

J. JOHNSON.
Heating-Stoves.

No. 144,105.

Patented Oct. 28, 1873.

FIG. 1.

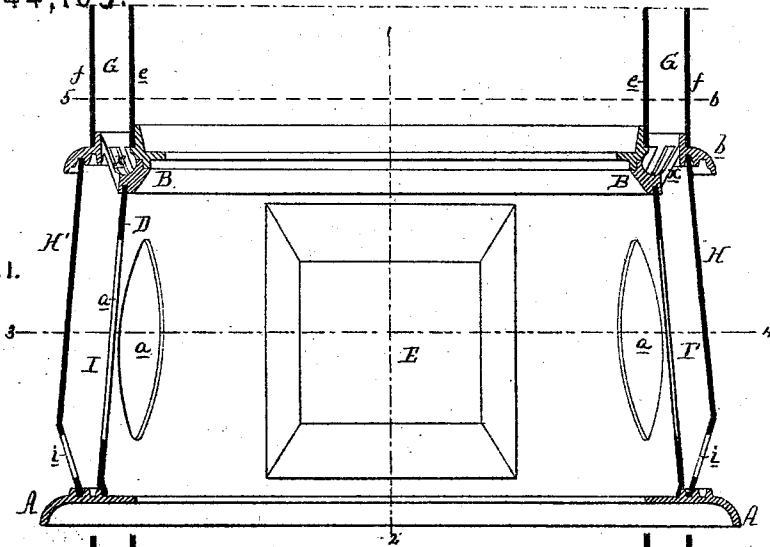


FIG. 2.

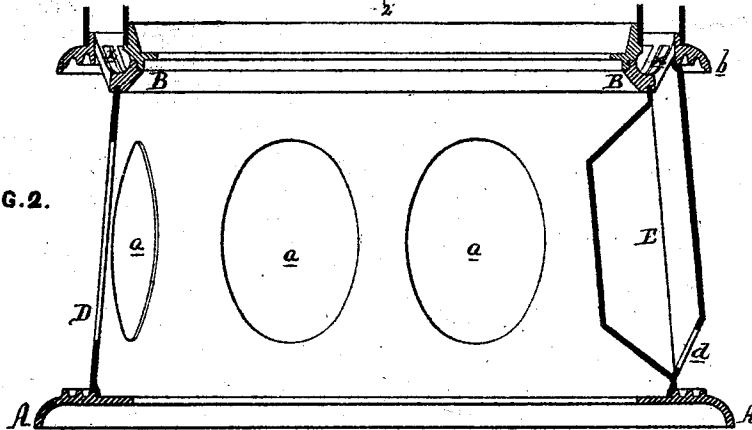
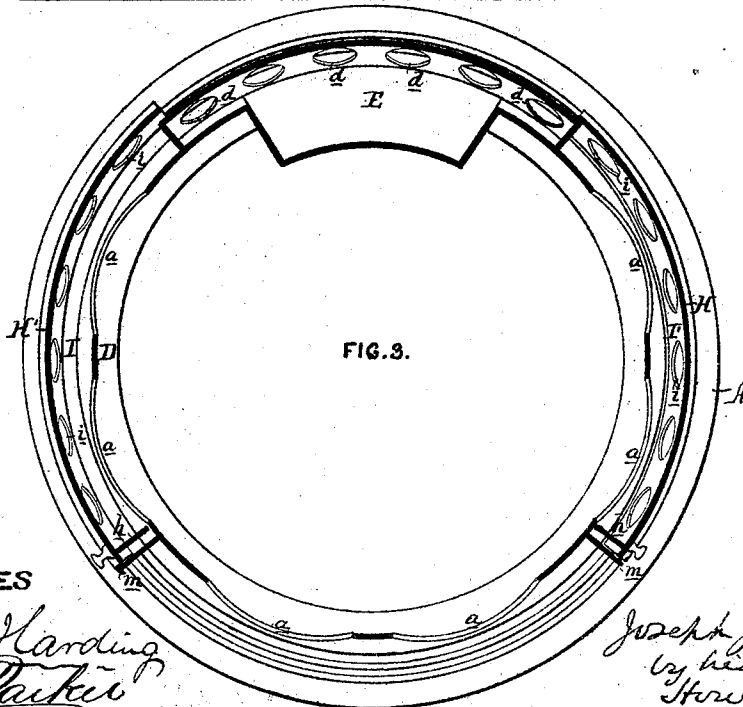


FIG. 3.



