

(No Model.)

F. KAEMPEN, Jr. & W. WEWERS.
OSCILLATING GRATE FOR COOKING STOVES, &c.

No. 541,359.

Patented June 18, 1895.

Fig. 1.

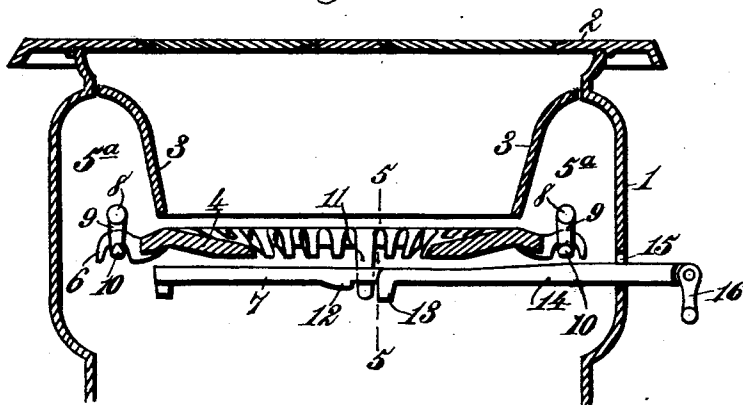


Fig. 2.

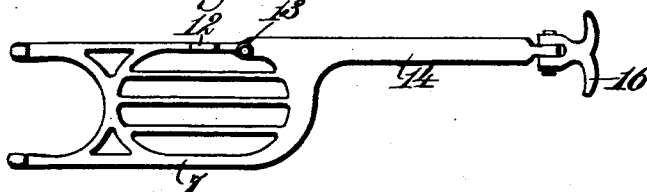


Fig. 3.

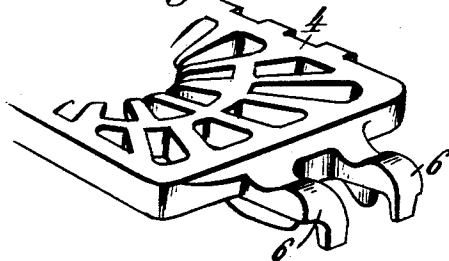


Fig. 4.

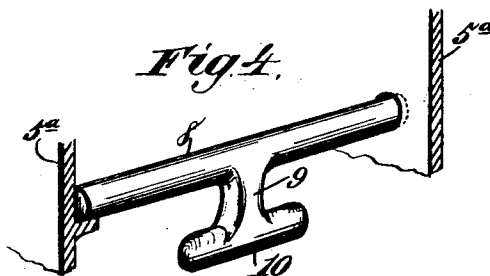


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

FOLKERT KAEMPEN, JR., AND WILLIAM WEWERS, OF QUINCY, ILLINOIS,
ASSIGNORS TO THE GEM CITY STOVE MANUFACTURING COMPANY,
OF SAME PLACE.

OSCILLATING GRATE FOR COOKING-STOVES, &c.

SPECIFICATION forming part of Letters Patent No. 541,359, dated June 18, 1895.

Application filed January 23, 1895. Serial No. 535,954. (No model.)

To all whom it may concern:

Be it known that we, FOLKERT KAEMPEN, Jr., and WILLIAM WEWERS, citizens of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented new and useful Improvements in Oscillating Grates for Cooking-Stoves, Heating-Stoves, and Ranges, of which the following is a specification.

This invention relates to oscillating grates for cooking stoves, heating stoves, and ranges, and has for its objects to provide a new and improved oscillating or swinging grate that may also be dumped or withdrawn, and to simplify the construction, whereby both operations are greatly facilitated.

To these ends our invention consists in the novel features, and in the combination or arrangement of parts hereinafter fully described and pointed out in the claims following the description, due reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a central longitudinal section illustrating my improved grate in operative position. Fig. 2 is a bottom plan view of the draw-grate removed. Fig. 3 is a perspective view of a portion of the upper grate-section. Fig. 4 is a detail view of one of the rocking hangers and the supports therefor; and Fig. 5 is a sectional view taken on the line 5 5, Fig. 1.

In order to enable those skilled in the art to make and use our invention, we will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the stove casing, 2 the top thereof, and 3 the linings in the fire-chamber.

