D. JOHNSON.

STOVE GRATE.

APPLICATION FILED JULY 1, 1911.

1,042,683.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 1.

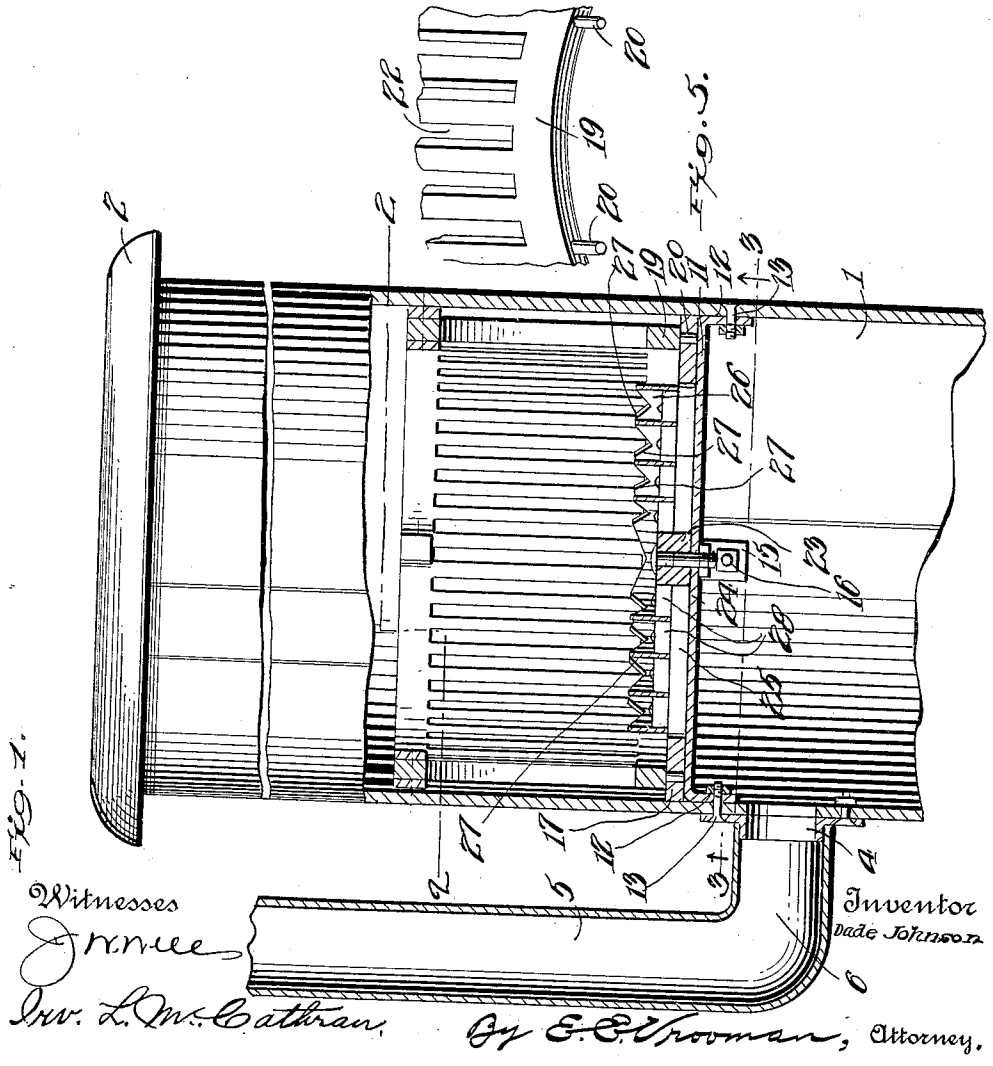

Fig. 1.

Fig. 5.

