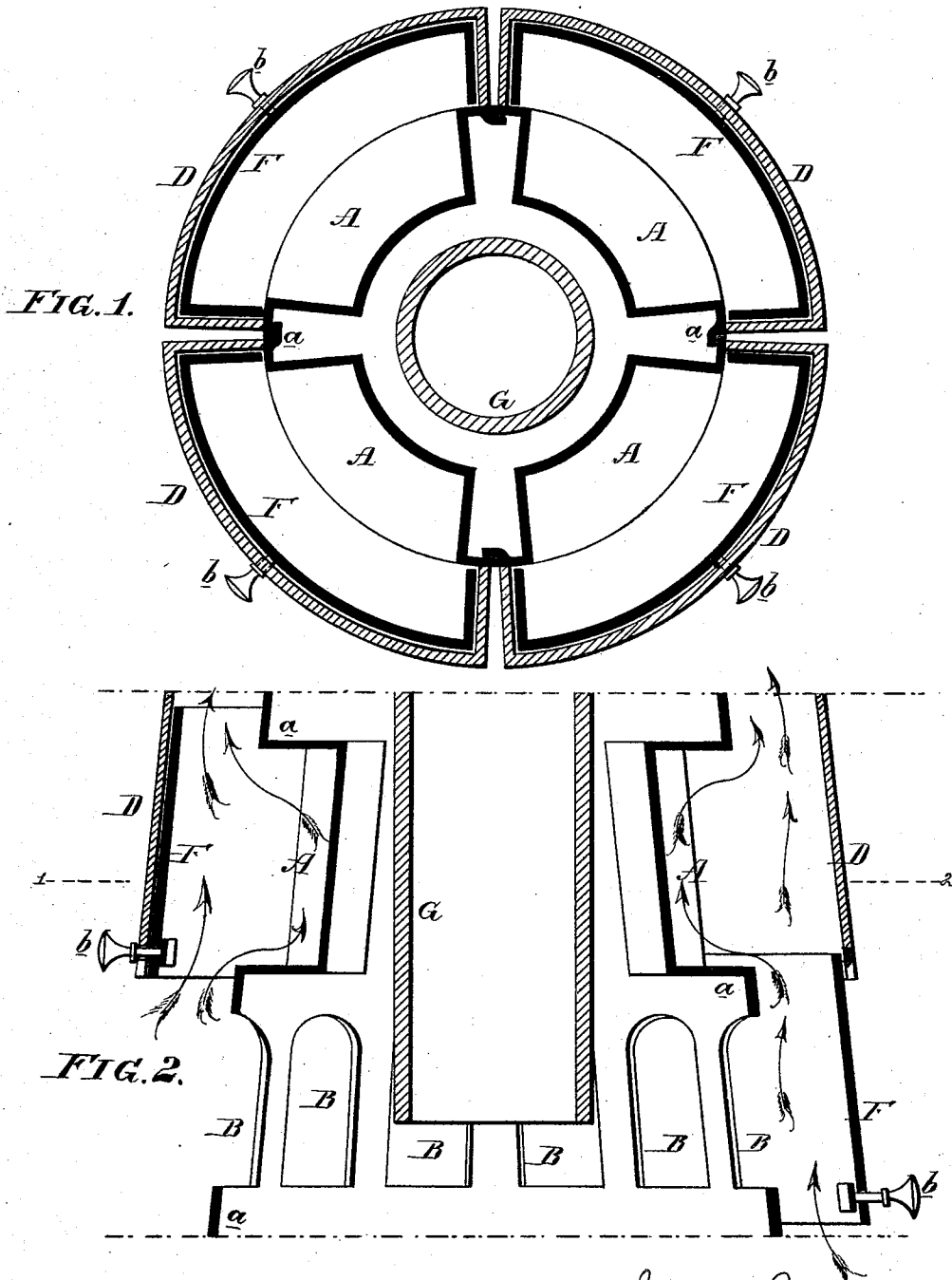


J. JOHNSON.
Heating-Stoves.

No. 145,424.

Patented Dec. 9, 1873.



Witnesses, John K. Rupertus.
Thomas McShane

Joseph Johnson
by his Attys.
Howson and Son

UNITED STATES PATENT OFFICE

JOSEPH JOHNSON, OF SPRING CITY, PENNSYLVANIA.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **145,424**, dated December 9, 1873; application filed November 8, 1873.

To all whom it may concern:

Be it known that I, JOSEPH JOHNSON, of Spring City, Chester county, Pennsylvania, have invented certain Improvements in Heating-Stoves, of which the following is a specification:

The object of my invention is to render a stove available for heating an upper apartment as well as that in which it is contained; and I attain this object, first, by combining a series of heating-chambers, A, which extend into the space surrounding the magazine above the mica doors B, with an exterior hood or hoods, D, open at the bottom, and communicating at the top with a hot-air flue; and, second, by combining a slide, F, admitting of being raised and lowered, so as to expose or cover the mica doors, with each of the said hoods D, all as shown in the sectional elevation, Figure 1, and sectional plan, Fig. 2, on the line 1 2, Fig. 1, of the accompanying drawing.

The upper and lower portions of the stove may be constructed in the manner adopted in ordinary illuminating-stoves. The drawing is therefore restricted to that portion to which my invention especially relates.

The magazine G extends downward to a point about opposite the centers of the mica doors B, which are placed at intervals throughout the entire circumference of the stove.

In the exterior casing *a* of the stove, above the mica doors B, are formed deep recesses, or, as they may be termed, heating-chambers, A, which extend into the space surrounding the magazine, but not too far into this space to interfere with the free upward passage of the products of combustion. The chambers A are open at their outer sides, and communicate freely with, and are entirely concealed by, hoods D, which are permanently secured to the exterior of the stove, and the lower ends of which terminate at a point above the mica doors, the hoods communicating freely at the top with a hot-air flue leading to an upper room or rooms. To each of the hoods D is adapted a slide, F, which can be lowered, as shown at the right-hand side of Fig. 1, so as

to form a continuation of its hood, covering one or more of the mica doors, or raised, as shown at the left-hand side of the same figure, so as to expose the doors, the raised slide being contained entirely within and concealed by the hood, where it is retained by any suitable fastening device, *b*.

Cold air enters the lower open ends of the hoods D, and, by circulating within the same, and in the chambers A, which are directly exposed to the products of combustion, becomes highly heated, and passes upward, as indicated by the arrows, to the hot-air flue and apartment above.

By lowering one or more of the slides F, the cold air may be caused to enter at a lower point, and will become more highly heated in passing the mica doors, and by contact with the heated surfaces adjacent to the same.

The number of chambers A to be employed will depend upon the size of the stove and arrangement and number of doors; but it is not absolutely necessary that there should be a separate hood, D, for each chamber, as a continuous circular hood, with or without partitions, might be employed.

I claim as my invention—

1. The combination of the hood D, and the casing *a*, and a series of hollow projections extending from the said casing into the combustion-chamber of a base-burning stove, above the illuminating-doors, and forming air-heating chambers communicating with a hot-air flue, all as set forth, for the purpose specified.

2. A heating-stove in which slides F, admitting of being raised and lowered to expose or cover the mica doors B, are combined with hoods D, secured to the exterior of the stove above the said mica doors, all substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH JOHNSON.

Witnesses:

WM. A. STEEL,
HARRY SMITH.