(No Model.)

J. H. KEYSER.

HEATING STOVE.

No. 325,678. Patented Sept. 8, 1885.

Fig 1.

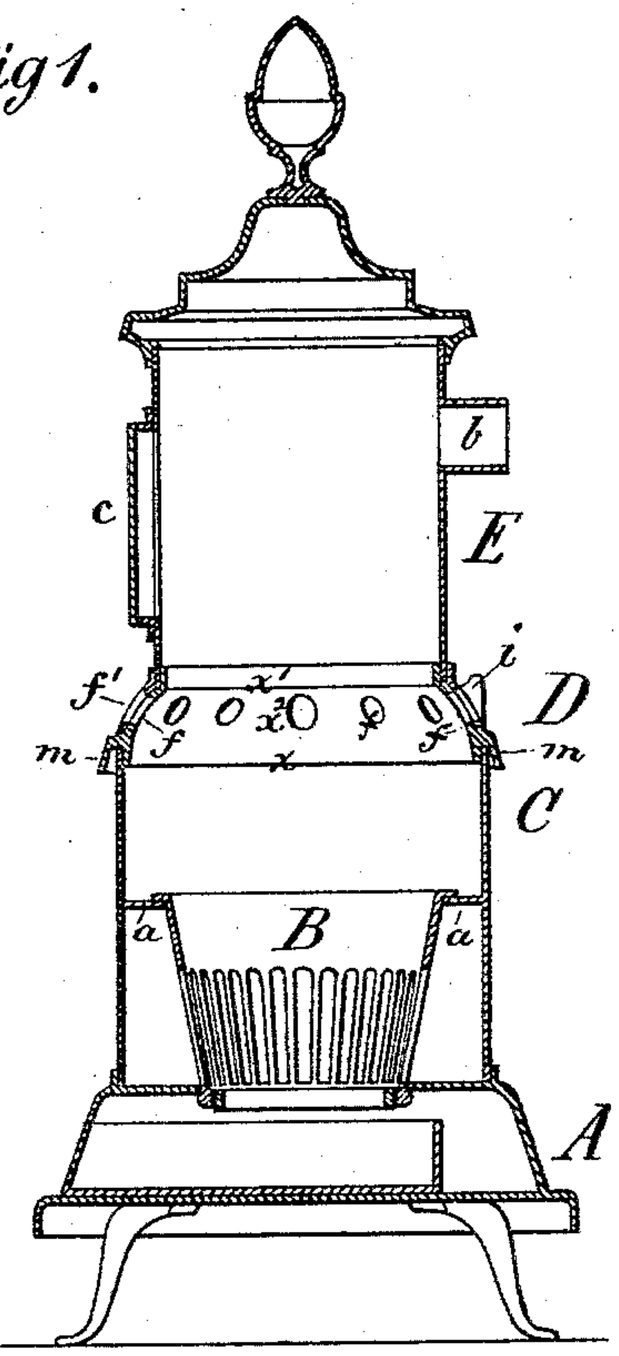


Fig 2.

