

Heating Stove.

Patented March 13, 1847.



UNITED STATES PATENT OFFICE.

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STOVE.

Specification of Letters Patent No. 5,014, dated March 13, 1847.

To all whom it may concern:

Be it known that we, JOHN S. MARLL and WILLIAM I. OGDEN, of Georgetown, in the District of Columbia, have invented a new and useful Improvement on Stoves for Heating Apartments, which we call the "Hot-Air-Tight Radiator;" and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

Figure 1,—plan showing the top of the stove as it appears when uncovered. Fig. 2,—vertical section of stove on the line B, B, Fig. 1. Fig. 3,—vertical section of stove on the line D, D, Fig. 1. Fig. 4,—vertical section of the top or cover of the stove, on the line B, B, Fig. 1. Fig. 5,—front elevation of the stove, complete.

a, a, Figs. 1, 2, 3, 5,—is the drum or body of stove. *b*,—Figs. 1, 2, 3,—bottom plate of the fuel chamber, or cylinder, C, Figs. 1, 2, 3. *c*,—Figs. 1, 3,—smoke chamber, or flue. *d, d*,—Figs. 1, 2,—hot air-pipes, to disseminate warmth in the principal apartment, and regulated by means of the circular valves, or dampers, *c'*, *c'*, Figs. 4, 5. *e, e, e, e*,—Figs. 1, 5,—radiating tubes conveying the draft. *f*,—Figs. 1, 2, 3, 4, 5,—pipe to convey heat to upper apartments, regulated by the damper or valve *r*, Figs. 2, 3, 4, 5. *g*,—Figs. 1, 3,—hot air chamber, for supplying heat to lower and side apartments, the heated air entering the orifices *g'*, *g'*, Figs. 1, 3. *h*,—Figs. 1, 3,—semi-circular grate, turning on the center *i*, Figs. 1, 3, by means of the handle *u*, Fig. 3, sifting the ashes into the ash-pan *v*, Fig. 3. *j*,—Figs. 1, 2, 3, 5,—pipe to convey heat to lower and side apartments, and regulated at bottom, by the valves or dampers *p, p*, in pipe *k*, Fig. 1. *m, m*, circular draft-holes conveying draft from flue *c*,—Figs. 1, 3. *n, n*,—Figs. 1, 3,—circular draft holes. *o*,—Figs. 1, 3,—knob or handle to covering plate at mouth of the ash chamber *t*, Figs. 2, 3. *q*,—Figs. 2, 3,—a plate attached to the sides of the fuel chamber, by which the smoke flue *c*, Figs. 1, 3, is formed. *s, s*,—Fig. 2,—cold air tubes. *w*,—Fig. 3, shows the position of the smoke-pipe, when the stove is covered, the pipe being attached to the cover. *x*,—Fig. 4,—circular draft-hole for regulating the course of the draft in the plate E, E, regulated by the valve *y*, attached to the rod *z*, which is secured and

guided by the clamps *a' a'*, and worked by the handle *b'*, Figs. 4, 5.

Note.—The dotted line A, A, Fig. 1, and *f'*, Fig. 3, represents the position of the said plate E, E, upon the stove when covered.

d', d',—Fig. 4,—is top of the fuel chamber, covered by a plate, (or for ornament, an urn) in which, at *e'*, Fig. 4, is a small draft-hole for regulating the admission of air. C,—Figs. 1, 2, 3,—fuel chamber, or cylinder.

The nature of our invention, consists in combining in one stove the application of a peculiar arrangement of the properties of the three most efficient and approved kinds, viz:—the hot-air, air-tight, and radiator; for warming one or many apartments,—supplying heat to those below as well as to those above and around, by means of pipes; and by valves or dampers to regulate the warmth in any apartment, or by the same means to cut it off from any apartment; and with the aforesaid advantages, combining that of economy, in cost of the stove over the usual furnaces for heating buildings, and in cost of fuel,—consuming, according to the size of the stove, from one-half to one peck of coal per day.

To enable others skilled in the art, to make and use our invention, we will proceed to describe its construction and operation.

The main body of the stove and its radiating pipes are constructed of sheet-iron, similar to the common radiator stove, of which, in this instance, for example, we have chosen the elliptical cylindrical form; and within it and attached to the same, of sheet-iron, and cast-iron, the various tubes, plates, apartments, valves or dampers, grates and bottoms, as more fully described in this specification and by the accompanying drawing.

What we claim as our invention and desire to secure by Letters Patent, is—

The arrangement of the hot air chamber and tubes in combination with the radiating pipes *e, e, e, e* and division plate E with its valves, substantially in the manner described.

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