Witnesses

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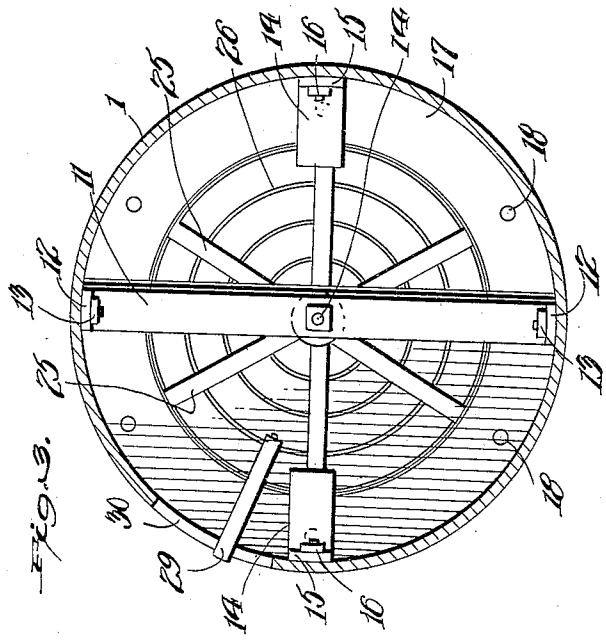

Fig. 3.

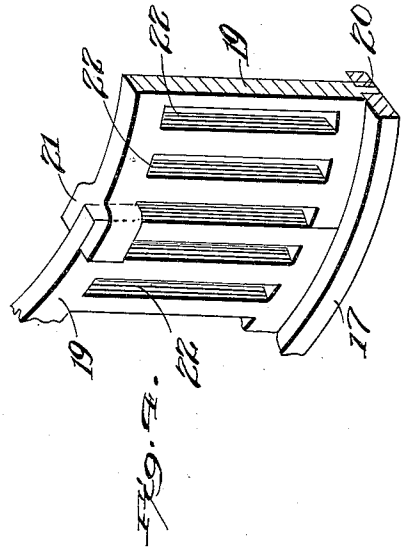

Fig. 4.

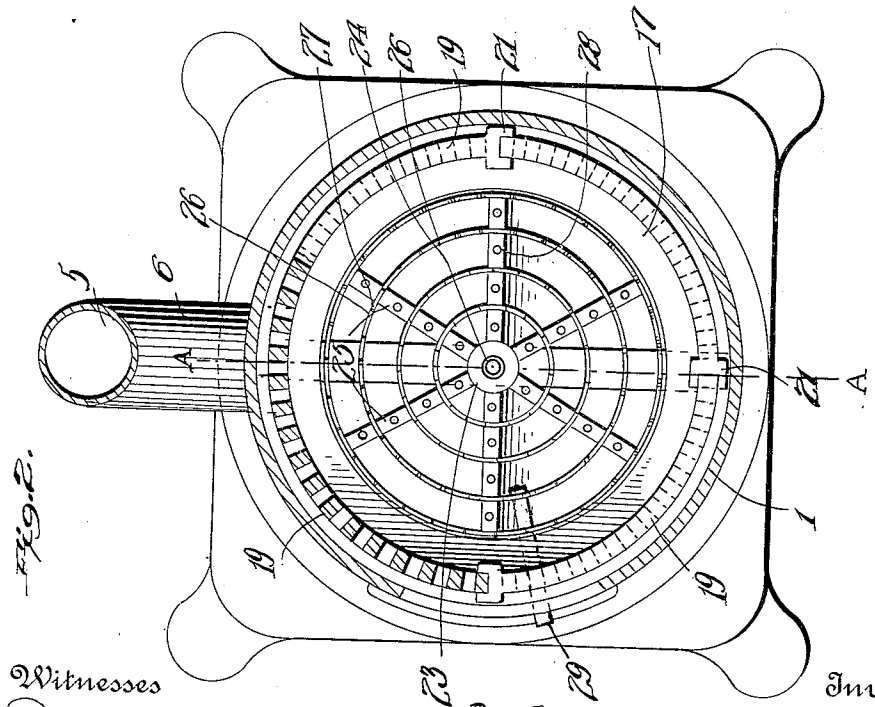

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

DADE JOHNSON, OF LEMONVILLE, MISSOURI.

