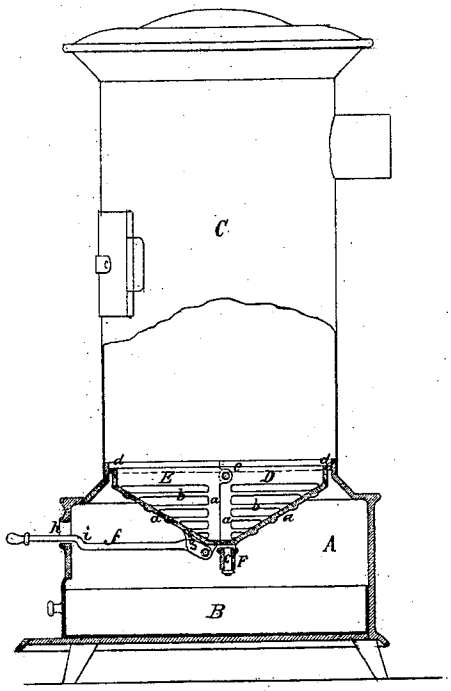
G. FROH.

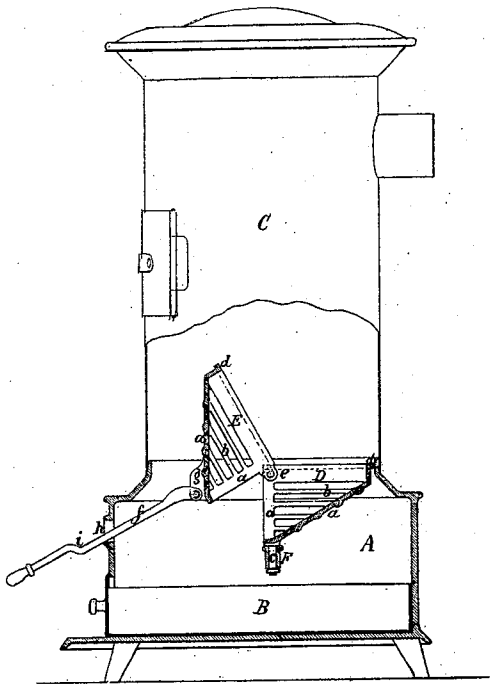
STOVE GRATE.

No. 100,024. Patented Feb. 22, 1870.

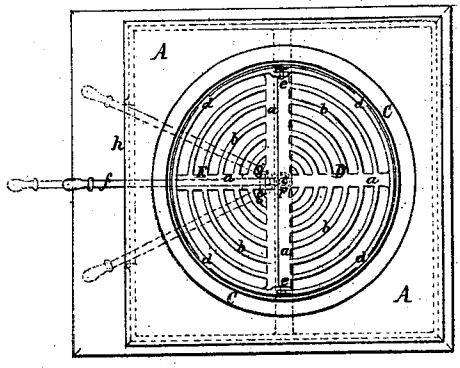
—Fig. 1.—



—Fig. 2.—



—Fig. 3.—



Witnesses:

Theodor Bezner

William Keuebler

Inventor:

George Froh.

United States Patent Office.

GEORGE FROH, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 100,024, *dated February* 22, 1870.

STOVE-GRATE.

The Schedule referred to in these Letters Patent and making part of the same.

I, GEORGE FROH, of the city of Philadelphia, and State of Pennsylvania, have invented certain Improvements in Grates for Stoves, of which the following is a specification.

My invention relates to the circular form of grates which are used in most of the modern cylindrical stoves for heating, and to which a vibrating motion in a horizontal plane is given for the purpose of raking the fire and removing the ashes from the burning coals.

These grates are usually so arranged that their entire contents may be removed by dropping either the whole grate or a portion of the same, or by giving it a rotary motion on a horizontal axis, the grate being held in its horizontal position by a sliding pin or other suitable appliance.

Now, in my invention, a circular cast-iron grate, in the form of an inverted obtuse cone or other similar concave form, is composed of two halves or sections, and these are hinged together in such a manner that a peculiarly devised handle, attached to the front section of the grate, will serve the double purpose of shaking the entire grate to free the burning coal from ashes, and also to so vibrate the front section of the grate that the entire contents may be emptied, the funnel-shaped construction of the grate serving to cause a complete discharge of the ashes, without the use of any poker or other detached implement.

In the drawing making part of this specification, and in which similar letters of reference allude to like parts in the several views—

Figure 1 is a side elevation, in section, of a stove embodying my invention, with the improved grate in position for holding the fuel.

Figure 2 is a similar sectional view, showing the manner of actuating the front section of the grate for the removal of the entire contents.

Figure 3 is a plan of fig. 1.

A is the square base of the stove, provided with an ash-pan, B, and carrying a cylindrical drum, C.

The improved grate consists of a rear section, D, and front section, E, the two forming a conically-dished receptacle, with radial bars, *a a*, and annular bars, *b b*.

The section D is, at its apex, provided with a pivot, *c*, which rests and turns in a support, F, attached to A.

The whole grate is also steadied at the top by outward projections, *d d*, on its annular rim, which bear loosely against the inside of the cylindrical top of A.

E is hinged to D, near the top, at *e e*, and provided with a peculiarly-formed shaking and dumping handle, *f*. This handle is jointed to the bottom of E, near the centre, and is fitted between flat lugs *g* in such a manner that a vibrating motion may be imparted to the whole grate by moving this handle laterally within the limits of the oblong opening *h* in A, as seen in dotted lines in fig. 3.

The handle *f* is provided with an offset, *i*, to prevent any undue outward movement and consequent opening of the joint between sections D and E of the grate.

When, however, the contents of the grate are to be entirely emptied, it is only requisite to slightly raise the handle *f*, so as to allow its offset *i* to pass through opening *h*, and then to withdraw *f* and throw it and section E into the position shown at fig. 3, thus discharging the whole contents of the grate into the ash-pan B, the conical form of the grate facilitating greatly the entire discharge of that part of the contents lying over the stationary rear section D.

I do not desire to confine the use of my improvement to the precise form of dished grate as shown in the annexed drawing, as this may be of a spherical or other concaved shape, without materially impairing the improvement.

I claim as my invention—

The pivoted section D and upward-vibrating section E of a dished circular grate, in combination with the shaking and dumping handle *f*, substantially as and for the purpose herein before set forth.

GEORGE FROH.

Witnesses:

THEODORE BERGNER,

WILLIAM KUEBLER