J. B OLDERSHAW.

Grate and Fire Pot for Stoves.

No. 214,693. Patented April 22, 1879.

Fig. 1

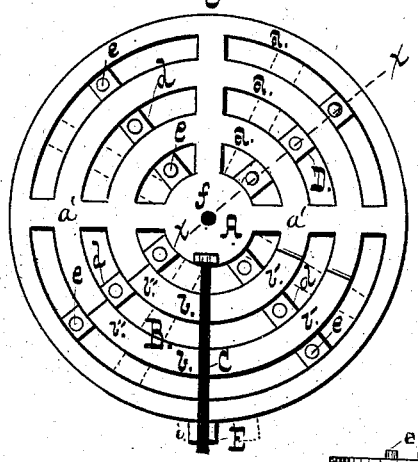
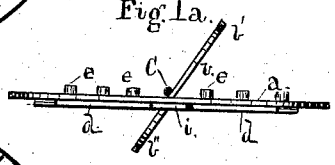


Fig. 1a.



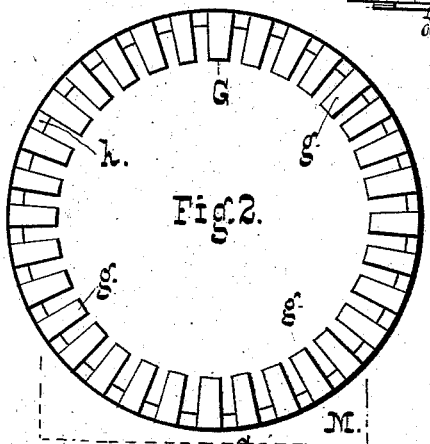


Fig. 2.

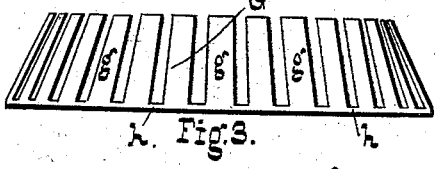


Fig. 3.

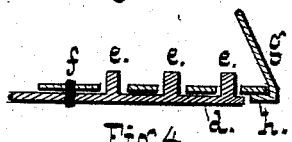


Fig. 4.

Witnesses,

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UNITED STATES PATENT OFFICE.

JOHN B. OLDERSHAW, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN GRATES AND FIRE-POTS FOR STOVES.

Specification forming part of Letters Patent No. **214,693**, dated April 22, 1879; application filed February 21, 1879.

To all whom it may concern:

Be it known that I, JOHN B. OLDERSHAW, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Grates and Fire-Pots for Stoves; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of the grate; Fig. 1ª, a front elevation of the same; Fig. 2, a plan view of the fire-pot; Fig. 3, a side elevation of the latter; and Fig. 4, a vertical sectional view on line *x x*, Fig. 1.

My present invention relates to stove-grates and fire-pots designed for use in magazine-stoves; and it consists in a grate and fire-pot, constructed as hereinafter described, and possessing points of novelty that are made the subject of the claim.

In the accompanying drawings, A is the grate proper, consisting of a number of concentric annular bars, *a a*, joined by radial bars *a'*. At the front of the grate is a tilting section, B, consisting of bars *b b*, constituting parts of the bars *a a*, rigidly secured to a rod, C. The ends *b' b'* of the bars *b b* rest on the bars *a a*, and their distance from the central pivot-rod C is slightly greater than that of the opposite ends, *b'' b''*.

D is a second grate, having radial bars *d d*, that carry pins *e e*, which project up between the grate-bars proper, and serve to loosen the ashes from the superincumbent coals as the lower grate is shaken. A handle or socket, E, is attached to the front of the lower grate for the shaker, the two grates being concentrically pivoted at *f*.

The rod C is cranked in front of the stove, (not shown,) in order to enable the user to tilt the section B.

G is the fire-pot, which consists of a number of arms, *g g g*, attached to or integral with a flange, *h*, and inwardly inclined, as shown in Fig. 3. M (in dotted lines) represents the magazine-opening over the fire-pot.

The object of tapering the fire-pot, as shown, is as follows: As the grate is co-extensive with the base of the fire-pot, which is its largest part, all the ashes tend to fall away from the arms *g* instead of through them, as is the case with fire-pots flared, as usual, in the opposite direction, and the result is that the incandescent coals are visible between the bars as long as fire is present in the pot. Moreover, no ashes fall between the bars upon the circumjacent flange of the stove-body, and free access for air is afforded between the bars.

The fire-pot is made in sections, by preference, to afford means of renewing burned-out parts, and to facilitate the insertion of the grate, which otherwise would need to be made in sections, which is not desirable.

Now, it will be noticed that the effect of pivoting the tilting section eccentrically, and but slightly eccentrically, is to cause the weight of the coals to prevent its accidental tilting, while facilitating the intentional tilting of the section.

Furthermore, the radial bar *d* of the lower grate in its normal position rests directly beneath the joint between the ends *b''* of the bars *b* and the upper grate-bars, *a*, as shown, so that when it is desired to tilt the section B it is first necessary to move the bar *d* from under the joint, thereby affording absolute security against an accidental tilting, which might possibly ensue otherwise from unequal or irregular combustion of the coals.

I am aware that it is not new, broadly, to provide a grate with a supplemental grate having pins or their equivalents (tubes) projecting between the bars, and that grates having tilting sections have long been in use; and I am further aware that outwardly-flared open grates and solid fire-pots with inwardly-inclined walls are not new; and, also, that a fire-pot consisting of an annular series of vertical bars is also old, and I therefore claim none of them; but

What I do claim is—

1. The walls of a fire-pot, consisting of an annular series of inwardly-inclined bars, substantially as shown and described.

2. In combination with the flange for supporting the grate, the fire-pot walls, consisting of an annular series of inwardly-inclined bars, substantially as described.

3. A grate consisting of a pair of concentrically-pivoted grids, one being provided with

a tilting section, which is secured by the other in its normal position, as set forth.

4. In combination with the grate A, consisting of the series of annular bars *a a*, the tilting section B, formed of the bars *b b*, eccentrically pivoted upon rod C, as set forth.

5. In combination with the fire-pot G, having inwardly-inclined bars *g g*, the grate A, co-extensive with the base of the fire-pot, substantially as set forth.

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