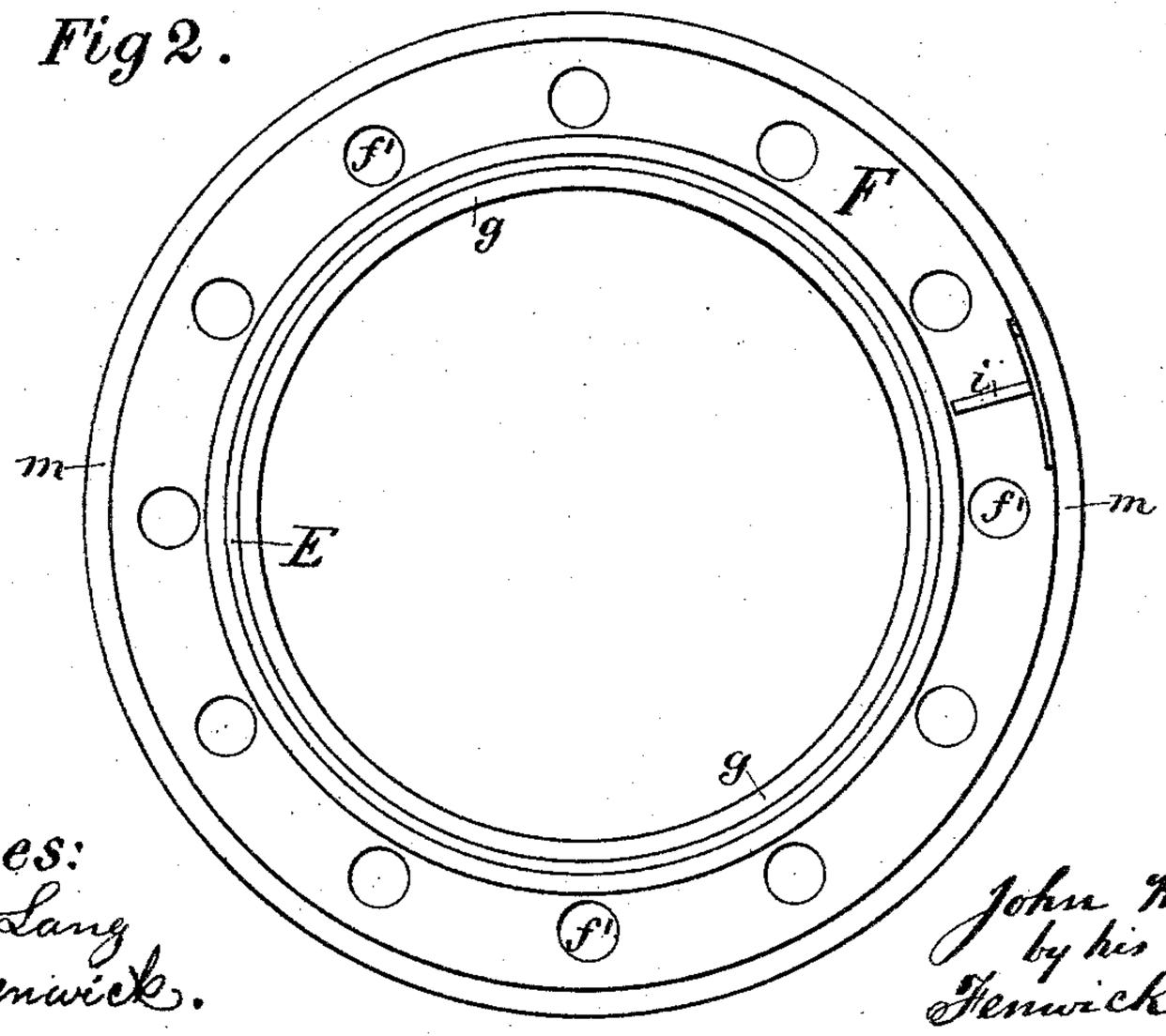
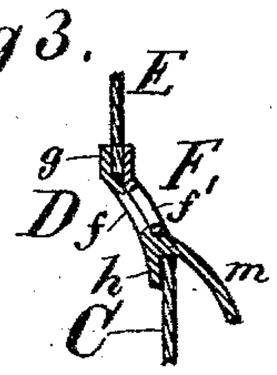


Fig 3.



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UNITED STATES PATENT OFFICE.

JOHN H. KEYSER, OF NEW YORK, N. Y.

HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 325,678, dated September 8, 1885.

Application filed October 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. KEYSER, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Improvement in Heating-Stoves, of which the following is a specification.

My invention consists in a peculiar cast-iron middle or intermediate section for a heating-stove, said section having a tapered form, largest at its lower edge, smallest at its upper edge, and of gradually-decreasing diameter from its lower to near its upper edge, and said section being perforated about midway of its height with a number of ventilation-holes and provided with a perforated sliding-ring damper, which is fitted loosely around and supported in position by the middle section; second, in a middle or intermediate section for a heating-stove, having a tapered form largest at its lower edge, smallest at its upper edge, and of gradually-decreasing diameter from its lower to near its upper edge, and provided with a sliding-ring damper, and having a flange below and above its tapered portion to which, respectively, the large lower cylindrical section of the stove and the small upper cylindrical section thereof can be fastened; third, in a middle or intermediate section for a heating-stove, having a tapered form largest at its lower edge, smallest at its upper edge, and of gradually-decreasing diameter from its lower to near its upper edge, and having a sliding-ring damper, and formed with a flaring skirting at its lower edge which overhangs the upper edge of the lower cylinder of the stove and forms a foot-rest extending out beyond said cylinder; and, fourth, in the combination, with a stove, of the tapered perforated section and a perforated sliding-ring damper, whereby the air in small currents can be admitted downwardly upon the fire when the draft below is closed, and thus combustion of the gases by a downdraft of air upon the coals effected before the same pass off through the exit-pipe, and whereby, also, the action of the stove can be fully controlled at all times, the sliding-ring damper serving for opening or closing or partly opening or closing the draft-openings, and the openings serving when the damper is opened for giving illumination to the room.