STOVE-GRATE.

1,042,683. Specification of Letters Patent. Patented Oct. 29, 1912.

Application filed July 1, 1911. Serial No. 636,322.

To all whom it may concern:

Be it known that I, DADE JOHNSON, a citizen of the United States, residing at Lemonville, in the county of Putnam and State of Missouri, have invented certain new and useful Improvements in Stove-Grates, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to stove grates and the principal object is to provide an improved type of grate in which the bottom of the grate is provided with supporting bars mounted upon a rotatable frame so that the grate may be shaken.

This invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a view of the stove with the lower portion shown in vertical section along the line A—A in Fig. 2 and the upper portion shown in side elevation. Fig. 2 is a view in transverse section along the line 2—2, in Fig. 1. Fig. 3 is a view in transverse section along the line 3—3, in Fig. 1. Fig. 4 is an enlarged fragmentary view of the grate showing the means for joining the sections of the grate wall together. Fig. 5 is a fragmentary view of the lower portion of one of the sections showing the means for mounting the sections upon the supporting plate.

This invention comprises a body portion 1 which is preferably circular and is provided with a cover 2. The lower portion of the stove is provided with an outlet 4 so that a down draft through the fire box may be created. A vertical pipe 5 provided with an angular lower end 6 is connected with the outlet 4 to permit the products of combustion to pass out of the stove.

A cross bar 11 is provided with end flanges 12 and is secured in the body portion by means of bolts 13 which pass through the walls of the body portion. One of the bolts 13 also assists in holding the collar 4 upon the body portion. Oppositely disposed lugs 14 having bent end portions 15 are secured to the wall of the stove by means of the bolts 16 and extend at right angles to the bar 11.

A ring 17 provided with openings 18 is placed within the body portion and rests upon the cross bar 11 and upon the lugs 14, the lugs 14 extending beyond the inner edge of the ring. A plurality of arcuate sections 19 which form the side walls of a grate are mounted upon the ring 17 and are each provided with depending pins 20 which fit in the openings 18 and hold the sections in place. The upper portion of each of the sections is provided at one end with a bifurcated extension 21 in which the opposite end of the adjoining section fits and thus holds the grate in a set up position. These sections 19 are each provided with vertical slots 22 which permits of a good draft through the grate.

The grate is provided with a bottom having a circular central disk 23 which is pivotally mounted upon the central portion of the cross bar 11 by means of the bolt 24 and from which there extends a plurality of radially extending arms 25. Supporting bands 26 provided with teeth 27 in their upper edges are mounted upon the arms 25 and are held in spaced relation by means of the spacing blocks 28. A lever 29 is mounted upon two of the bands 26 and extends beneath the ring 17 and through an opening 30 formed in the wall of the stove so that the bottom of the grate can be oscillated to cause the teeth 27 to agitate the contents of the grate and cause the ashes to sift into the lower portion of the stove where they can be removed.

In using this stove, the grate is filled with coal and wood and paper is placed upon the top of the coal and wood and lighted. The flame passes through the coal in the grate and out through the pipe 5. As the coal burns any soot and smoke created does not pass out into the room through the heat pipes, but passes through the coal and the soot is consumed. When it is desired to shake the coal the lever 29 is moved to turn the bottom of the grate and causes the teeth to agitate the bed of coals so that the fine ashes in the lower portion will sift through and into the bottom portion of the stove.

What I claim as my invention is:—

A grate comprising a supporting bar

adapted to be mounted in a stove, a supporting ring carried by said bar adjacent its outer ends, a disk pivotally mounted at the center of said bar, arms radiating from said disk to a point adjacent said ring, toothed bands mounted upon said arms, spacing blocks mounted upon said arms between said bands, side walls mounted upon said ring, and means carried by said bands for oscillating said grate.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

DADE JOHNSON.

Witnesses:
JOSIE MATTHEW,
J. A. MCVEY.