The grate is made in two sections, 4 and 7. The upper section 4 is preferably dish-shaped, or inclined from its outer edges inward, and at its opposite ends is provided with hooked projections 6 that are arched upward and then downward, for the purpose hereinafter described. The grate-section 4 is centrally apertured, as shown, beneath which aperture is supported the draw-grate 7, in the manner and by the means which will hereinafter appear. Journaled in the side walls 5^a of the fire space, or in suitable bearings secured

thereto, are pendulous hangers, each consisting of a rocking-bar 8, from the center of which depends a neck 9, provided at its lower end with laterally extending arms forming an inverted T-head 10. The necks 9 of the hangers extend between the hooked projections 6 of the grate section 4, said hooked projections resting over and upon the T-heads 10, by which the grate-section 4 is freely suspended. Projecting from the under side of the grate-section 4 is a stirrup composed of arms 11, by which the draw-grate 7 is supported. The draw-grate 7 is provided at one edge upon its under side with two lugs 12 and 13, said lugs, when the draw-grate is in place, resting upon opposite sides of one of the arms 11. From the draw-grate 7 extends a rod 14, which projects through a vertical slot 15, formed in the front casing of the stove, and at its extreme end is provided with a handle 16 pivoted thereto, whereby it normally hangs suspended from said rod out of the way. The fire linings 3 at the opposite ends of the fire-chamber are curved or arched, as shown, so as to overhang the rocking-bars 8 and the hooked projections 6, for protecting the same from the action of the fire and preventing ashes and cinders from dropping thereon and interfering with the free and easy operation of the grate.

The operation of our improved grate is as follows:

To shake the fire the rod 14 is forced in and out, causing the draw-grate 7 to move to and fro, and the lugs 12 and 13 engaging the arm 11, the motion is imparted to the grate-section 4, causing said section and the draw-grate 7 to swing back and forth upon the hangers which oscillate in their bearings in the sides of the fire space. A to-and-fro swinging movement is thus imparted to the entire grate with a slight up and down movement, which serves to both agitate the fire to shake the ashes down between the grate-bars and also to free pieces of clinker and the like that accumulate about the edge of the grate.

Owing to the manner of suspending the grate, the force necessary to swing or oscillate the same to shake the fire is extremely slight, and by arching the end linings 3 in the man-

ner shown, the connection between the grate and the hangers is prevented from becoming clogged by ashes or cinders. To dump or draw the fire, the rod 14 is slightly turned axially by means of the handle 16, thus lifting the side of the grate so as to raise the lug 12 above the stirrup 11 upon which the grate rests, when the grate may be drawn through between the arms 11 toward the front of the stove, thus allowing the contents of the fuel chamber to drop down through the central aperture in the grate-section 4 into the ash-box. It is merely necessary to push the rod inward to restore the grate to its position, the beveled face of the lug 12 riding over the lower end of the arm 11, and when it has passed the latter, the grate drops into position with the lugs 12 and 13 resting upon opposite sides of the arm 11 in position to shake the grate, as shown in Fig. 1.

Having thus described our invention, what we claim is—

1. The combination of pendulous hangers, an upper grate section engaged at opposite end portions with said hangers, a reciprocating draw-grate engaged with the upper grate-section and movable therewith, and a handle for reciprocating the draw-grate, whereby the upper grate-section and the draw-grate reciprocate and rise and fall in unison, substantially as described.

2. The combination of rocker-bars having pendent heads, an upper grate-section having opposite end portions engaged with the pendent-heads of the rocker-bars, and a reciprocating draw-grate engaged with said upper grate-section, and provided with means for operating the same, whereby the upper grate-section and the draw-grate reciprocate and rise and fall in unison, substantially as described.

3. The combination of rocker-bars, provided with pendent heads, an upper grate-section having opposite end portions provided with hooks engaging the pendent heads of the rocker-bars, a reciprocating draw-grate engaged with the upper grate-section, and a handle for operating the draw-grate, whereby the upper grate-section and the draw-grate reciprocate and rise and fall in unison, substantially as described.

4. The combination with rocker-bars having pendent-heads, an upper grate-section having a pendent stirrup and provided at opposite ends with hooks which engage the pendent heads of the rocker-bars, and a draw-grate detachably engaging the stirrup, and having means for reciprocating the same, whereby the upper grate-section and the draw-grate reciprocate and rise and fall in unison, substantially as described.

In testimony whereof we have hereunto set our hands and affixed our seals in presence of two subscribing witnesses.

FOLKERT KAEMPEN, JR. [L. S.]
WILLIAM WEWERS. [L. S.]

Witnesses:

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