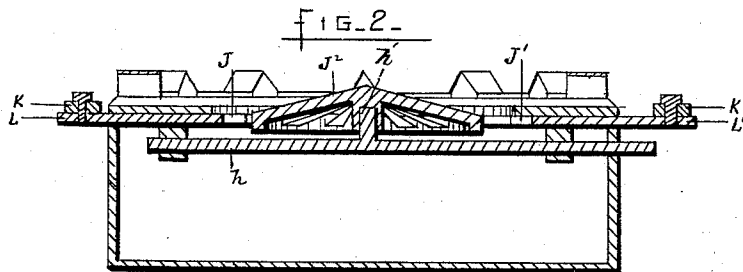
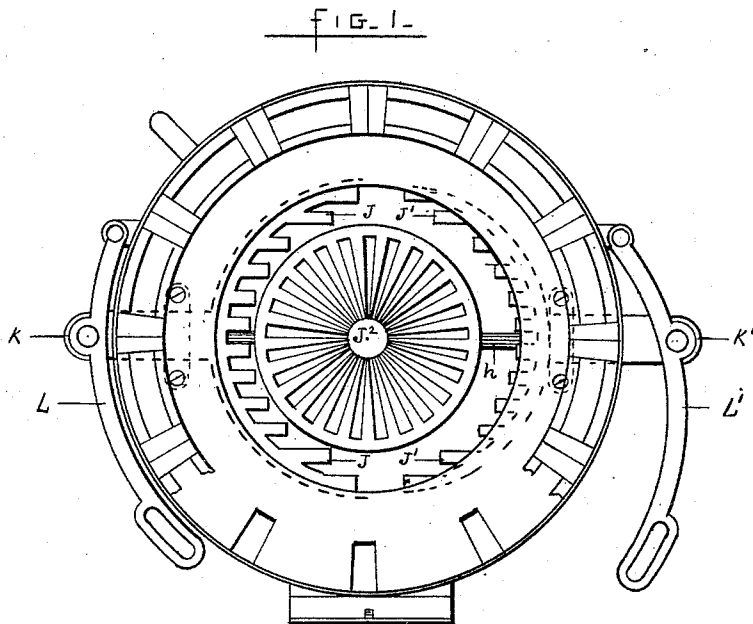


(No Model.)

A. A. SHEPARDSON.
GRATE.

No. 474,462.

Patented May 10, 1892.



Witnesses-

N. C. Steele
H. M. Fowler

Inventor-

Arvid A. Shepardson
By Rufus Bennett Fowler
Atty.

UNITED STATES PATENT OFFICE.

ARIOUL A. SHEPARDSON, OF WORCESTER, MASSACHUSETTS.

GRATE.

SPECIFICATION forming part of Letters Patent No. 474,462, dated May 10, 1892.

Application filed December 7, 1885. Serial No. 184,836. (No model.)

To all whom it may concern:

Be it known that I, ARIOUL A. SHEPARDSON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Grates, of which the following is a specification, containing a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a horizontal section of the furnace, taken above the grate and showing so much of the grate as is disclosed in the top view. Fig. 2 represents a central vertical section of the grate and a fragment of the furnace.

Similar letters refer to similar parts in both figures.

My invention relates to certain improvements in the fire-grates of stoves and furnaces, having for its object to provide means whereby the ashes and clinkers can be easily removed from the outer edges of the grate, thereby securing a free draft and active combustion next to the surface of the fire-pot, as hereinafter described, and set forth in the claims.

Within the ash-box I journal a rocking spindle *h*, having midway its length a vertical spur *h'*, upon which is mounted the central section *J*² of the grate, having its upper surface inclined or conical and capable of being rotated on the central pivot *h'* with a rapid reciprocating motion by means of a lever inserted through a long slot or opening in the walls of the ash-box and engaging the central section *J*². This method of shaking a central circular rotating grate is very common, and the well-known means by which the same is accomplished are not herein shown or described, as they form no part of my present invention.

In carrying my invention into effect it is only intended to arrange the central section *J*² of the grate so as to permit it to be shaken and dumped, and mounting the same upon central pivot supported upon a rocking bar is a usual and well-known form of construction. Around the central section *J*², I arrange the annular portion of the grate, made in semi-annular sections *J J'*, provided with teeth or fuel-supporting bars extending inward toward the central section *J*² when the semi-annular sections *J J'* are in their normal position. The semi-annular section *J* is repre-

sented in the accompanying drawings in its normal position and the semi-annular section *J'* is represented as moved away from the central section *J*², in order to provide an open space through which the ashes and clinkers can fall into the ash-box. The semi-annular sections *J* and *J'* are provided with flat arms or bars *K K'*, extending outward through slots in the wall of the ash-box and having their outer ends pivoted to levers *L L'*, which are hinged to projecting lugs on the ash-box, as represented in Fig. 1. By the angular motion of the levers *L L'* the semi-annular sections *J J'* are moved toward and away from the central section *J*², causing the ashes and clinkers supported upon the annular sections to be deposited in the ash-box and securing a free draft around the edge of the central section *J*².

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a fire-grate, the combination of the central circular section, the semi-annular sections arranged concentrically around said central section and provided with arms extending outward through the wall of the ash-box, whereby each of said semi-annular sections can be drawn away from said central section, substantially as described.

2. In a fire-grate, the combination of a central circular section provided with a conical or inclined upper surface, semi-annular sections arranged concentrically around said central section and provided with arms extending outward through the wall of the ash-box, levers hinged to the rigid portion of the stove or furnace and pivoted to said arms, whereby said semi-annular sections are moved toward and away from said central section by the angular movement of said hinged levers, substantially as described.

3. In a fire-grate, the combination of a rocking bar *h*, having a spur or pivot *h'*, a central section *J*², supported upon said spur or pivot, semi-annular sections arranged concentrically around said central section, arms *K K'*, extending outwardly from said central section through the wall of the ash-box, levers hinged to the rigid portion of the stove or furnace and pivoted to said arms, substantially as described.

ARIOUL A. SHEPARDSON.

Witnesses:

N. C. STEERE,

RUFUS BENNETT FOWLER.