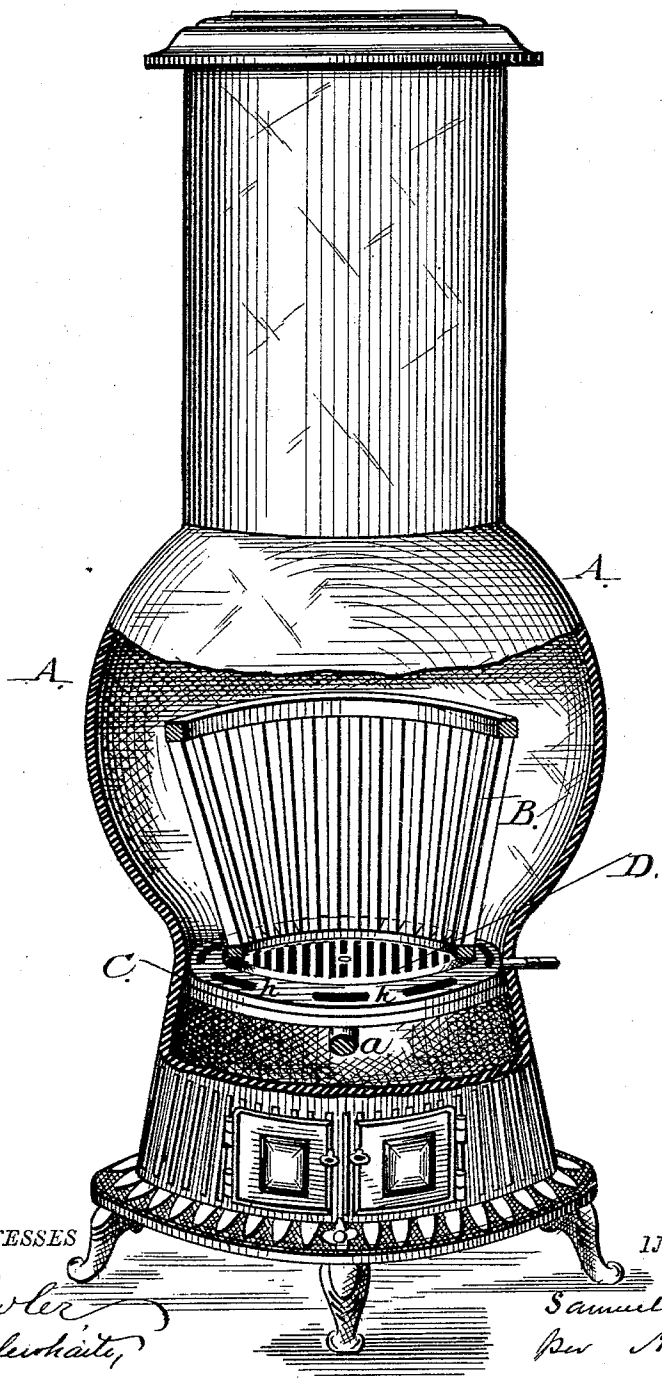
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S. H. FALES.

COAL STOVE.

No. 331,622. Patented Dec. 1, 1885.

Fig. 1.



WITNESSES

T. W. Fowler

H. B. Applewhite,

INVENTOR

Samuel H. Fales

per A. H. Evans & Co.

Attorneys

N. PETERS. Photo-Lithographer, Washington, D. C.

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Fig. 2.

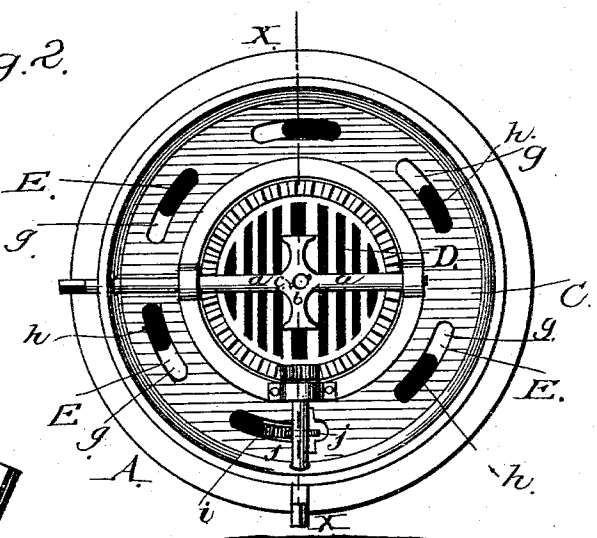


Fig. 4.