WITNESSES

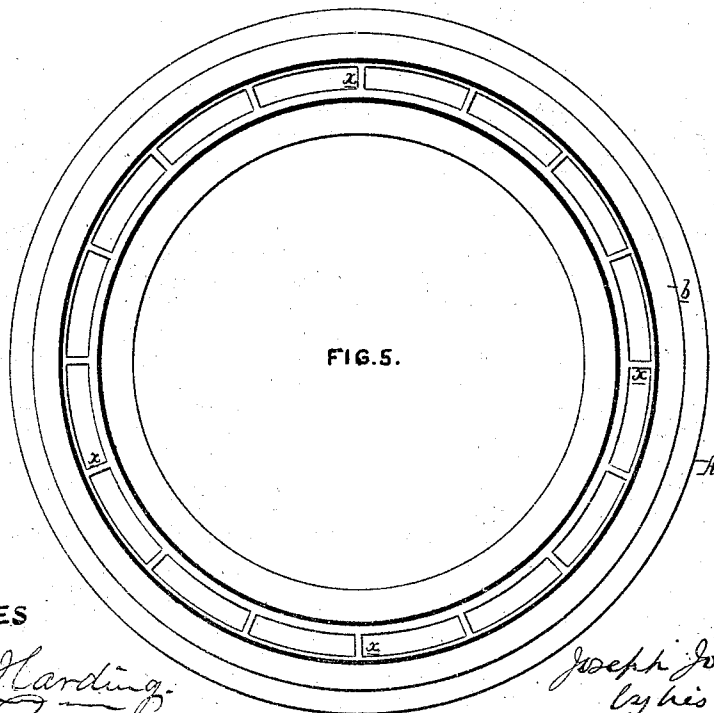
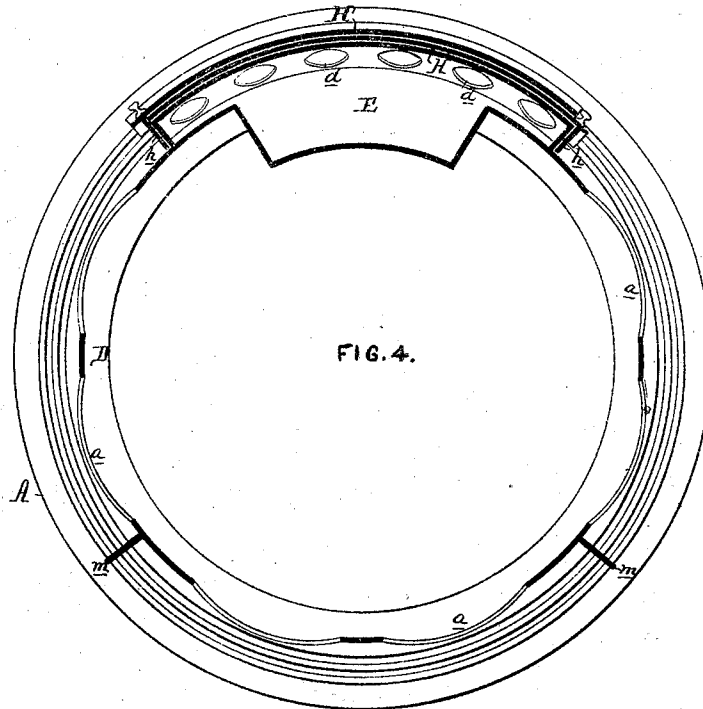
Wm. B. Harding
John Parker

Joseph Johnson
by his atty.
Horace Anderson

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WITNESSES

Mr. B. Harding.
John Parker

Joseph Johnson
by his Attor
Hewson and Son.

UNITED STATES PATENT OFFICE.

JOSEPH JOHNSON, OF HARRISBURG, PENNSYLVANIA.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **144,105**, dated October 28, 1873; application filed October 26, 1871.

To all whom it may concern:

Be it known that I, JOSEPH JOHNSON, of Harrisburg, Dauphin county, Pennsylvania, have invented an Improvement in Heating-Stoves, of which the following is a specification:

My invention relates to an improvement in stoves which supply heated air to rooms above that in which the stove is situated; and my improvement consists in combining, with the casing of the stove, a permanent chamber, in which the air is heated prior to being conducted to the upper rooms.

Figure 1, Drawing No. 1, is a vertical section of sufficient of the stove to illustrate my improvement; Fig. 2, a vertical section on the line 1 2, Fig. 1; and Fig. 3, a vertical section on the line 3 4, Fig. 1; Fig. 4, Drawing No. 2, also a sectional plan on the line 3 4, Fig. 1; and Fig. 5, a sectional plan on the line 5 6, Fig. 1.

A is a ring situated on the lower portion of the fire-chamber of a heating-stove, and between this ring and an upper ring, B, extends the sloping casing D of the upper portion of the fire-chamber, there being in this casing a number of openings, *a a*, furnished with mica panels in the usual manner. Surrounding the ring B, and forming part of the same in the present instance, is an outer ring, *b*, the two rings being connected together by radial bars *x*, Fig. 5, between which the heated air from below can pass freely. At the rear of the casing D is formed a permanent heating-chamber, E, the extent and shape of which will be best observed in Figs. 2 and 3, cold air being admitted to this chamber below through openings *d d*, and passing from the same, in a heated state, through the ring B *b*, to the annular space G between the two casings *e* and *f*, which are fitted to flanges on the said rings B *b*, the space G communicating with the rooms above that in which the stove is situated, and the products of combustion passing through the space surrounded by the casing *e* to the usual exit-pipe. (Not shown in the drawing.) Two segmental plates, H and H', are arranged to slide in

grooves in the lower ring A and upper ring *b*, each slide being furnished at its front edge with a flange, *h*, bearing against the casing D, and, with the rear of the permanent heating-chamber E, maintaining the slides at such a distance from the said casing D as to form between the two, when the slides are moved forward, as in Fig. 2, two heating-chambers, I and I', which communicate, through the ring B *b*, with the annular space G, and receive cold air through openings *i* below.

When these slides are moved back to the rear of the permanent heating-chamber E, as shown in Fig. 4, the room containing the stove has the full benefit of the radial heat from the whole of the casing D, excepting that portion of the rear of the same which is occupied by the said permanent chamber.

When it is desirable to have more heat in the upper chamber and less in the room below, the slides I and I' may be moved forward until arrested by the flanges *m m* of the casing D, when two supplementary heating-chambers, I and I', will be formed, these chambers communicating, through the annular space G, with the rooms above.

I claim—

1. The combination, with the casing of the stove and with the space G, of the heating-chamber E, arranged as set forth.

2. The combination of the casing D, the permanent heating-chamber E, the slides H and H', and the annular space G communicating with the upper rooms.

3. The combination, with the casing of the stove, of slides H H', having inner flanges *h*, and adjustable to form chambers of varying extent, as set forth.

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

JOSEPH JOHNSON.

Witnesses:

JOHN H. ZOLLINGER,
GEORGE GEARHART.