In the accompanying drawings, Figure 1 shows a vertical section of my improved stove; Fig. 2, a top view of the middle cast-iron section detached from the stove; and Fig. 3, a broken detail vertical section of the middle section, slightly modified at its lower edge, so as to form a projecting foot-rest.

A represents the ash-pit section of a stove, this being provided with the usual front door, sliding damper, and ash-drawer.

B is an ordinary basket-grate, suspended upon lugs *a* of the larger lower cylindrical section C of the stove.

D is the middle or intermediate cast-iron section, and E the smaller upper cylindrical section, of the stove, the latter having an exit-passage, *b*, and a door, *c*, filled with mica. The middle section, D, is in ring form, and its profile is of a taper form on its outside and inside, as shown, being largest at x and smallest at x', and contracted from x to x^2, and from x^2 to x', as shown. The surfaces between x and x' may be straight or curved, but there must always be a downward flare of the ring-section D from x' to x, so that it shall serve as a means for keeping a sliding-ring damper, F, from descending after it has been set in position upon the same.

Through the section D a number of elliptical ventilation or air holes, *f*, are formed, and the set of these holes is such, their highest diameters being in vertical planes, that the fire inside the stove can be seen distinctly by looking down through them.

The ventilation-holes, by being elliptical or having their longest diameters in vertical planes, afford a good view to the fire and necessary room for entrance of air, and at the same time are more ornamental than large circular holes; and where a given number of the elliptical holes instead of round ones are formed in a given sized ring holes can be spaced so as to afford room for ornaments between them to be placed upon the ring. I, however, do not confine my invention to holes of elliptical form, but shall adopt any suitable form of holes.

At the upper edge of the section D a flange,

g, is formed, and at the lower edge a flange, *h*, is provided. To the flange *g* the upper or smaller cylindrical section of the stove is fastened, while to the flange *h* the lower or larger cylindrical section thereof is secured.

Projecting outward and downward a flaring skirting, *m*, may be formed at the base of the section D, so as to form a shoulder or rest for the ring-damper F, and also a foot-rest beyond the upper edge of the lower section, C, of the stove. The sliding-ring damper F is provided with a handle or knob, *i*, and is perforated with holes *f'*, corresponding to the holes *f* in the section D, and it is placed upon the section D before the section E is fastened to section D. By turning the ring-damper on the section D more or less, the holes *f* can be closed or opened to a greater or less degree and the amount of air admitted regulated as desired.

When it is desired to have the draft supplied entirely through the holes in section D and damper F, the damper in the ash-pit section is closed and the ring-damper F opened fully. This will insure burning of the gases before they escape, and will also give a high degree of illumination in the room through the openings.

I contemplate using my invention with magazine-stoves, but consider it more highly useful for stoves which are not supplied with coal by a magazine.

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

1. The stove comprising section E, having door *c* and exit-passage *b*, intermediate or middle section, D, of upwardly-tapered form, and provided with holes *f*, sliding upwardly-tapered ring-damper F, having ventilation-holes *f'*, and the lower section, C, having grate B, substantially as and for the purpose described.

2. The stove comprising middle or intermediate cast-metal section, D, having an upward tapered form and perforated, and provided with upper and lower flanges, *g* and *h*, the upwardly-tapered sliding damper having ventilating-holes *f'*, the sheet-iron sections C E, united to the middle section, and the upper section being smaller than the lower one and provided with a door, *c*, and exit *b*, while the lower section is provided with a grate, B, substantially as described.

3. The stove comprising the middle or intermediate section, D, having the described tapered form, holes *f*, and foot-rest *m*, the tapered sliding damper having holes *f'*, the section E, having door or exit *b*, and the section C, having grate B, substantially as described.

4. The combination, with the sections C and E of the stove, of the intermediate or middle section, D, having ventilation-openings *f*, foot-rest *m*, shoulder, flanges *g h*, and a sliding ring-damper, F, having openings *f'*, substantially as and for the purpose described.

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