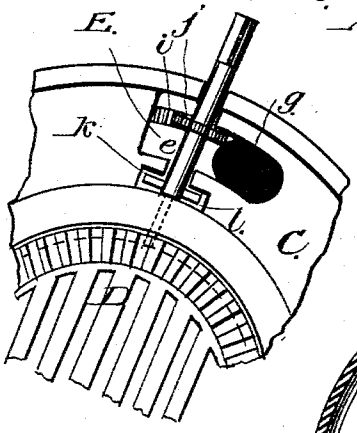
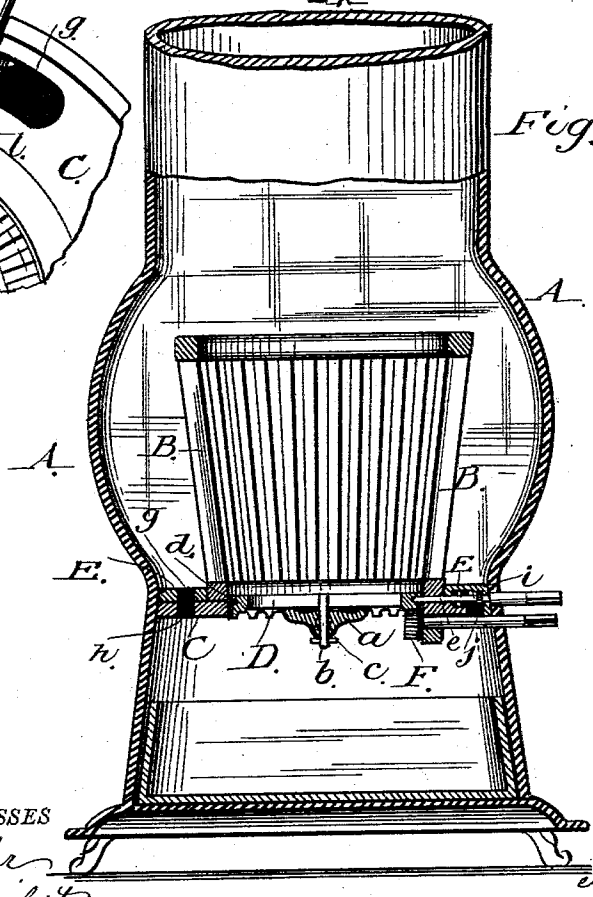


Fig. 3.



WITNESSES

P. W. Fowler

H. B. Applewhite,

INVENTOR

Samuel H. Fales

per A. H. Evans & Co

Attorneys.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL H. FALES, OF NEW HAVEN, CONNECTICUT.

COAL-STOVE.

SPECIFICATION forming part of Letters Patent No. 331,622, dated December 1, 1885.

Application filed May 11, 1885. Serial No. 165,061. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. FALES, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Coal-Stoves, of which the following is so full, clear, and exact a description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective of my improved stove, with a portion of the casing broken away, thus showing the structure of the interior. Fig. 2 is a plan view of the bottom of the stove, showing the revolving grate, the perforated damper, &c. Fig. 3 is a cross-section of Fig. 2 on the line *x x*, which shows the groove in the outer periphery of the revolving grate, the pinion which operates the perforated draft-plate, and also the pinion which operates the revolving grate. Fig. 4 is a detail to be referred to.

My invention relates to heating-stoves; and it consists in the novel construction, combination, and arrangement of parts, as will hereinafter be fully set forth, and specifically pointed out in the claims.

In the drawings, A represents the casing of the stove, the upper part of which forms a radiator and heating-drum.

B is a basket-grate or fire-pot, which is secured to the perforated damper-plate C at a suitable distance from the walls of the casing A. By reference to Fig. 1 it will be observed the fire-pot is much smaller than the casing A, which leaves considerable space between the outer surface of the fire-pot and the inner surface of the casing A.

D is a revolving grate, pivoted at its center to the bar *a* by the pin *b*, which extends through a hole in the bar *a*, and is secured in position by a key, *c*. The bar *a* is provided with a pair of twin projections, which extend at right angles to the bar, and which form supports for the revolving grate D. This grate D is provided at *d* with a groove, which extends completely around the periphery of the grate and serves as a guide, in which the arbor *e* extends, which allows the grate to rotate, and at the same time prevents the grate from dumping.

F is a pinion, which serves as a means of revolving the grate D.

On the top of the perforated damper-plate C is a slide, E, which is also provided with elongated holes *g g*, which register with similar holes, *h h*, in the damper C.

At *i* is a rack-bar in the slide E, which registers with the cogs *j* on the arbor *e*. This arbor *e* is also provided with a pin, K, which extends through it at right angles, and forms a sort of bayonet-fastening in the T-shaped slot *l* in the damper-plate C, as shown in Fig. 4. The object of this T-shaped slot *l* and pin K is to allow the arbor *e* to be withdrawn from the groove *d*, to allow the dumping of the grate when it is desired to do so. This arbor *e* also serves as a means of operating the slide E, by simply turning it with the thumb and finger, the cogs *j* meshing in the rack-bar *i*.

The operation is as follows: Fill the fire-pot in the usual manner, and when it is desired not to have a very hot fire, open the draft by operating the slide E with the arbor *e*. When it is desired to increase the amount of heat in the room, close or partially close the draft by simply turning the arbor *e* in the opposite direction. When it is desired to dump the grate, give the arbor *e* half a revolution, withdraw it till it clears the grate, and then dump the latter by turning the bar *a*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a casing, a perforated damper-plate, a correspondingly-perforated slide, an open basket-grate or fire-pot supported upon the damper-plate, a revolving grate having a peripheral groove, an arbor with toothed wheel for operating the slide, said arbor passing through the damper-plate and guiding the movement of the grate, and a pinion for revolving the grate, substantially as herein described.

2. In a stove, the fire-pot, the casing, and the revolving grate having a grooved periphery, in combination with the perforated damper, the correspondingly-perforated slide, and

the arbor *e*, which serves the double purpose of a guide for the grate and a means of regulating the draft, substantially as set forth.

3. In a stove, the combination of the casing, the fire-pot supported therein, a chamber between the fire-pot and casing, the revolving grate having a groove in its periphery, a sliding arbor engaging the groove, and a toothed wheel engaging teeth on the bottom of the grate for revolving the latter in either direction, substantially as herein described.

SAMUEL H. FALES.

Witnesses:
ROBT. G. CURTIS,
JOHN L. WOODRUFF.