

S. B. PATTERSON.
Heating-Stoves.

No. 142,270.

Patented August 26, 1873.

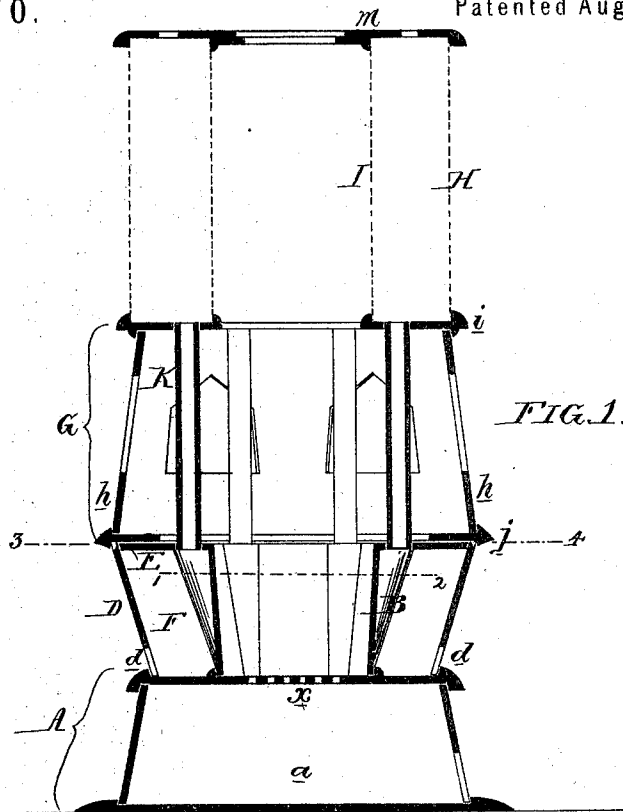


FIG. 1.

FIG. 3.

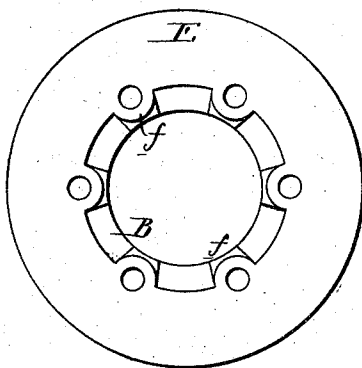
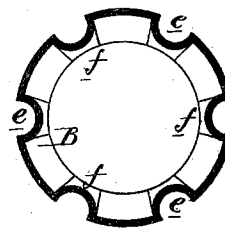


FIG. 2.



Witnesses, Hubert Howson
Thomas McAlvain

S. B. Patterson
by his attys.
Howson and Son

UNITED STATES PATENT OFFICE.

SEELY B. PATTERSON, OF PHILLIPSBURG, NEW JERSEY, ASSIGNOR TO
PHILLIPSBURG STOVE WORKS, OF SAME PLACE.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. **142,270**, dated August 26, 1873; application filed
June 16, 1873.

To all whom it may concern:

Be it known that I, SEELY B. PATTERSON, of Phillipsburg, Warren county, New Jersey, have invented an Improvement in Heating-Stoves, of which the following is a specification:

The object of my invention is to obtain an increased heating-surface in that class of stoves which are designed to impart heat to rooms above that in which they are contained; and this object I obtain by the combination of a recessed or grooved fire-pot, B, with tubes K passing through the illuminated chamber G, as shown in the vertical section, Figure 1, and sectional plan, Fig. 2, of the accompanying drawing, so that the air entering the chamber F surrounding the fire-pot shall be heated by passing into the grooves of the same, and further heated by passing through the tubes K before it reaches the upper chamber, whence it may be distributed to upper rooms, or into that containing the stove, or into both, as circumstances may demand.

A is the base of the stove inclosing the ash-pit *a*, and to the top of this base is secured the fire-pot B and exterior casing D, which are connected together at the top by an annular plate, E, an annular chamber, F, being thus formed between the fire-pot and casing D, to which chamber air can gain access through openings *d d*. The fire-pot, which has the usual grate *x*, is of a peculiar construction, being made of the tapering form represented in the vertical section, Fig. 1, but having on the outside and extending from bottom to top of fire-pot a number of recesses, *e*, forming projections or ribs *f* on the inside, as shown in the sectional plan, Fig. 2, on line 1 2, and also in the sectional plan, Fig. 3, on line 3 4. G is the illuminated portion of the stove, consisting of the casing *h*, having the usual mica doors or frames, and the lower plate *j* secured to the casing D and the upper plate *i*. Above this illuminated portion of the stove is the usual cylindrical casing H, through which passes the inner casing I surmounted with a plate, *m*. Between the plate

i and top plate E of the chamber F extend as many vertical tubes K as there are recesses *e* in the fire-pot, each tube terminating below at a point immediately above one of the recesses, and the several tubes forming communications between the chamber F and the annular chamber formed by and between the casings H and I.

When the stove is in full operation the projections or ribs *f* of the fire-pot will be embedded, as it were, in a mass of burning fuel, hence, the recesses *e* will be intensely hot, and the air which enters the chamber F through the openings *d*, will, in seeking the only vents which the tubes K afford, enter and impinge against the recesses, which are, in reality, continuations of said tubes; thus a high degree of temperature is imparted to the air before it enters the tubes, and its heat is increased by passing through them as they are exposed to the ignited products of combustion circulating within the illuminated casing.

The heated air admitted to the chamber between the casings H and I may be discharged into the room containing the stove through a register on the top plate *m*, or may be distributed through suitable pipes to upper rooms.

My invention may be used with any stove of suitable construction. In Fig. 1 it is shown as applied to a non-base-burning stove, which, however, may be converted into a base-burner by inserting the usual magazine, and providing a proper outlet for the passage of the products of combustion.

I claim—

The combination, in a stove, of a fire-pot having external recesses *e*, a chamber, F, surrounding the pot, and tubes K communicating at the lower ends with said recesses, as set forth.

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

SEELY B. PATTERSON.

Witnesses:

T. M. RIEGEL,
G. W. BEEROTZ.